

December 2020

# PRAYAS4IAS

प्रयास सुनहरे भविष्य की

*Current Affairs*

*Special Issue*

*MCQs*



THE  
**PRAIAS INDIA**  
Step to Success

✉ [info@theprayasindia.com](mailto:info@theprayasindia.com)

🌐 [www.theprayasindia.com/upsc](http://www.theprayasindia.com/upsc)

*An initiative for UPSC Aspirants*

**Sources** The Hindu | Live Mint | The Economic Times | The Indian Express | PRS  
PIB | PRS | ET | Government & World Reports (NITI, Aayog, Budget WEF Economic  
Survey etc.) | Hindu Business Line | NCERTs | All standard reference books

## December (Week 1)

### INDEX

#### Contents

<b>Prelims</b> .....	2
<b>NATIONAL</b> .....	2
Global Innovation and Technology Alliance (GITA).....	2
ARTPARK.....	2
Green Charcoal Hackathon .....	3
Disqualification under RPA 1951 .....	3
GST .....	5
Border Roads Organisation (BRO).....	5
WHO World Malaria Report 2020 .....	6
<b>INTERNATIONAL</b> .....	8
Shanghai Cooperation Organisation .....	8
Hualong One - China's first domestically made nuclear reactor.....	9
<b>Mains</b> .....	11
<b>GS I</b> .....	11
The pernicious idea of exclusive belonging.....	11
<b>GS II</b> .....	13
Ayurvedic doctors and sanction for surgeries.....	13
A misguided policy that cuts deep into patient safety .....	14
Why it is better to be in than out of RCEP .....	16
Personal choices, the Constitution's endurance.....	17
<b>GS III</b> .....	20
The Paris Agreement is no panacea .....	20
The perils of deregulated imperfect agrimarkets .....	22
Low-paid workers, women hit most by COVID-19 wage gaps: ILO report .....	24
Current Affairs Quiz .....	25

# Prelims

## NATIONAL

### Global Innovation and Technology Alliance (GITA)

(Source: [PIB](#) )

**Context:** 9th foundation day of GITA.

#### About GITA:

- Global Innovation & Technology Alliance (GITA) is a “not-for-profit” Section-8 Public-Private Partnership (PPP) company promoted jointly by the Technology Development Board (TDB), Department of Science & Technology (DST), Government of India and the Confederation of Indian Industry (CII).
- The Prime Minister’s Council on Trade & Industry had, in 2010, recommended the incorporation of a Government’s arm’s length entity under PPP mode to professionally manage the Government’s funds for providing flexibility to industry for undertaking R&D along with global partners.
- The GITA platform encourages industrial investments in innovative technology solutions by:
  - Mapping technology gaps.
  - Undertaking expert evaluation of technologies available across the globe.
  - Facilitating techno-strategic collaborative partnerships appropriate for Indian economy.
  - Connecting industrial and institutional partners for synergistic matchmaking.
  - Providing soft funding for technology development/acquisition/deployment.
- GITA’s vision is to strengthen India’s innovation ecosystem by supporting and enabling technology and innovation-driven enterprises.
- Enterprises from India are tying up with their counterparts from partner countries including Canada, Finland, Italy, Sweden, Spain, and the UK.
- GITA is headquartered in Gurugram, Haryana.

### ARTPARK

(Source: [PIB](#) )

**Context:** *ARTPARK to usher in a new model of industry, academia and government collaboration in AI & Robotics for societal impact*

#### What is ARTPARK?

- ARTPARK will develop AI & Robotics facilities to support technology innovations as well as capacity building through advanced skills training of students and professionals in these areas. Some of these facilities will be key enablers for whole new sets of technologies, products and services.
- It will develop DataSetu - that will enable confidentiality and privacy-preserving framework to share data and run analytics spurring the data-sharing ecosystem and create a data marketplace, boosting AI applications and solutions.

- **One such service will be BhashaSetu - that will enable real-time Indic language translation, both of speech to speech and speech to text.** This will further unlock the economic potential of the country, and enable all Indian citizens to equitably participate in the economic progress, regardless of their language.
- It is set up as the premier research translation park with a global collaborative ecosystem.
- It is getting incubated at Robert Bosch Centre for Cyber-Physical Systems at IISc.
- ARTPARK is committed to leveraging AI & Robotics in a mission-driven model to bring a better quality of life for people.
- Its mission includes lowering the cost of living with AI and robotics, ensuring a better quality of life for everyone, and improving access to AI awareness, education and enablement.

## **Green Charcoal Hackathon**

(Source: [PIB](#) )

**Context:** NVVN (NTPC VidyutVyapar Nigam), a wholly-owned subsidiary company of NTPC Ltd, launched the Green Charcoal Hackathon.

### **About the Green Charcoal Hackathon:**

- It is a technology challenge with an aim to fast-track technology developments conducted by NVVN in partnership with EESL (Energy Efficiency Services Ltd – a 100% govt. owned energy service company).
- The purpose of the event is to leverage the innovative Indian mind to bridge the technology gap, with the prime objective to:
  - Clean the air by eliminating farm fire, producing renewable energy out of the agro residue.
  - Promote local entrepreneurship.
  - Increase the income of the farmers.
- The ultimate goal is to reduce the carbon footprint of the nation.
- At the end of the hackathon, the organisers hope to come up with an economical and commercially viable machine that can convert agro residue to charcoal without emissions.
- This is expected to benefit farmers as well as the environment.

### **Need:**

- The increasing air pollution due to the burning of stubble and agro residue by local farmers has become a major concern for the country. As a result, NVVN is looking for technologies to convert the agricultural waste to a form that can be used in the power plants in the form of the Green Charcoal Hackathon.
- One such option is **torrefaction** which converts the agro residue to green charcoal.
- The technology to produce torrefied fuel using agro residue biomass is not easily accessible to small entrepreneurs due to the higher cost of imported machines, lack of sufficient manufacturers.
- The technology to produce torrefied fuel using agro residue biomass once developed in India will be made accessible to small entrepreneurs.

## **Disqualification under RPA 1951**

(Source: [The Hindu](#) )

**Context:** The Central government has told the Supreme Court that it rejected the idea of barring convicted legislators for life from contesting elections, forming or becoming an office-bearer of a political party.

### **Details:**



- The Union Ministry of Law and Justice said an elected representative of the people cannot be equated with public servants who are banned for a lifetime on conviction.
- The government said disqualification under the Representation of the People Act of 1951 for the period of the prison sentence and six years thereafter was enough for legislators.
- The Centre's stand differs from that taken by the Election Commission, which endorsed a life ban as necessary to "champion the cause of decriminalisation of politics".
- The case is based on a plea by Supreme Court advocate Ashwini Upadhyay, who argued that a life ban on conviction should uniformly apply for members of the judiciary, executive and the legislature. There should not be any discrimination of one from the other.

### **Representation of People Act, 1951:**

- Article 324 to 329 of Part XV of the Constitution deals with the electoral system in our country.
- Constitution allows Parliament to make provisions in all matters relating to elections to the Parliament and State Legislatures.
- In exercise of this power, the Parliament has enacted laws like the Representation of the People Act 1950 (RPA Act 1950), Representation of the People Act 1951 (RPA Act 1951) and Delimitation Commission Act of 1952.
- RPA Act 1951 deals with the disqualification of people's representatives.
- 'Election' is defined in Section 2 (d) of Representation of People Act, 1951 as "an election to fill a seat or seats in either House of Parliament or in the House or either House of Legislature of a State."
- 'Conviction' is defined as "an outcome of a criminal prosecution which concludes in a judgment that the defendant is guilty of the crime charged."

### **Grounds of Disqualification:**

Section 8 deals with the Disqualification of representatives on conviction for certain offenses. This section states that :

- If a person contesting election is charged with any criminal charges or has been convicted for the same earlier loses his right to stand for election according to the statute. Section 8 of the Representation of People Act, 1951 provides various grounds under which a person may be disqualified on conviction for certain offenses.
- Section 8(1) states that a person convicted of an offense punishable under
  - Section 153A i.e. offense of promoting enmity between different groups on ground of religion, race, place of birth, residence, language, etc., and doing acts prejudicial to maintenance of harmony or Section 171E i.e. offense of bribery or Section 171F i.e. offense of undue influence or any offense relating to rape given in Section 376 or offense of cruelty towards a woman by husband or any relative of husband or subsection (2) or (3) of Section 505 which states offense of making statement creating or promoting enmity, hatred or ill-will between classes or offense relating to such statement in any place of worship or in any assembly engaged in the performance of religious worship or religious ceremonies; of the Indian Penal Code (45 of 1860).
- Likewise, there are various other offenses which if committed by a candidate will lead him to disqualification. **For instance:**
  - Protection of Civil Rights Act, 1955 which provides for preaching and practice of untouchability.
  - Section 11 of the Customs Act, 1962 which states the offense of importing and exporting of prohibited goods.
  - Sections 10 to 12 of Unlawful Activities (Prevention) Act, 1967 i.e. offense of being a member of an unlawful association.
  - The Narcotics Drugs and Psychotropic Substances Act, 1985
  - The Prevention of Corruption Act, 1988
- **Shall be disqualified, where the convicted person is sentenced to –**
  - Only fine, for a period of six years from the date of such conviction;



- Imprisonment, from the date of such conviction and shall continue to be disqualified for a further period of six years since his release.

## **GST**

(Source: [The Hindu](#) )

**Context:** *The Supreme Court held that lottery, gambling and betting are taxable under the Goods and Services Tax (GST) Act. The court held that lottery, betting and gambling were “actionable claims” and came within the definition of ‘goods’ under Section 2(52) of the Central Goods and Services Tax Act, 2017.*

### **What is GST?**

- GST is one indirect tax for the whole nation, which will make India one unified common market.
- It is a single tax on the supply of goods and services, right from the manufacturer to the consumer.
- It is a destination based tax i.e will be collected at the state where the goods are sold instead of the manufacturing states.
- In India, GST Bill was first introduced in 2014 as The Constitution (122nd Amendment) Bill.
- This got an approval in 2016 and was renumbered in the statute by Rajya Sabha as The Constitution (101st Amendment) Act, 2016.
- The provisions are -
  - Central GST to cover Excise duty, Service tax etc, State GST to cover VAT, luxury tax etc.
  - Integrated GST to cover inter-state trade. IGST per se is not a tax but a system to co-ordinate state and union taxex.
  - **Article 246A – States have power to tax goods and services.**
  - **Article 279A** - GST Council to be formed by The President to administer & govern GST. It's Chairman is Union Finance Minister of India with ministers nominated by the state governments as its members.
  - The council is devised in such a way that the centre will have 1/3<sup>rd</sup> voting power and the states will have 2/3<sup>rd</sup>.
  - The decisions will be taken by 3/4<sup>th</sup> majority.

### **What are the taxes that are currently exempted in GST?**

- Custom duty will be still collected along with the levy of IGST on imported goods.
- Petroleum and tobacco products are currently exempted.
- Excise duty on liquor, stamp duty and electricity taxes are also exempted.

## **Border Roads Organisation (BRO)**

(Source: [PIB](#) )

**Context:** *Lieutenant General Rajeev Chaudhry assumes charge as Director General Border Roads (DGBR).*

### **Border Roads Organisation:**

- Initially, BRO was functional under the Ministry of Road Transport and Highways. But since 2015, it is being managed and is functional under the Ministry of Defence
- BRO is operational in 21 Indian states and 1 union territory. But also, functional in our friendly countries like neighboring countries such as Afghanistan, Bhutan, Myanmar, and Sri Lanka



- The Organisation was formed on May 7, 1960, to maintain and develop the Indian remote areas of north and northeast situated near the borders
- The composition of this organisation comprises Officers and troops which are selected from the Indian Army's Corps of Engineers, Army Service Corps, Military Police and other personnel

#### **The mission of BRO:**

- To ensure that cost-effective, sustainable, and strategic needs of the armed forces are met without any inconvenience
- Achieving an international level of quality excellence and time consciousness
- Present their expertise in any project of national or transnational development
- Using information technology in the best possible manner and implementing it as an advantage in the various infrastructure projects
- Highest level of proficiency must be shown with every construction
- To upgrade the quality of life and livelihood in border areas by helping them with the means of easy transport, accessibility and connectivity

### **WHO World Malaria Report 2020**

(Source: [PIB](#) )

**Context:** *The World Malaria Report 2020 released by WHO.*

#### **Highlights of World Malaria Report 2020**

- It is published by WHO annually.
- The report indicates that India has made considerable progress in reducing its malaria burden.
- India is the only high endemic country which has reported a decline of 17.6% in 2019 as compared to 2018.
- The Annual Parasitic Incidence (API) reduced by 27.6% in 2018 compared to 2017 and by 18.4% in 2019 as compared to 2018. India has sustained API less than one since the year 2012.
- India has also contributed to the **largest drop in cases region-wide**, from approximately 20 million to about 6 million. The percentage drop in the malaria cases was 71.8% and deaths was 73.9% between 2000 to 2019.
- India achieved a reduction of 83.34% in malaria morbidity and 92% in malaria mortality between the year 2000 and 2019.
  - This helped India achieve Goal 6 of the Millennium Development Goals (50-75% decrease in case incidence between 2000 and 2019).
- The total number of malaria cases reported in 2020, till October has also decreased by about 45% as compared to the corresponding period in 2019.

#### **About Malaria:**

- Malaria is a life-threatening disease caused by parasites that are transmitted to people through the bites of infected female Anopheles mosquitoes. It is preventable and curable.
- Children aged under 5 years are the most vulnerable group affected by malaria.
- The WHO African Region carries a disproportionately high share of the global malaria burden. In 2019, the region was home to 94% of malaria cases and deaths.
- Malaria is caused by Plasmodium parasites.
- The parasites are spread to people through the bites of infected female Anopheles mosquitoes, called "malaria vectors."
- Symptoms of malaria:
  - Fever



- Headache
- Chills
- Severe malaria can cause severe anaemia, respiratory distress in relation to metabolic acidosis, or cerebral malaria.
- In adults, multi-organ failure is also frequent.
- If untreated, malaria can be fatal.





## INTERNATIONAL

### Shanghai Cooperation Organisation

(Source: [The Hindu](#) )

**Context:** India hosted the Heads of Government Council meeting of the eight-nation Shanghai Cooperation Organisation (SCO).

#### Shanghai Cooperation Organisation (SCO)

- Shanghai Cooperation Organisation (SCO) is a Eurasian political, economic and military organisation, which was founded in Shanghai by the leaders of China, Russia, Kazakhstan, Kyrgyzstan, and Tajikistan in the year 2001.
- The aim of SCO is to establish cooperation between member nations on:
  - Security-related concerns
  - Resolving border issues
  - Military cooperation
  - Intelligence sharing
  - Countering terrorism
  - Countering American influence in Central Asia

#### Members of Shanghai Cooperation Organisation

- Apart from the founding members (listed above), Uzbekistan joined the group later as a permanent member.
- India and Pakistan are the newest inclusion to the Organisation and it added another 1.45 billion people in the SCO making the group cover around 40 per cent of the global population.
- Both these nations signed the memoranda for becoming a permanent member of the Shanghai Cooperation Organisation in 2016.
- The eight permanent members of the SCO are:
  1. China
  2. Kazakhstan
  3. Kyrgyzstan
  4. Russia
  5. Tajikistan
  6. Uzbekistan
  7. India
  8. Pakistan

#### Why India's membership to SCO matters?

- Shanghai Cooperation Organisation is seen as an eastern counter-balance to NATO. With India being its member, it will allow the country to push effective action in combating terrorism and on issues related to security.
- With the presence of India and China, the world's most populous countries, SCO is now the organisation that has the largest population coverage. India's entry into the group is expected to increase the group's heft in regional geopolitics and trade negotiations while giving it a pan-Asian hue at the same.

## **Hualong One - China's first domestically made nuclear reactor**

(Source: [The Hindu](#) )

**Context:** *China has powered up its first domestically developed nuclear reactor — the Hualong One — a significant step in Beijing's attempts to become less dependent on Western allies for energy security and critical technology.*

### **Details:**

- The reactor, which was connected to the national grid on Friday, can generate 10 billion kilowatt-hours of electricity each year and cut carbon emissions by 8.16 million tons, according to China National Nuclear Corporation (CNNC).
- This marks China breaking the monopoly of foreign nuclear power technology and officially entering the technology's first batch of advanced countries.
- Nuclear plants supplied less than five percent of China's annual electricity needs in 2019, according to the National Energy Administration, but this share is expected to grow as Beijing attempts to become carbon neutral by 2060.
- Reducing its dependence on Western allies in critical high-tech sectors such as power generation is a key goal in Beijing's "Made in China 2025" plan.
- Billions of dollars in state subsidies have been given to Chinese companies to speed the process — a move that has angered China's trade partners and sparked a protracted trade row with Washington.
- Work on the Hualong One reactor started in 2015 and there are currently six other reactors under construction at home and abroad.
- The Hualong One, deployed at a plant in east China's Fujian province, will be put into commercial use by the end of the year after undergoing tests.
- China has 47 nuclear plants with a total generation capacity of 48.75 million kilowatts — the world's third highest after the U.S. and France.
- Beijing has invested billions of dollars to develop its nuclear energy sector in recent years as it struggles to wean its economy from coal.
- Thirteen nuclear plants are under construction, more than in any other country.

### **How does a nuclear reactor produce electricity?**

- A nuclear reactor produces and controls the release of energy from splitting the atoms of certain elements. In a nuclear power reactor, the energy released is used as heat to make steam to generate electricity.
- The principles for using nuclear power to produce electricity are the same for most types of reactor. The energy released from continuous fission of the atoms of the fuel is harnessed as heat in either a gas or water, and is used to produce steam. The steam is used to drive the turbines which produce electricity (as in most fossil fuel plants).
- The world's first nuclear reactors 'operated' naturally in a uranium deposit about two billion years ago. These were in rich uranium orebodies and moderated by percolating rainwater. The 17 known at Oklo in west Africa, each less than 100 kW thermal, together consumed about six tonnes of uranium. It is assumed that these were not unique worldwide.
- Today, reactors derived from designs originally developed for propelling submarines and large naval ships generate about 85% of the world's nuclear electricity.
- The main design is the pressurised water reactor (PWR) which has water at over 300°C under pressure in its primary cooling/heat transfer circuit, and generates steam in a secondary circuit. The less numerous boiling water reactor (BWR) makes steam in the primary circuit above the reactor core, at similar temperatures and pressure. Both types use water as both coolant and moderator, to slow neutrons.



- Since water normally boils at  $100^{\circ}\text{C}$ , they have robust steel pressure vessels or tubes to enable the higher operating temperature. (Another type uses heavy water, with deuterium atoms, as moderator. Hence the term 'light water' is used to differentiate.)



# Mains

## GSII

### The pernicious idea of exclusive belonging

(Source: [The Hindu](#) )

**Context:** *This idea of exclusive belonging is relatively recent. Indeed, even today, a substantial number of humans appear not to have it. Or if they do, only very faintly. Multiple belonging is common because we imbibe from other cultures when we go to them. And because ideas and values, energetic and nimble-footed, come to us as they seek uncharted territories. This fluidity in understanding who we are is ineradicable, infinitely better than a condition in which we are confined to a fixed, categorical idea of identity.*

#### Identity is multi-layered

- The idea that each human being belongs to only one religious or linguistic community, a single culture or a unique civilization appears to be ubiquitous. Many have begun to believe that our identity is defined by membership to only mutually exclusive groups. If we are Bengali, then we cannot be Odia or Assamese; if Hindu, then not Muslim or Christian.
- That we belong exclusively to one culture, religion or language is undesirable and unfeasible. It is not feasible because our overall identity is far more complex and multi-layered than what we articulate or others believe.
- To take the manifest part of ourselves as our only identity is to accept a truncated, impoverished self. It is undesirable because it forces us to rely exclusively on one tradition when in fact we can be nourished by many.
- We live much better when we are open to multiple influences, enriched by varied currents of thought and value.

#### Intersecting cultures

- Take any one of us living in say in Delhi. We are heirs to myriad streams of Hindi/Urdu/Punjabi. Local dialects apart, these are shaped by old Sanskrit and old Persian, close cousins in an ancient family of languages — consider words such as asura/ahura or yajna/yasna).
- Those who speak them do not realise that several words on their tongue are of Arabic origin (Aadmi, Maalik). Since languages are not simply a means of communication but constitute multiple worlds, the criss-crossing and overlapping worlds they inhabit are infinitely more complex and expansive than is recognised.
- Monuments and public spaces that surround us (Humayun's Tomb, the Ramlila Maidan, Parliament building) and the varied cuisines that shape our taste and sensibility are also creations of intersecting cultures. And so are the identities they shape.
- The same is true of moral frameworks that ground our commitments and convictions — structures of values that have developed over 5,000 years.
- The idea of exclusive allegiance to any one of these flies in the face of evidence and is based on ignorance or deliberate denial. Why should we, instead of embracing all of them, insist on exclusive belonging and loyalty to just one?

#### A serious objection

- At this point it might be objected that a person's identity is defined not by everything that has influenced her but by those elements she has evaluated to be of greater importance. Someone can say that her



fundamental commitments flow from a single framework — and this alone defines her identity. Identity is defined by what is publicly affirmed because of judgement of its real significance. It announces where we truly belong, to what we owe our overriding allegiance.

- A person's identity, the argument goes, is defined by his orientation to an incomparably higher good. It underlines the quest to be a certain kind of person, to give oneself a direction. Does this often not require removing all 'alien or bad features'? Is not this movement towards something higher often a battle between the good and the evil within? Why cannot this be seen as a certain kind of purification?
- A shuddhikaran for a Hindu or for that matter, a jihad for a Muslim. If so, does it not follow that one is a Hindu because of one's aspiration to realise what is most valuable in Hinduism rather than in any other ethical tradition?
- To tell such a person that there is a Muslim ingredient in his self is irrelevant because the whole point of his existence is to become a good Hindu and remove extraneous, non- or anti-Hindu elements. This seems like a forceful rebuttal. But it overlooks two stronger challenges.
  - First, the encounter between two different ethical traditions results in mutual transformation of what is truly worthwhile in these traditions. Arguably, the ethics of Vedic people originally comprised three ends of life: kama, artha and dharma. It needed the teachings of the Buddha to add a fourth value, Moksha. Similarly, the Arya Samaj challenged idol worship as a perverse substitution of original Vedic fire rituals, but can one deny that it was also influenced by the Islamic conception of a formless god? Religions have frequently shaped each other's conception of the ultimate good, even as they conceal or stigmatise the source.
  - Second, and equally important, most of us are powered by multiple moral sources. We acknowledge within us the presence of different even incompatible normative orientations. Consider the French philosopher, Paul Ricoeur's disclosure that the private reading of the Bible was central to the pietistic Protestant milieu in which he was born. This part of his upbringing, leaning on prayer and the undogmatic examination of conscience, had little intellectual content about it. But Ricoeur was equally impacted by another milieu wherein critical thinking and public standards of rationality were essential. He says: 'I always moved back and forth between these two poles: a biblical pole and a rational, critical pole. A duality that has lasted through my entire life. I remained faithful to this double allegiance.' I believe this self-description captures the life of many intellectuals. Many scientists take their Hindu outlook seriously; many philosophers are at home in their Jewish, Islamic or Catholic spiritualities. Loyal to both, they feel that something terribly important would be lost if either was snatched away from them.

### **Multiple allegiances**

- Indeed, it is not surprising if there are many Muslims today who are inspired by both the Ramayana and the Koran. This was something commonplace till the mid-20th century in large parts of Haryana's Meo community. It is still common to find some of our greatest singers, musicians and poets moved equally and simultaneously by Hindu and Muslim mysticism.
- The fact is that large numbers of people in the past embraced not just dual but multiple allegiances and this is unlikely to disappear in future. The demand for a single, exclusive allegiance makes for a sorry, desiccated self.
- The idea of exclusive belonging or allegiance is a pernicious intrusion into world cultures. Equally dangerous is a political project that foists a singularity or homogeneity and calls for the obliteration of multiplicity and fluidity – so that we become purely one or the other.
- The demand to 'purify' ourselves, rid ourselves of anything 'foreign' that contaminates is not only hard to meet but, if we are to lead better, richer lives, not worth compliance.



## GS II

### Ayurvedic doctors and sanction for surgeries

(Source: [The Hindu](#) )

**Context:** *The Central Council of Indian Medicine, a statutory body set up under the AYUSH Ministry to regulate Indian systems of medicine, issued a gazette notification allowing postgraduate (PG) Ayurvedic practitioners to receive formal training for a variety of general surgery, ENT, ophthalmology and dental procedures. The decision follows the amendment to the Indian Medicine Central Council (Post Graduate Ayurveda Education) Regulations, 2016, to allow PG students of Ayurveda to practise general surgery.*

#### **Is allowing non-allopathic doctors to perform surgery legally and medically tenable?**

- The passing of the National Medical Commission Act in 2019 allowed for the formalisation of proposals to induct mid-level care providers — Community Health Providers — in primary healthcare in India, who would serve at health and wellness centres across the country, and focus on primary healthcare provision, with a limited range of medicines allowed for them to use for treatment of patients.
- This move had also attracted strong opposition from modern medicine practitioners, who branded this as a form of quackery through half-baked doctors. Several countries have been using mid-level care providers, such as nurse practitioners, to enhance the access to healthcare, though with strict safeguards around training, certification, and standards.
- The current debate revolves around the Central Council of Indian Medicine issuing amendments to the Indian Medicine Central Council (Post Graduate Ayurvedic Education) Regulations, 2016, to allow postgraduates students in Ayurveda undergoing ‘Shalya’ (general surgery) and ‘Shalakya’ (dealing with eye, ear, nose, throat, head and neck, oro-dentistry) to perform 58 specified surgical procedures.
- This was immediately opposed by many allopathic professionals, with the Indian Medical Association (IMA) decrying it as a mode of allowing mixing of systems of medicine by using terms from allopathy.
- The AYUSH Ministry subsequently clarified that the ‘Shalya’ and ‘Shalakya’ postgraduates were already learning these procedures in their (surgical) departments in Ayurvedic medical colleges as per their training curriculum, and the amendment merely added clarity and definitions to the 2016 regulations concerning post-graduate Ayurveda education.

#### **Can short-term training equip them to conduct surgeries and will this dilute the medicine standards in India?**

- As such, the postgraduate Ayurvedic surgical training is not short-term but a formal three-year course.
- Whether the surgeries conducted in Ayurvedic medical colleges and hospitals have the same standards and outcomes as allopathic institutions requires explication and detailed formal enquiry, in the interest of patient safety.

#### **Will non-allopathic doctors who have undergone training be restricted to practise in rural areas having poor doctor-patient ratios?**

- As of now, no such restriction exists that limits non-allopathic doctors, including those doing Ayurvedic surgical postgraduation, to rural areas.
- They have the same rights as allopathic graduates and postgraduates to practise in any setting of their choice.





**With allopathic surgeons often unwilling to practise in rural areas, how can this problem be solved?**

- The shortage and unwillingness of allopathic doctors, including surgeons, to serve in rural areas is now a chronic issue. The government has tried to address this by mechanisms such as rural bonds, a quota for those who have served in rural service in postgraduate seats, as well as, more recently, a plan to work on increasing the number of medical colleges and postgraduate seats.
- However, we would probably still continue to fall short of enough trained specialists in rural areas. We need to explore creative ways of addressing this gap by evidence-based approaches, such as task-sharing, supported by efficient and quality referral mechanisms.
- The advent of mid-level healthcare providers, such as Community Health Providers in many States, is also an opportunity to shift some elements of healthcare (preventive, promotive, and limited curative) to these providers, while ensuring clarity of role and career progression.

**Is it sensible to allow Ayurvedic surgeons to only assist allopathic surgeons, rather than perform surgeries themselves?**

- The AYUSH streams are recognised systems of medicine, and as such are allowed to independently practise medicine. They have medical colleges with both undergraduate and postgraduate training, which include surgical disciplines for some systems, such as Ayurveda.
- There is, however, a difference in approach in the systems of medicine, and hence models, which allow for cross-pathway. An apprenticeship model for Ayurvedic surgeons working with allopathic surgeons might fall into a regulatory grey zone.
- It might require re-training Ayurvedic practitioners in the science of surgical approaches in modern medicine. Even then, there might be a limit to what they are allowed to do. Any such experiment can put patient safety in peril, and hence, will need careful oversight and evaluation.

**Can this lead to substandard care?**

- Many patients prefer to receive treatment exclusively from AYUSH providers, while some approach this form of treatment as a complement to the existing allopathic treatment they are receiving.
- For invasive procedures, like surgery, the risk element can be high. Patients have a right to know and understand who their surgeon would be, what system of medicine they belong to, and their expertise and level of training.
- There should not be a difference in quality of care between urban and rural patients — everyone deserves a right to quality and evidence-based care from trained professionals.

**A misguided policy that cuts deep into patient safety**

(Source: [The Hindu](#) )

**Context:** *The basic requirement of medical practice is the safety of the patient. Surgery is a branch of medicine in which poor training can have dramatic and disastrous results. This is the strongest argument against the ill-advised move of the government of India to allow graduates in Ayurveda to practise surgery.*

**Apprenticeship is key**

- Surgery in the present era is an interdisciplinary endeavour. A well-trained anaesthesiologist keeps the patient free of pain. Other specialist doctors address any other illnesses that the patient has before surgery can be safely performed.
- The well-trained surgeon must have a good knowledge of the structure of the human body in health and disease. This is one branch of medicine where knowledge can only be acquired through apprenticeship — that is, the learner needs to be guided by an expert.
- It takes many years and much exposure before a graduate in medicine can safely perform surgery. It is an aphorism in modern medicine that a surgeon needs to know not only how to perform surgery, but

when. Importantly, the surgeon needs to know when not to perform surgery, a skill commonly called clinical judgement. These skills are difficult to teach and difficult to master.

- Errors in surgery can be devastating. Data from the United States suggests that up to 4,000 surgical errors occur each year despite well-considered controls on who can perform surgery. Efforts to reduce this rate focus on better training. Besides professional codes, legal mechanisms have been developed to ensure safe medical practice.
- In India, the Consumer Protection Act serves as an incentive to modern medical practitioners to provide high quality health care. Even this legal mechanism is not accessible to the poor. It is quite clear that there is no shortcut to safe surgical outcomes. One simply cannot get away from it — safe surgery requires years of training.
- The idea of competence without comprehension should not beguile us into believing that surgery is a suitable subject for its application. Anecdotes of people not educated, but able to perform complex tasks should be understood in the framework of the psychologist Rasmussen's Skill, Rule and Knowledge-based Error model.
- Some complex tasks are a set of repetitive steps where the person acquires proficiency merely by practice, for example, using a complex machine without knowing how it works. This is not applicable in surgery where novel situations are often encountered and a good knowledge base is essential to solve problems which may not have been previously encountered.

### **What constitutes safe surgery**

- Modern medicine is an integrated whole in which specialties have developed from the understanding that the knowledge base is so vast that a single human can only ever hope to master a few of the domains required in order to provide the best possible outcomes to patients.
- Modern medical training consists of a basic degree during which the fundamentals of the functioning of humans in health and disease, and techniques to diagnose illnesses are taught. Increased knowledge in various domains is obtained through post-graduate training.
- All these domains work together in order to ensure safe surgery. It is impossible for Ayurveda to incorporate surgical techniques while ignoring all the other domains of modern medicine and still perform surgery safely and effectively.
- What is scientific knowledge? How is it to be transmitted? Is there any sound basis for different scientific systems in the modern world? More specifically, can there be fundamentally different explanations of how the human body is structured and functions? These are all important questions and have implications for policy in health care. Important decisions with potential to seriously harm thousands of people should not be casually made without clear answers.
- Safe and effective health care should not become a casualty of a misguided desire to protect indigenous systems. Traditional knowledge in India has become the victim of self-serving apparatchiks who have fossilised it, preventing its development and growth. Human knowledge is a universal resource, ever growing. The way forward is to incorporate traditional medical systems into modern medicine.

### **Could deepen inequity**

- The quality of medical care received in India is highly dependent on personal resources. Surgical facilities manned by graduates of Ayurveda will be patronised only by the very poor who do not have the resources to access modern medical care.
- This will further entrench the existing grossly unequal access to health care. An epidemic of catastrophic complications, disproportionately affecting the poor can be expected if surgical procedures are performed by the poorly trained.
- There is a shortage of trained medical personnel in rural areas. The only way to address this is to greatly increase the number of government medical colleges. This will take a few years, but it is a safe and effective policy.
- Safety of patients should not become a victim of misguided policies based on poor understanding of what safe surgery requires.

## **Why it is better to be in than out of RCEP**

(Source: [The Hindu BusinessLine](#) )

**Context:** On November 15 15 countries signed the Regional Comprehensive Economic Partnership (RCEP) agreement after the Association of South-East Asian Nations summit. India, which was originally part of the 16 countries negotiating the agreement, opted out in November last year. India's decision of not joining RCEP has been appreciated and criticised equally.

### **Details:**

- RCEP has been described as the largest trade agreement till now, a trade agreement between all Asean nations along with Australia, China, Japan and New Zealand, accounting for 29 per cent of global gross domestic product (GDP) and almost one-third of the world's population.
- After being part of the negotiations for seven years, India got out, as many of its "outstanding issues and concerns" were not resolved. It feared a surge in imports from China against which it has inadequate protection. India feared especially for the agricultural sector, particularly the dairy sector, which would not be able to compete against competitive imports from Australia and New Zealand.
- The other unresolved issues including on rules of origin; the fear was that some countries might route their products through RCEP members at low duties. India also wanted RCEP to remove the most-favoured-nation (MFN) obligation, as it did not want to give this benefit to nations with which it has border disputes.
- Also, there was no assurance to India on non-tariff barriers and market access issues and it was felt that sectors like steel, leather goods, electronics, and textiles will be affected by cheaper imports.
- India opting out of RCEP appears to be influenced by the industry lobby, which has preferred protectionism.
- India could have remained in the bloc and got its fears adequately assuaged with amendments to relevant clauses. Before joining the World Trade Organisation also, there were similar issues and these were rectified with India effectively leading developing countries at the WTO.

### **More protectionist**

- And, ever since India opted out of RCEP, its policies have become more protectionist. There has been a substantial increase in the import tariff on many product categories.
- The government has announced production-linked incentives (PLI) for 13 sectors with a financial commitment of ₹1.45 trillion. It wants these sectors to match up to international standards and has offered them protection via import tariffs. Such an industrial policy will make it difficult for India to enter RCEP (the doors are open for it), as the grouping mandates lowering of import tariff.
- The arguments for the opting out have pointed to the limited advantage India has derived out of existing free trade agreements (FTAs). India has been running trade deficits with Asean, South Korea and Japan with whom it has FTAs. But take a closer look, many RCEP member-countries such as Indonesia, the Philippines and Vietnam also run trade deficits with China; many, including Japan, have territorial disputes with China. Yet, these countries decided to sign the pact.
- Contrary to the view of many politicians who consider autarky to be a virtue and buying foreign goods as anti-national, viewing trade agreements from the point of trade balance alone is not appropriate. Running up more imports than exports may not necessarily be undesirable, especially for countries like India, which are still in developing stage.
- After all, it is the people of the country who benefit through free trade as they get access to better quality products at a cheaper price. Rising imports of key inputs is also a sign of a growing economy.

- Remaining out of RCEP can also affect the bilateral trade relationship with RCEP members. It can, for instance, affect the Australia-India-Japan network in Indo-Pacific. The recent Supply Chain Resilience Initiative (SCRI), aimed as a trade bloc to counter China, promoted by Japan and endorsed by Australia and India, will also be impacted adversely.

### **Missing supply chains**

- By not joining RCEP, India's strategy of attracting international supply chains to India will get hit, as member-countries are more likely to establish different elements of value chains among themselves. Reason: components and parts manufactured in one country can be freely traded with other member-nations, without attracting any import tariff.
- If India thinks that first it should protect the domestic industry and make it more competitive and join the trade bloc later, it may be too late. By that time the supply chains that are getting relocated would have established themselves elsewhere.
- There have been suggestions that India must now focus on joining the US-backed Trans-Pacific Partnership (TPP), which is likely to get priority with the incoming Biden Administration, and also focus on forging a trade agreement with the EU.
- Under the TPP, in Obama's regime, the US had proposed duty-free market access for many products to member-countries.

### **The TPP possibility**

- Signing up with the TPP can create challenges for the India's textile industry. Vietnam, a major competitor of India in the sector will, as a TPP member get free access to Indian markets. Also, there were several clauses in TPP related to the IPR regime and the digital economy that were not agreeable to India.
- If under the Biden Administration negotiations begin once again, then it would not only be difficult for India to join the TPP with the existing protectionist regime but also a challenge to safeguard the interest of several sectors.
- The negotiation on the India-EU trade agreement is making little progress as India is pushing for a "mini deal" to begin with, while the EU has clearly stated that it will not sign anything less than a comprehensive trade and investment agreement.
- To play a strategic role in the Indo-Pacific region, India should focus on strengthening the Quad grouping (with Australia, the US, Japan) and explore the possibility of deepening its economic ties with neighbours such as Bangladesh, Sri Lanka, Nepal and Bhutan, which so far has not been given much importance.

### **Changing world order**

- It is essential to understand that in the current scenario, the economic world order is changing and countries are forging multilateral arrangements that will shape the future of Asian economies in the 21st century.
- It is important to realise that forging FTAs with different regions or countries may bring some pain to some sectors for some time, but being part of open trade and getting integrated with a trading bloc will definitely be a superior alternative and pave the way for India to play an important role in the global economy and politics.

## **Personal choices, the Constitution's endurance**

(Source: [The Hindu](#) )





**Context:** *In a short and well-reasoned order, the Allahabad High Court declared last month that religious conversions, even when made solely for the purposes of marriage, constituted a valid exercise of a person's liberties.*

**Details:**

- The High Court ruled that the freedom to live with a person of one's choice is intrinsic to the fundamental right to life and personal liberty.
- In holding thus, the order recognised that our society rested on the foundations of individual dignity, that a person's freedom is not conditional on the caste, creed or religion that her partner might claim to profess, and that every person had an equal dominion over their own senses of conscience.
- None of this ought to need spelling out in a secular, democratic republic. Not least over 70 years after its founding. But such are the times that we live in, with various State governments undertaking projects to outlaw what they describe pejoratively as "Love Jihad", that this decision is an important reminder of the Constitution's goals and promises.

**Right to privacy**

- The High Court's order makes it clear that it is neither the province of the state nor any other individual to interfere with a person's choice of partner or faith.
- By invoking the Supreme Court's judgment in Puttaswamy, the High Court held that an individual's ability to control vital aspects of her life inheres in her right to privacy, that this promise includes the preservation of decisional autonomy, on matters, among other things, of "personal intimacies, the sanctity of family life, marriage, procreation, the home, and sexual orientation".

**Petitioners vs. State**

- The petitioners, Salamat Ansari and Priyanka Kharwar, had approached the High Court seeking orders to quash a First Information Report (FIR) that was lodged against them.
- This FIR alleged that a series of crimes had been committed, including one under Section 366 of the Indian Penal Code, which criminalises the abduction of a woman with an intent to compel her to marry against her will.
- The petitioners claimed that they were both adults competent to contract a marriage, and had, in fact, wedded in August 2019, as per Muslim rites and ceremonies, only after Ms. Kharwar had converted to Islam. They said, they had been living together for more than a year, and that their peace and happiness had been threatened by the prospects of prosecution.
- The State resisted these claims. It argued that Mr. Ansari and Ms. Kharwar's partnership had no sanctity in the law, because a conversion with a singular aim of getting married was illegitimate. In making this argument, the government relied on a pair of judgments delivered by single judges of the Allahabad High Court, in particular on the judgment in Noor Jahanv. State of U.P. (2014).
- There, the High Court had held that a conversion by an individual to Islam was valid only when it was predicated on a "change of heart" and on an "honest conviction" in the tenets of the newly adopted religion. Additionally, the High Court had ruled that the burden to prove the validity of a conversion was on the party professing the act.
- Therefore, in Salamat Ansari, it was argued that it was for the woman to establish that her conversion was borne out of her conscience and out of a deep-seated belief in the teachings of her new religion. The Division Bench rejected this theory. It held that the judgment in Noor Jahan was incorrectly delivered.
- Marriage, the High Court said, is a matter of choice, and every adult woman has a fundamental right to choose her own partner. Even if such a decision encourages other concomitant decisions, including a choice of religion, the state can have little to do with it. According to the High Court, the Constitution is violated every time matters of intimate and personal choice are made vulnerable to the paternal whims of the state.

**Freedom of conscience**



- Important as these findings might be, the verdict in Salamat Ansari is not a product of any interpretive ingenuity. Article 25 of the Constitution expressly protects the choices that individuals make. In addition to the right freely to profess, practise and propagate religion, it guarantees to every person the freedom of conscience.
- By its dictionary definition, “conscience” refers to each person’s own sense of moral right and wrong. It is an emotion that cannot be judged from the outside. It is certainly not something that the state can examine as a function of its sovereign authority.
- Moreover, the idea of protecting one’s freedom of conscience goes beyond mere considerations of religious faith. This much is evident when we ask ourselves why the Constitution accords any protection at all to religious beliefs.
- Contrary to what some might think, the safeguard that the document affords to religion is not because there is something innate in religious faith that demands special security. On the other hand, this liberty is promised because questions of conscience — which include choices of faith — are matters of ethical autonomy. The provision’s ultimate *raison d’être* is to allow individuals the freedom to lead their lives as they please.
- On this understanding, we see that to tether a person’s choice of religion to her knowledge of that faith is to render nugatory the ability of a person to express her own sense of conscience.
- In overruling Noor Jahan, the Division Bench of the High Court said that it did not see “Priyanka Kharwar and Salamat as Hindu and Muslim,” but it saw them rather “as two grown up individuals who out of their own free will and choice are living together peacefully and happily....”

#### **A tenuous peace**

- How long, though, can this tenuous peace last? Already, seemingly in response to the judgment, the government of Uttar Pradesh has introduced an ordinance which makes not only religious conversions that are forcefully obtained an offence but that also declares void any conversion found to be made solely for marriage. In supporting the law, the State will likely rely on a 1977 Supreme Court judgment in *Rev. Stanislaus v. State of Madhya Pradesh*.
- There, the Court upheld, on grounds of public order, two of the earliest anti-conversion statutes in India: the Madhya Pradesh Dharma Swatantrya Adhiniyam, 1968, and the Orissa Freedom of Religion Act, 1967. These laws required that a District Magistrate be informed each time a conversion was made and prohibited any conversion that was obtained through fraud or illegal inducement.
- We cannot doubt the proposition that no person should be compelled to choose a certain religion, but to open up to scrutiny every act of conversion by placing on individuals the burden to prove that their decision was conscientious entrenches a form of hard paternalism, where purely private choices are made subject to the State’s ultimate sanction.

#### **Respect people’s choices**

- Today, it is hard to see how *Rev. Stanislaus* constitutes good law. In his treatise on constitutional law, the jurist, H.M. Seervai, wrote that the “judgment is clearly wrong, is productive of the greatest public mischief and ought to be overruled”.
- Since then, a nine-judge Bench ruling of the Supreme Court, in *Puttaswamy*, has recognised that every individual possesses a guaranteed freedom of thought; that at the core of liberty is the rights of persons to decide for themselves how they want to lead their lives.
- When we fail to acknowledge and respect the most intimate and personal choices that people make — choices of faith and belief, choices of partners — we undermine the most basic principles of dignity. Our Constitution’s endurance depends on our ability to respect these decisions, to grant to every person an equal freedom of conscience.



## GS III

### The Paris Agreement is no panacea

(Source: [The Hindu](#) )

**Context:** *Nothing that U.S. President Donald Trump touched turned into gold, except perhaps his business empire, but ironically, he was the alchemist who turned the Paris Agreement, once considered the product of a conspiracy hatched by the U.S. and China to change the course of negotiations away from the Rio Declaration (1992) and the Kyoto Protocol (1997), into a holy grail worth pursuing.*

#### Details:

- Many developing countries, including India, which hesitated to sign the Agreement because it had exempted developed countries from their mandatory obligations to reduce greenhouse gas emissions, turned into its devout supporters the moment Mr. Trump denounced it as a hoax and announced his decision to withdraw from it.
- Today, the Paris Agreement is deemed as the panacea for all environmental ills when the truth is that it is a repudiation of the principles of ‘common but differentiated responsibilities’ and ‘the polluter must pay’.
- Mr. Trump was not the only one who called the Paris Agreement a hoax. Many scientists and environmentalists expressed deep disappointment when it was adopted, as the national and international actions envisaged under it were far below the optimum levels.
- They did not add up to limiting the rise of global temperature to below 2°C, the minimum necessary to save the globe from disastrous consequences. It merely opened a new path to protect the lifestyles of industrialised nations by denying the developing countries their right to development.

#### Efforts over the years

- The most hopeful time for global cooperation in protection of the planet was between the time of the Stockholm Conference (1972) and the time of the Rio Conference (1992). That was when mounting scientific evidence about the role of anthropogenic emissions in global warming led to political initiatives to harmonise development and environment.
- Former Prime Minister Indira Gandhi’s resounding address at Stockholm declaring poverty as the worst polluter reverberated in many conference halls. The historic consensus in Rio led to the adoption of the UN Framework Convention on Climate Change (UNFCCC), which was a model global instrument balancing the right to development of the developing countries and the obligations of the developed countries.
- A distinction was made between the “luxury emissions” of the developed countries, which were reduced mandatorily, and the survival emissions of the developed countries, which were allowed to increase. Moreover, a huge financial package was approved to develop environment-friendly technologies in developing countries.
- But by the time the Conference of the Parties was held in Berlin in 1995, the developed countries had backed off from their commitments. They made a determined effort to impose mandatory cuts on developing countries. Though the G-77 was split, we managed to maintain the Rio principles with the assistance of the Chairperson, Angela Merkel.



- The Kyoto Protocol enshrined the Rio principles. It fixed emission targets for developed countries and a complex set of provisions was included to satisfy their interests. But it was never ratified by the U.S. Congress and the U.S. withdrew its support in 2001.
- The end of the Kyoto Protocol and the abandonment of the spirit of the Rio principles were reflected in the Copenhagen Accord (2009), engineered by the U.S. and China and sold to some key countries including India on the argument that a global climate action plan would be possible only if all reductions of the greenhouse gases were made voluntary.
- The basic terms of the Copenhagen Accord were brokered directly by a handful of key country leaders including the U.S., China, India and Brazil on the final day of the conference. It took another full day of tense negotiations to arrive at a procedural compromise allowing the deal to be formalised over the bitter objections of a few governments.
- There was a virtual revolt by the developing countries, but the Paris Agreement was virtually born in Copenhagen, and adopted later in 2015.

### **A fundamental change**

- The Paris Agreement marked a fundamental change in the principles of Rio and for the first time brought all nations into a common cause to undertake ambitious efforts to combat climate change.
- It requires all parties to put forward their best efforts through nationally determined contributions (NDCs) and to strengthen these efforts in the years ahead. This includes all parties to report regularly on their emissions and on their implementation efforts.
- The Paris Agreement moved away from the principle of common but differentiated responsibilities and all countries were placed on an equal footing by making reduction of greenhouse gas emissions voluntary. The NDCs so far submitted will not result in the desired objective of limiting increase of global warming to below 2°C.
- The Paris Agreement requires that all countries — rich, poor, developed, and developing — slash greenhouse gas emissions. But no language is included on the commitments the countries should make. Nations can voluntarily set their emissions targets and incur no penalties for falling short of their targets.
- It sets forth a requirement for countries to announce their next round of targets every five years, but does not include a specific requirement to achieve them.
- The scientific community has already rejected the Paris Agreement as a solution. Further temperature rise, even of 1.5°C, may result in catastrophic and irreversible changes. At 1.5°C, 70%-90% of coral reefs across the world would die. At 2°C, none would be left.
- Even a 1°C hotter planet is not a steady state, says a report of the Intergovernmental Panel on Climate Change (IPCC). The techno-optimism that the wonders of technology will be able to find answers to the dilemma we face without our having to alter our patterns of living is a delusion.
- The IPCC report acknowledges that “the pathways to avoiding an even hotter world would require a swift and complete transformation not just of the global economy but of society too”. This will only be possible if the world rejects nationalism and parochialism and adopts collaborative responses to the crisis. The Paris Agreement falls short of that imperative.
- U.S. President-elect Joe Biden has declared that the U.S. will have the most progressive position on climate change in the nation’s history. He has already laid out a clean energy and infrastructure plan, a commitment to return to the Paris Agreement, and a goal of net-zero emissions by 2050.
- The appointment of former Secretary of State John Kerry as Climate Change Envoy is a clear indication of the importance that Mr. Biden attaches to addressing global warming issues. Having been one of the architects of the Paris Agreement, Mr. Kerry must be aware of its merits and deficiencies. It is hoped that he will also be aware of the development imperatives of the developing nations.
- If Mr. Kerry and Mr. Biden insist on matching cuts by the developing countries as a conditionality to return to the Paris Agreement, the whole debate of equity and climate justice will emerge, with India and the U.S. on opposing sides.

## **The perils of deregulated imperfect agrimarkets**

(Source: [The Hindu](#) )

**Context:** *The eruption of massive farmers' protests across India against the Farm Acts has shocked those in the seat of power in Delhi. According to the government, many private markets will be established, middlemen would disappear, farmers would be free to sell to any buyer and farmgate prices would rise. But the protesting farmers do not accept these claims. They believe that farmgate prices would fall with the intensification of a corporate presence in agricultural markets. They also believe that the government, ultimately, wants to phase out the Minimum Support Price (MSP) system.*

### **More mandis needed**

- An important assumption behind the FPTC Act is that mandis controlled by Agricultural Produce Marketing Committees (APMC) are monopsonies in rural areas. This assumption itself is specious. First, official data show that even for paddy and wheat, respectively, only 29% and 44% of the harvest is sold in a mandi, while 49% and 36% is sold to either a local private trader or an input dealer. In other words, de facto, a large proportion of Indian harvest is not directly sold in a mandi.
- Farmers are forced to sell outside the mandis for two reasons. The first is that there are not enough mandis. In 1976, there were 4,145 large markets in India, with the average area served at 775 km<sup>2</sup>. The National Commission on Agriculture (NCA) had recommended that every Indian farmer should be able to reach a mandi in one hour by a cart. .
- Thus, the average area served by a mandi was to be reduced to 80 km<sup>2</sup>. For this, the number of mandis was to increase to at least 41,000. But there were only 6,630 mandis in 2019 with an average area served of 463 km<sup>2</sup>. Using another set of criteria, a government committee in 2017 had recommended that India should have at least 10,130 mandis. So, by all counts, India needs not less but more mandis.
- The second reason is that most small and marginal farmers, given their small marketable surplus, do not find it economical to bear the transport costs to take their harvests to mandis. Thus, they end up selling their harvest to a village trader even if at a lower price. Even if private markets replace mandis, small and marginal farmers will continue to sell to traders in the village itself. The situation will change only if economies of scale rise substantially at the farm-level.
- Second, de jure too, the freedom to sell outside mandis already exists in many States. Already, 18 States have allowed the establishment of private markets outside the APMC; 19 States have allowed the direct purchase of agricultural produce from farmers; and 13 States have allowed the establishment of farmer's markets outside the APMC.
- Despite such legislative changes, no significant private investment has flowed in to establish private markets in these States. Private markets have emerged in some pockets for some crops, but these are by no means widespread.
- The reason for poor private investment in markets is the presence of high transaction costs in produce collection and aggregation. When private players try to take over the role of mandis and the village trader, they incur considerable costs in opening collection centres and for salaries, grading, storage and transport.
- The more the number of small and marginal farmers are, the higher will these costs be. Corporate retail chains face additional costs in urban sales and storage, as well as the risk of perishability. This is why many retail chains prefer purchasing bulk quantities of fruits and vegetables from mandis rather than directly from farmers.

### **Transaction costs**

- Even if private markets emerge, the size of transaction costs are likely to offset any decline in mandi taxes. As a result, there is no assurance that farmers would receive a higher price in private markets. In the existing private markets too, there is no evidence of farmers receiving higher prices than in the



mandis. In fact, if transaction costs exceed mandi taxes, the costs would be transferred to the farmers as a lower price. This, then, would imply a stronger squeeze on the farmer than at present

- Many commentaries treat taxes in mandis as wasteful. This assertion is not fully true. First, much of the mandi taxes are reinvested by APMCs to improve market infrastructure. A fall in mandi taxes would reduce the surplus available with APMCs for such investment.
- Second, in States such as Punjab, the government charges a market committee fee and a rural development fee.
- The Punjab Mandi Board uses these revenues to construct rural roads, run medical and veterinary dispensaries, supply drinking water, improve sanitation, expand rural electrification and provide relief to farmers during calamities. Such rural investments will also be adversely affected if mandis are weakened.

### **The fate of MSPs**

- Without doubt, MSPs would continue to survive on paper as the government will have to procure to maintain a minimum buffer stock. However, many policy signals point to a strategic design to weaken the MSPs.
  - First, input and labour costs are rising sharply in agriculture. This necessitates a regular upward revision of MSPs to keep pace with costs of living. However, MSPs are rising at a far slower rate over the past five to six years than in the past.
  - Second, the government has not yet agreed to fix MSPs at 50% above the C2 cost of production. As a result, farmers continue to suffer a price loss of ₹200 to ₹500 per quintal in many crops.
  - Third, the Commission for Agricultural Costs and Prices (CACP) has been recommending to the government that open-ended procurement of food grains should end. These policy stances have set alarm bells ringing among farmers.
- In Punjab, Haryana and western Uttar Pradesh, most crop sales are at the MSP through procurement centres including the mandis. The farmers in these regions legitimately feel that they have been dealt a double whammy.
- If mandis weaken and private markets with no commitment to MSPs expand, they fear a gradual erosion of their entitlement to a remunerative price. If mandis weaken and private markets do not sufficiently replace them, they fear that the void would be filled by unscrupulous and unregulated traders.
- As Barbara Harriss-White, a scholar of India's agricultural markets once observed, "deregulated imperfect markets may become more, not less, imperfect than regulated imperfect markets".

### **Steps to be taken**

- Discussions between the government and the farmers can be structured using a broad framework based on two focus points.
  - First, India needs an increase in the density of mandis, expansion of investment in mandi infrastructure and a spread of the MSP system to more regions and crops. This should happen hand-in-hand with a universalisation of the Public Distribution System as an affordable source of food for the poor.
  - Second, we need not just more mandis, but also better mandis. APMCs need internal reform to ease the entry of new players, reduce trader collusion and link them up with national e-trading platforms. The introduction of unified national licences for traders and a single point levy of market fees are also steps in the right direction.
- However, if we go by the Union Finance Minister's statement in November 2019, the government thinks that the APMC system has "served its purpose" and the States should "reject" and "dismantle" mandis.
- Such statements betray the real intent of the government, which has not missed the attention of the protesting farmers.
- Further, the branding of protesters as "anti-national" and "Khalistanis" has only helped to further alienate the farmers from the government. The government's legislative adventurism with the Farm Bills



was misplaced to begin with. . But it is never too late to rethink. Unconditional talks with farmers would be an appropriate starting point.

### **Low-paid workers, women hit most by COVID-19 wage gaps: ILO report**

(Source: [Down to Earth](#) )

**Context:** *The average wages in two-third countries — for which official data was available — fell or grew more slowly in the first six months of 2020 due to the novel coronavirus disease (COVID-19) pandemic. Low-paid workers, disproportionately women, were the most affected by loss of working hours, according to a report published by the International Labour Organization December 2, 2020.*

#### **Details:**

- In the remaining one-third countries — including Brazil, Canada, France, Italy and the United States — an increase in average wages was the result of a large numbers of low-paid workers losing their jobs or leaving the labour market.
- The *Global Wage Report 2020 / 21* found that not all workers were equally affected by the crisis. Those in lower-skilled occupations lost more working hours than higher-paying managerial and professional jobs.
- Using data from the group of 28 European countries, the report showed that without temporary subsidies, the lowest paid 50 per cent of workers would have lost an estimated 17.3 per cent of their wages.
- The impact on women was worse than that on men, found the report. Estimates found that without wage subsidies, women would have lost 8.1 per cent of their wages in the second quarter of 2020 compared to 5.4 per cent for men. Such a discrepancy was mainly caused by reduced working hours more than by the difference in the number of lay-offs.
- The report stated that globally, 266 million people (15 per cent of all wage earners) were earning less than the hourly minimum wage even before the onset of the COVID-19 pandemic.
- This was partly because many countries excluded agricultural and domestic workers from their coverage; and partly because of the large numbers working informally where the rules are not enforced.
- Women were over-represented among workers earning minimum wage or less. Sectors such as leisure, tourism and hospitality, which were among the worst hit, typically employ more women.
- The report also looked at wage trends in 136 countries in the four years (2016-19) preceding the pandemic. It found that global wage growth fluctuated between 1.6 and 2.2 per cent.
- Wages increased most rapidly in Asia and the Pacific and Eastern Europe and slowly in North America and northern, southern and western Europe.
- In countries where strong measures were taken to preserve employment, the effects of the crisis were felt primarily as falls in wages rather than massive job losses.
- Temporary wage subsidies put in place by governments have helped limit the rise in inequality, but in the 10 countries for which figures were available, they would offset only 40 per cent of the total loss in wages, the report said.
- The growth in inequality created by the COVID-19 crisis threatens a legacy of poverty and social and economic instability that would be devastating.
- Our recovery strategy must be human-centred. We need adequate wage policies that take into account the sustainability of jobs and enterprises, and also address inequalities and the need to sustain demand.
- Adequate and balanced wage policies, arrived at through strong and inclusive social dialogue, are needed to mitigate the impact of the crisis and support economic recovery, the report said.
- In planning for a new and better “normal” after the crisis, adequate minimum wages — statutory or negotiated — could help to ensure more social justice and less inequality.

## **Current Affairs Quiz**

1) Consider the following statements regarding “Global Innovation & Technology Alliance”

1. Global Innovation & Technology Alliance (GITA) is a “not-for-profit” Public Private Partnership (PPP) company.
2. It is promoted jointly by the Technology Development Board (TDB), Department of Science & Technology (DST) and the Confederation of Indian Industry (CII).

Which of the above statement(s) is/are correct?

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

Answer : c

2) “Hualong One” is a nuclear reactor of-

- a. Japan
- b. China
- c. North Korea
- d. South Korea

Answer : b

- ‘Hualong One’ is China’s first domestically made nuclear reactor.
- It can generate 10 billion kilowatt-hours of electricity each year and cut carbon emissions by 8.16 million tons.
- It marks China breaking the monopoly of foreign nuclear power technology and officially entering the technology’s first batch of advanced countries.

3) Which of the following countries are not members of Organisation of Islamic Cooperation (OIC)?

1. Iraq
2. Iran
3. Pakistan
4. Bangladesh
5. Afghanistan

Select the correct answer using the codes given below:

- a. 3 only
- b. 1, 3 and 5 only
- c. 3, 4 and 5
- d. All of the above are members

Answer : d

4) Which of the following statements are correct with respect to Zebra Fish?

1. Zebrafish a tiny freshwater fish, it is native to Indo-Gangetic plains.
2. Zebrafish can efficiently regenerate its damaged heart within a short time period.

Select the correct answer using the codes given below

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

Answer : c



5) The ritual Tripura Purnima Snan recently in news is celebrated by?

- Hindu Communities in North-East
- Sikh Community across the globe
- Buddhist Communities in Bihar
- Hindu Communities in Uttar Pradesh

Answer : d

6) Consider the following statements with respect to Aadi Mahotsav

- The Aadi Mahotsav is a unique celebration of the spirit of tribal culture, crafts, cuisine and commerce.
- TRIFED organises it to familiarize culture of the tribal communities across the country.

Which of the statement(s) given above is/are correct?

- 1 only
- 2 only
- Both 1 and 2
- Neither 1 nor 2

Answer : c

7) With respect to the World Malaria Report, 2020 released recently, consider the following statements

- According to the report, India records the largest increase in cases in South-East Asia.
- The report is being published annually by the World Health Organization (WHO).

Which of the statement(s) given above is/are correct?

- 1 only
- 2 only
- Both 1 and 2
- Neither 1 nor 2

Answer : b

India records the largest reduction in cases in South-East Asia.

8) *Gale crater* is located in which of the following?

- Mars
- Moon
- Jupiter
- None of the above

Answer : a

9) Which of the following groups are Naga Tribes?

- Angami, Ao, Lotha, pochury
  - Kukis, Kacharis, Garos, Karbis
  - Chakhesang, Chang, Rengma, Sumi
  - Khiamniungan, Konyak, Phom, Sangtam
- 1, 2 and 3 only
  - 2, 3 and 4 only
  - 1, 3 and 4 only
  - All of the above

Answer : c

10) Consider the following statements with respect to Tree Rings

- Tree Rings can show the rainfall pattern of several centuries in the region.
- Narrower Tree rings reflect more rainfall and higher river runoff.

Which of the statement(s) given above is/are correct?

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

Answer : a

Wider Tree rings reflect more rainfall and higher river runoff.

11) Which of the following statements are incorrect with respect to “Emergency Use Authorisation (EUA)”?

- 1. EUA is a mechanism to grant interim approvals to Vaccines and medicines only if there are evidence they are safe to use.
- 2. India’s drug regulations have provisions for an EUA, and the process for receiving one is clearly defined by CDSCO

Select the correct answer using the codes given below:

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

Answer : b

- India’s drug regulations do not have provisions for an EUA, and the process for receiving one is not clearly defined or consistent.
- The CDSCO has been granting emergency or restricted emergency approvals to Covid-19 drugs such as remdesivir, favipiravir and itolizumab.

12) Consider the following statements with respect to “COVID Pneumonia”

- 1. It is a condition in which the infection starts damaging the tissues of lower respiratory tract and it is similar from regular Pneumonia.
- 2. People who are potentially at the risk of catching COVID pneumonia are children, people with weaker immunity system, elderly and cancer patients.

Which of the statement(s) given above is/are correct?

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

Answer : b

- It is a condition in which the infection starts damaging the tissues of lower respiratory tract and it is different from regular Pneumonia.
- Regular pneumonia is caused by bacteria or virus that inflames lungs, causes pus or phlegm in the lungs and the supply of oxygen is affected which causes shortness in breath.
- In the case of bacterial pneumonia, there are more chances of patients getting completely cured.
- But in the case of COVID pneumonia, it involves lung tissues as well which may lead to post-COVID complications.

13) Which of the following statements are correct with respect to “Roshni Act”?

- 1. It was targeted to earn Rs.25,000 crore by transferring 20 lakh kanals of State land to existing occupants against payment at market rates.
- 2. It was implemented with the aim of boosting the farming sector and "generating substantial revenue" for funding power projects.

Select the correct answer using the codes given below

- a. 1 only
- b. 2 only



- c. Both 1 and 2
- d. Neither 1 nor 2

Answer : c

14) Consider the following statements with respect to “Contempt of Courts”

1. In the case of the Supreme Court, the Attorney General may bring in a motion before the court for initiating a case of criminal contempt.
2. The Attorney General’s consent is mandatory when a private citizen wants to initiate a case of contempt of court against a person in Supreme Court.

Which of the statement(s) given above is/are correct?

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

Answer : c

15) India’s first home for transgender children will be established in which of the following cities?

- a. Mumbai
- b. Bangalore
- c. Pune
- d. New Delhi

Answer : b

## **Special Issue**

December (Week 1)

### **Contents**

How China is controlling COVID-19 .....	2
-----------------------------------------	---





## **How China is controlling COVID-19**

(Source: [The Hindu](#) )

**Context:** *That China has broadly returned to normalcy, with people coming back to work in June and July, students returning to schools and colleges in August, and a surge in domestic tourism during the October national holiday that almost matched pre-pandemic levels, has been greeted abroad with a mixture of scepticism and incredulity.*

### **Details:**

- How did a country of 1.4 billion people, where the COVID-19 pandemic first began in the city of Wuhan in December, manage to suppress local outbreaks and return to some form of normalcy by the summer, barring a few small clusters that have been quickly extinguished?
- In August, images of a crowded waterpark of revellers in Wuhan and of crowds thronging a beer festival in Qingdao went viral — striking images of a return to normalcy that did not, however, put paid to persisting conspiracy theories online, convinced that China is either suppressing news about domestic outbreaks or has been quietly administering some secret cure unbeknownst to the rest of the world.
- The explanation behind China's recovery is, however, slightly more mundane.
- That the outbreak began in Wuhan — and spread rapidly in December and January even as local officials covered up the scale of the outbreak until late January — is one unsurprising reason for the scepticism surrounding China's COVID-19 recovery, as is the rather improbable official national COVID-19 data, according to which the country has only recorded around 86,000 cases and 4,600 deaths.
- Leaving aside China's famously unreliable official statistics — which almost certainly undercount the total number because many hundreds of cases and deaths were most likely not recorded during the early outbreak in Wuhan, a time when local authorities were covering up cases and hospitals were overwhelmed by a new virus and without the means to test every case — there is no evidence to suggest there are currently thousands of cases or hidden outbreaks.
- This is backed up by, among other things, the return to normalcy, opening of schools, the boom in domestic travel, the current situation in hospitals, and not to mention, independent accounts from foreign reporters based in China.

### **Locking down**

- How China managed to prevent the outbreak in Wuhan and Hubei province from spreading across the country in the early part of the year was one key factor in its COVID-19 battle.
- A stringent lockdown of the entire province of Hubei — which lasted from January 23 to April 16 and was initially doubted as an effective strategy by public health experts — coupled with an equally stringent national lockdown throughout February that lasted, in some provinces, until March — was one key measure that bought the authorities time.
- Cases in all of China outside Hubei would peak by late February because of tight restrictions that stopped all domestic travel and travel into China, essentially bringing all movement, and spread of the infection, to a grinding halt.
- Crucially, it wasn't only about locking down. In parallel with the lockdown period was the implementation of the world's most expansive test and trace system that allowed authorities to stay ahead of the curve, with a suffocating approach that eventually helped bring cases through local transmission down to zero in most of China by the summer.
- China by no means is COVID-19- free, but has been able to ensure low numbers since the summer by sustaining a suffocating “zero infection” approach to small clusters that have been reported since,



brought either through imported cases from overseas or, as in the case of Beijing in June, through contaminated imported seafood.

- This approach, combining mass testing and contact tracing, was applied in Beijing in June, in Dalian the following month, in Qingdao in October, and more recently, in Tianjin in November.
- In Qingdao, the entire city was tested — 10.92 million in five days — after infections were reported at a local hospital, blamed on improper disinfection linked to an imported case. The city's daily testing capacity was around 2,000 in February. It has been ramped up to 2.6 lakh as of today. One common approach was pooled testing, that uses 10 samples for a single test. Chinese public health experts also hail the unheralded role of contact tracing — in part enabled by technology and mandatory health apps, but also made possible by the largely forgotten but equally crucial legwork of tens of thousands of healthcare workers and volunteers — in allowing China to stay ahead of the COVID-19 curve.
- China has also been stringent on international travel, not only continuing to limit the number of flights, but among few countries mandating 14 days quarantine for every international traveller at government-designated hotels. China has also been very selective in organising repatriation flights and discouraged those overseas from returning, an approach that has been criticised by Chinese citizens and students stranded abroad, including many in India.

### Masking up

- Enforcing near-universal mask use has been another important measure, made possible not just in China but in much of East Asia by raised public awareness, helped by memories from the first SARS epidemic in 2002. Mandatory and universal mask use, Chinese experts say, has been crucial in containing the spread. Indeed, China's latest cluster in Tianjin was found to have been caused by a man not wearing a mask, who spread the virus to eight people.
- Some of China's stringent "zero infection"— targeted strategies, such as enforced centralised quarantine even for asymptomatic cases, restrictions on international travellers, and the mass testing of entire cities, may be unpalatable measures that democratic governments may find difficult to enforce.
- They have, however, been broadly backed by the public in China, so much so that when a recent cluster emerged in Tianjin, there were calls online from elsewhere demanding Tianjin residents be barred from travelling.
- At the same time, other simple but effective measures such as getting people to mask up properly and spreading the right message on mask use right from early February, were critical and invaluable, even if those messages have yet to filter through in much of the rest of the world.



## December (Week 2)

### INDEX

#### Contents

<b>Prelims</b> .....	2
<b>NATIONAL</b> .....	2
Organochlorines.....	2
LiDAR Survey technique.....	3
Mallana Cream.....	3
Tharu tribals.....	3
Geographical Indication.....	4
Contempt proceedings.....	5
One Nation one Ration Card.....	6
Indo-Nepal Link Canal.....	7
HelpAge India presented UN Population Award for 2020.....	8
Karnataka's new anti-cow slaughter bill.....	8
<b>INTERNATIONAL</b> .....	10
SAARC.....	10
Havana syndrome.....	10
UN removes cannabis from its 'most dangerous drug' category.....	11
France's draft law against 'Islamism'.....	12
Northern Lights.....	12
<b>Mains</b> .....	14
<b>GS I</b> .....	14
Caste in the census.....	14
<b>GS II</b> .....	15
Australia-China ties.....	15
Challenges in achieving herd immunity through vaccination.....	17
Malnutrition in children.....	18
<b>GS III</b> .....	20
Inflation's import in monetary matters.....	20
The rise of the AI economy.....	21
Paris Agreement.....	22
Current Affairs Quiz.....	25

# Prelims

## NATIONAL

### Organochlorines

(Source: [Down to Earth](#) )

**Context:** A 'mystery disease' has left 450 patients in Eluru, Andhra Pradesh with seizures, nausea, dizziness and headaches. One person even died December 8. Among tentative reasons being blamed are organochlorides.

#### What are organochlorines?

- Organochlorines (OC) are a group of chlorinated compounds that belong to the class of persistent organic pollutants (POPs) with high persistence in the environment. They are widely used as pesticides.
- OC insecticides were earlier used to control malaria and typhus; they were later banned in most countries. They are relatively cheaper; as a result Dichlorodiphenyltrichloroethane (DDT), hexachlorocyclohexane (HCH), aldrin and dieldrin are among the most widely used pesticides in developing countries of Asia.
- A review statistics on the use of different pesticides has shown that 40 per cent of all pesticides used belong to the organochlorine class of chemicals.
- OC can cause several adverse are substances capable of causing adverse effects in the central and peripheral nervous system; as a result, several such chemicals were banned in the United States.

#### How do these pesticides reach people?

- People can be exposed to organochlorines through accidental inhalation if they are in an area where such pesticides were used or sprayed.
- The chemicals can also be ingested through fish, dairy products and other fatty foods, which can get contaminated.
- Organochlorine pesticides accumulate in the environment.
- They are persistent and move long distances in surface runoff or groundwater. OCs, in the mid-1970s in India, resulted in widespread reproductive failure among birds; they laid eggs with thin shells that cracked before hatching.
- Exposure to organochlorine pesticides over a short period may result in convulsions, headache, dizziness, nausea, vomiting, tremors, confusion, muscle weakness, slurred speech, salivation and sweating.
- Long-term exposure to organochlorine pesticides may damage the liver, kidney, central nervous system, thyroid and bladder.
- Many such pesticides have been linked to elevated rates of liver or kidney cancer in animals. There is also evidence indicating that organochlorine pesticides may cause cancer in humans.



## LiDAR Survey technique

(Source: [PIB](#) )

**Context:** *The National High Speed Rail Corporation Limited will be adopting Light Detection and Ranging Survey (LiDAR) technique using Laser enabled equipment mounted on a helicopter for conducting a ground survey for the preparation of the detailed project report for the proposed Delhi-Varanasi HSR corridor.*

### **LiDAR**

- LiDAR, is a remote sensing method that uses light in the form of a pulsed laser to measure ranges (variable distances) to the Earth.
- Lidar uses ultraviolet, visible, or near infrared light to image objects. It can target a wide range of materials, including non-metallic objects, rocks, rain, chemical compounds, aerosols, clouds and even single molecules.

## Mallana Cream

(Source: [Indian Express](#) )

**Context:** *The Narcotics Control Bureau in Mumbai claimed to have seized the contraband 'Malana Cream' from a person linked to actor Sushant Singh Rajput's death.*

### **What is Malana Cream?**

- It is the charas or hash or hashish which comes from the Malana Valley in Kullu district of Himachal Pradesh. Charas, called bhang in Himachal, is the resin obtained from a species or strain of the cannabis plant (botanical classification of cannabis is disputed), which grows naturally in the valley and is also cultivated illegally.
- The valley has a single village, Malana, and the hash resin produced there is generally more 'creamy', or clay-like, as compared to that produced in other parts of the state.

### **What makes it unique?**

- The cannabis plant has a number of chemical compounds called cannabinoids, among which tetrahydrocannabinol (THC) is the primary psychoactive constituent which produces the high sensation.
- Strains of the plant with low levels of THC are used for industrial and non-drug purposes such as making ropes, paper, textiles etc. Plants with a high level of another cannabinoid called CBD (cannabidiol) are used for medicinal purposes.
- A high proportion of THC in the plant extract is required for recreational drug use and Malana Cream is believed to be particularly rich in THC, making it more potent. Resin extracted from the plant, generally by rubbing using hands, is also concentrated further to obtain the more potent hash oil.
- In addition, charas from Malana has a distinct set of turpenes, aromatic compounds associated with flavour and other characteristics. These characteristics are the result of unique climatic conditions of the valley.

## Tharu tribals

(Source: [Indian Express](#) )

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

### What is this scheme about?

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

### Who are the Tharu people?

- The community belongs to the Terai lowlands, amid the Shivaliks or lower Himalayas. Most of them are forest dwellers, and some practice agriculture. The word tharu is believed to be derived from sthavar, meaning followers of Theravada Buddhism.
- The Tharus live in both India and Nepal. In the Indian terai, they live mostly in Uttarakhand, Uttar Pradesh, and Bihar. According to the 2011 census, the Scheduled Tribe population in Uttar Pradesh was more than 11 lakh; this number is estimated to have crossed 20 lakh now.
- The biggest chunk of this tribal population is made up of Tharus. Members of the tribe survive on wheat, corn and vegetables grown close to their homes. A majority still lives off the forest.

### Geographical Indication

(Source: [Indian Express](#) )

**Context:** The Himachal Pradesh government is trying to obtain GIs (Geographical Indication) for five products from the state – Karsog Kulth, Thangi of Pangi, Chamba Metal Crafts, Chamba Chukh, and Rajmah of Bharmour.

### What is a Geographical Indication?

- The World Intellectual Property Organisation defines a GI as “a sign used on products that have a specific geographical origin and possess qualities or a reputation that are due to that origin”.
- GIs are typically used for agricultural products, foodstuffs, handicrafts, industrial products, wines and spirit drinks. Darjeeling tea, Kullu shawl, Mysore agarbathi, champagne (France), Swiss watches etc are some of its examples.
- Internationally, GIs are covered as an element of intellectual property rights under the Paris Convention for the Protection of Industrial Property. They are also covered under the Trade Related Aspects of Intellectual Property Rights (TRIPS) Agreement.

### What is special about these five products from Himachal?

- **Karsog Kulth:** Kulthi or Kulth (horse gram) is a legume grown as a kharif crop in Himachal Pradesh. Kulth grown in the Karsog area of Mandi district is believed to be particularly rich in amino acids.



- **Pangi ki Thangi:** It is a type of hazelnut which grows in Pangi valley located in the northwestern edge of Himachal. It is known for its unique flavour and sweetness.
- **Chamba metal crafts:** These include items such as metal idols and brass utensils which, historically, were made by skilled artisans in the courts of kings of Chamba. There are efforts to revive the trade, and a plate made from a brass-like alloy and having carvings of gods and goddesses is still popular.
- **Chamba Chukh:** It's a chutney made from green and red chillies grown in Chamba, and prepared in traditional and unique ways. The practice has largely declined in rural households of Chamba, but survives to some extent at the small-scale industrial level.
- **Bharmouri Rajmah:** It's more specifically called the Kugtalu Rajmah, since it grows in the area around Kugti Pass in the Bharmour region of Chamba district. It is rich in proteins and has a unique flavour.

### Contempt proceedings

(Source: [Indian Express](#) )

**Context:** *Attorney General for India K K Venugopal on Tuesday granted consent to initiate criminal contempt of court proceedings against comic illustrator Rachita Taneja for allegedly scandalising the judiciary through her tweets and illustrations.*

#### **What is the procedure for bringing a criminal contempt of court case against an individual?**

- The Contempt of Courts Act, 1971, lays down the law on contempt of court. Section 15 of the legislation describes the procedure on how a case for contempt of court can be initiated.
- In the case of the Supreme Court, the Attorney General or the Solicitor General, and in the case of High Courts, the Advocate General, may bring in a motion before the court for initiating a case of criminal contempt.
- However, if the motion is brought by any other person, the consent in writing of the Attorney General or the Advocate General is required.
- The motion or reference made for initiating the case will have to specify the contempt of which the person charged is alleged to be guilty.

#### **Why does the Attorney General have to grant consent?**

- The procedure in cases of criminal contempt of court, which means the publication of material that scandalises or lowers the dignity of the court or prejudices or interferes with the proceedings of the court, the consent of the Attorney General is required under the law.
- The objective behind requiring the consent of the Attorney General before taking cognizance of a complaint is to save the time of the court. Judicial time is squandered if frivolous petitions are made and the court is the first forum for bringing them in.
- The AG's consent is meant to be a safeguard against frivolous petitions, as it is deemed that the AG, as an officer of the court, will independently ascertain whether the complaint is indeed valid.

#### **Is the AG's consent mandatory for all contempt of court cases?**

- The AG's consent is mandatory when a private citizen wants to initiate a case of contempt of court against a person. Before such a plea can be filed, the Attorney General must sign off on the complaint, determining if it requires the attention of the court at all.
- However, when the court itself initiates a contempt of court case, as it did in the case of Prashant Bhushan recently, the AG's consent is not required. This is because the court is exercising its inherent powers under the Constitution to punish for contempt and such Constitutional powers cannot be restricted because the AG declined to grant consent.





- The three-judge Bench headed by Justice Arun Mishra reiterated this position in the Prashant Bhushan case. “As far as the suo motu petitions are concerned, there is no requirement for taking consent of anybody, including the learned Attorney General because the Court is exercising its inherent powers to issue a notice for contempt.
- It is equally well settled, that once the Court takes cognizance, the matter is purely between the Court and the contemnor. The only requirement is that the procedure followed is required to be just and fair and in accordance with the principles of natural justice,” the court had said.
- AG Venugopal had repeatedly objected to the court’s initiation of contempt proceedings against Bhushan during the course of the hearing.

#### **What happens if the AG denies consent?**

- If the AG denies consent, the matter all but ends. In August, AG Venugopal had refused to grant consent to initiate criminal contempt proceedings against actor Swara Bhasker for allegedly making derogatory comments against the Supreme Court.
- Last week, he turned down a request to initiate contempt proceedings against author Shefali Vaidya as the tweets were made over a year ago. The law has a limitation period of one year for bringing in action against an individual.
- The complainant can, however, separately bring the issue to the notice of the court and urge the court to take suo motu (on its own motion) cognizance. If the court does take suo motu cognizance, as it did in the case of Prashant Bhushan, the consent of the senior-most law officer is not required.
- Article 129 of the Constitution gives the Supreme Court the power to initiate contempt cases on its own, independent of the motion brought before it by the AG or with the consent of the AG.
- “The Supreme Court shall be a court of record and shall have all the powers of such a court including the power to punish for contempt of itself,” Article 129 states.

#### **What happens after the AG has granted consent?**

- Once the consent of the Attorney General is given in writing, a notice under The Contempt of Courts Act is served personally on the person against whom the proceedings are sought to be initiated by the court. If the court decides not to serve the notice personally, the law requires the court to record the reasons for it.
- If the court is satisfied that the alleged contemnor is likely to abscond or evade judicial proceedings, it can order attachment of property of a value that it deems reasonable.
- Once the notice is served, the alleged contemnor may file an affidavit in support of his defence, explaining the nature and circumstances of her remarks.
- The case is required under the Act to be heard by a Bench of at least two judges. The court then takes into account any evidence available to check the affidavit, and pass appropriate orders.

### **One Nation one Ration Card**

(Source: [AIR](#) )

**Context:** A total of nine states have completed the implementation process of One Nation One Ration Card System. Andhra Pradesh, Goa, Gujarat, Haryana, Karnataka, Kerala, Telangana, Tripura and Uttar Pradesh have successfully completed the reforms in PDS.

#### **One Nation One Ration Card**

- The Union Government launched the 'One Nation, One Ration Card' scheme on a pilot basis in four states in 2019.
- This scheme aims to ensure all beneficiaries, especially migrants get ration (wheat, rice and other food grains) across the nation from any Public Distribution System (PDS) shop of their own choice. Finance

Minister Nirmala Sitharaman announced plans for nation-wide rollout of the scheme in all states and Union Territories by March 2021.

- Under the existing system, a ration cardholder can buy food grains only from the PDS in the locality where he or she lives. This will change once the 'One Nation, One Ration Card' system becomes operational nationally.
- It was also launched with the purpose that no poor person should be deprived of getting subsidised food grains under the food security scheme when they shift from one place to another. It aims to reduce instances of corruption by middlemen and fraudulence in ration cards to avail benefits from different states.

### **Who is eligible for One Nation One Ration Card**

- Any citizen, who is declared under Below Poverty Line (BPL) category will be eligible to get the benefit of this scheme across the country.
- As of now, about 20 states have come on board to implement the scheme. The beneficiaries will be identified on the basis of their Aadhar based identification through the electronic point of sale (PoS) device. All the PDS shops will have the facility of electronic PoS devices.
- One Nation One Ration Card' scheme is also aimed at reducing the incidents of hunger deaths in the country, to further improve rankings in the Global Hunger Index.

### **Indo-Nepal Link Canal**

(Source: [PIB](#) )

**Context:** *Foundation stone of head regulator works of Indo-Nepal Link Canal laid.*

### **Background:**

- In 1996, the governments of India and Nepal had entered into a bilateral agreement called '**Mahakali Treaty**'.
- As per this treaty, the Govt. of India is to supply 70MU per annum of energy generated from Tanakpur Power Station and construct a head regulator & 1.2 km long Indo-Nepal irrigation canal taking off from Tanakpur Barrage for release of a predetermined quantity of water.
- The Indo-Nepal Link Canal project comprises constructing a Head Regulator on the left bank of the existing Tanakpur Barrage and diverting its water into irrigation canal to Nepal.

### **Tanakpur Power Station:**

- It is a hydel power station located at Tanakpur near Banbassa, District Champawat, Uttaranchal.
- The Tanakpur Power Station has a capacity of 94.2 MWe.
- The first unit was commissioned in 1992 and the last in 1992. It is operated by National Hydro Power Corporation (NHPC).
- It harnesses the hydropower potential of the Sharda River (Mahakali River in Nepal).

### **Mahakali Treaty**

- The Mahakali Treaty is a bilateral treaty between India and Nepal and pertains to the sharing of the waters of the Mahakali River.
- The treaty basically aims at integrated development of water resources in the Mahakali River and has been finalized on the basis of equal partnership.
- The Mahakali originates in Nepal and forms the border between the two countries for a considerable distance.
- The treaty recognizes the Mahakali River as a boundary river between the two countries.



- The scope of the Treaty covers the Sarada Barrage, the Tanakpur Barrage and the proposed Pancheswar project.
- From the Sarada Barrage, the Treaty gives Nepal 28.3 cumec (1000 cusec) of water in the wet season and 4.25 cumec (150 cusecs) in the dry season. This quantity is to be supplied from the Tanakpur Barrage if the Sarada Barrage turns non-functional.
- Further, the Treaty also directs that not less than 9.91 cumecs (350 cusecs) should flow downstream of the barrage to maintain and preserve the ecosystem of the river.
- Although the treaty is in operation, the implementation process had been tardy.

### **HelpAge India presented UN Population Award for 2020**

(Source: [The Hindu](#) )

**Context:** *HelpAge India has been presented the UN Population Award for 2020 (institutional category), according to a release issued by UNFPA.*

#### **Details:**

- Established by the United Nations General Assembly in 1981, the United Nations Population Award recognises contributions in the fields of population and reproductive health.
- The Committee for the United Nations Population Award, which made the selections, is chaired by Ion Jinga, the permanent representative of Romania to the United Nations, and is composed of representatives of nine other UN Member States.
- For the first time in the history of the UN Population Award, the honour is being conferred on an Indian institution.
- The last time the Award came to an Indian was 28 years ago, back in 1992, when it was awarded to Mr. J.R.D. Tata as an individual laureate.
- HelpAge India, which has been working for 'the cause and care of disadvantaged older persons to improve their quality of life' for over four decades, is the first Indian institution to receive this award.

### **Karnataka's new anti-cow slaughter bill**

(Source: [Indian Express](#) )

**Context:** *The BJP-led government in Karnataka passed the Karnataka Prevention of Slaughter and Preservation of Cattle Bill (2020) in the Assembly amid strong opposition from the Congress and the Janata Dal (Secular). The Bill envisages a ban on all forms of cattle slaughter and stringent punishment for offenders.*

#### **Is the Bill completely new by itself?**

- No. The 2020 Bill is a revised version of a law passed by the BJP when it was in power in 2010. It was presented in a bid to ban all forms of cattle slaughter by recommending stringent punishment for violators.
- However, as cited by top leaders of the ruling party in Karnataka, prescribed punishments have been intensified and a complete ban on any kind of cattle slaughter is being stressed upon in the new Bill.

#### **What happened to the 2010 Bill?**



- The 2010 Bill was passed when BJP was in power with B S Yediyurappa as Chief Minister. It was shelved in 2013 by the Siddaramaiah-led Congress government after the Bill failed to get the Governor's assent.
- The Congress had then reverted to the less-stringent Karnataka Prevention of Cow Slaughter and Preservation of Animals Act, 1964, that allowed cow slaughter with certain restrictions.
- The 1964 law allowed the slaughter of bullock, buffalo-male or female if it was certified by a competent authority to be above the age of 12 years, incapacitated for breeding or deemed sick. That law had banned the killing of any cow or calf of she-buffalo.

#### **How is 'beef' and 'cattle' defined in the latest Karnataka Bill?**

- While 'beef' is defined as the flesh of cattle in any form, the word 'cattle' is defined as "cow, calf of a cow and bull, bullock, and he or she buffalo below the age of thirteen years".
- The Bill also terms shelters established for the protection and preservation of cattle registered with the Department of Animal Husbandry and Fisheries as 'gau shalas'.

#### **What are the penalties?**

- Police officers ranked sub-inspector and above or a competent authority will have the power to search premises and seize cattle and materials used or intended to use to commit the offence. Such seizures, if any, will then be reported before the Sub-Divisional Magistrate without unreasonable delay.
- Terming cow slaughter as a cognizable offence, violators can attract three to seven years of imprisonment. While a penalty between Rs 50,000 and Rs 5 lakh can be levied for the first offence, second and subsequent offences can attract penalties ranging between Rs 1 lakh and Rs 10 lakh.

## INTERNATIONAL

### SAARC

(Source: [AIR](#) )

**Context:** *In his message on the 36th SARRC Charter day, The PM called upon the nations to recommit ourselves to defeating the forces that support and nurture terrorism, and to work collectively towards a secure and prosperous South Asia.*

#### About SAARC

- The regional organization South Asian Association for Regional Cooperation (SAARC) was established on December 8, 1985. There were initially seven member states that are mainly located in South Asia, i.e. Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka.
- In April 2007, at the Association's 14th summit, Afghanistan became its eighth member. The Headquarter of SAARC is in Kathmandu, Nepal. His Excellency Mr. Arjun Bahadur Thapa of Bhutan is the present Secretary General of the organization (From March 1, 2014 to present).

#### History

- In the late 1970's, the then President of Bangladesh Ziaur Rahman proposed the creation of a trade bloc consisting of South Asian countries and with this end in view, he wrote communicated with the heads of governments of South Asian countries.
- The proposal was accepted by India, Pakistan and Sri Lanka during a meeting held in Colombo in 1981. In August 1983, the leaders adopted the Declaration on South Asian Regional Cooperation at a meeting which was held in New Delhi, India.
- During the next two years the South Asian nations committed themselves to form this South Asian alliance and the process culminated in the First SAARC Summit held on 7-8 December, 1985 in Dhaka where the Heads of State or Government of the initial seven countries adopted the Charter establishing the South Asian Association for Regional Cooperation (SAARC).

### Havana syndrome

(Source: [Indian Express](#) )

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

#### What are ‘microwave weapons’?

- “Microwave weapons” are supposed to be a type of direct energy weapons, which aim highly focused energy in the form of sonic, laser, or microwaves, at a target.
- People exposed to high-intensity microwave pulses have reported a clicking or buzzing sound, as if seeming to be coming from within your head.
- It can have both acute and long-term effects — without leaving signs of physical damage.

#### What is the ‘Havana syndrome’?





- In late 2016, US diplomats and other employees stationed in Havana reported feeling ill after hearing strange sounds and experiencing odd physical sensations in their hotel rooms or homes.
- The symptoms included nausea, severe headaches, fatigue, dizziness, sleep problems, and hearing loss, which have since come to be known as “Havana Syndrome”. Cuba had denied any knowledge of the illnesses even though the US had accused it of carrying out “sonic attacks”, leading to an increase in tensions.
- In all, more than two dozen American diplomats and members of their families in Cuba and China and at least 14 Canadian citizens in Havana reportedly have experienced similar symptoms.
- While the symptoms have resolved for some of the affected employees, for others, the effects have lingered and posed a significant obstacle to their work and affected normal functioning of lives.

### **UN removes cannabis from its ‘most dangerous drug’ category**

(Source: [Indian Express](#) )

**Context:** *In a decision that could influence the global use of medicinal marijuana, the United Nations Commission on Narcotic Drugs (CND) on Wednesday voted to remove cannabis and cannabis resin from Schedule IV of the 1961 Single Convention on Narcotic Drugs, decades after they were first placed on the list.*

#### **The cannabis plant**

- According to the WHO, cannabis is a generic term used to denote the several psychoactive preparations of the plant *Cannabis sativa*. The major psychoactive constituent in cannabis is Delta-9 tetrahydrocannabinol (THC). The Mexican name ‘marijuana’ is frequently used in referring to cannabis leaves or other crude plant material in many countries.
- Most species of cannabis are dioecious plants that can be identified as either male or female. The unpollinated female plants are called hashish. Cannabis oil (hashish oil) is a concentrate of cannabinoids — compounds which are structurally similar to THC — obtained by solvent extraction of the crude plant material or of the resin.
- The WHO says that cannabis is by far the most widely cultivated, trafficked and abused illicit drug in the world.

#### **Under international law**

- The Vienna-based CND, founded in 1946, is the UN agency mandated to decide on the scope of control of substances by placing them in the schedules of global drug control conventions.
- Cannabis has been on Schedule IV—the most dangerous category— of the 1961 Single Convention on Narcotic Drugs for as long as the international treaty has existed.
- Since it was first scheduled, however, global attitudes towards cannabis have changed dramatically, with many jurisdictions permitting cannabis use for recreation, medication or both, despite it remaining on Schedule IV of the UN list.
- Currently, over 50 countries allow medicinal cannabis programs, and its recreational use has been legalised in Canada, Uruguay and 15 US states, as per UN News.

#### **The CND vote**

- In January 2019, the WHO made six recommendations related to scheduling of cannabis in UN treaties. The proposals were to be placed before the CND’s session in March that year, but members overwhelmingly voted to postpone the vote, requesting additional time.



- Then, at its currently ongoing session, the CND rejected five of the six proposals, but approved the key one to remove cannabis and cannabis resin from Schedule IV. However, both substances will continue to remain on Schedule I, the least dangerous category.
- The proposals CND rejected on Wednesday included removing extracts and tinctures of cannabis from Schedule I and adding certain preparations of dronabinol to Schedule III of the 1961 Convention.

### **France's draft law against 'Islamism'**

(Source: [Indian Express](#) )

**Context:** *Recently, the French cabinet presented a draft law that targets “radical Islamism” — although the word “Islamist” is not part of the text. The Bill comes in the wake of a series of terror attacks in recent years. Although in the pipeline for some time, it is being seen as a response to the October beheading of schoolteacher Samuel Paty. It has raised concerns that it could stigmatise France’s Muslim community, the largest in Europe.*

#### **What does the proposed law aim to do?**

- It envisages a range of measures, including school education reforms to ensure Muslim children do not drop out, stricter controls on mosques and preachers, and rules against hate campaigns online.
- Once the law comes into force, French mosques could see increased surveillance of their activities, such as financing. The government would be able to exercise supervision over the training of imams, and have greater powers to shut down places of worship receiving public subsidies if they go against “republican principles” such as gender equality. Moderate community leaders targeted by an extremist “putsch” could receive protection.
- Under French secularism laws, or laïcité, there is already a ban on state employees displaying religious symbols that are “conspicuous”, such as the crucifix or hijab. This ban would now be extended beyond government bodies to any sub-contracted public service, as per *The Economist*.
- There would also be a clampdown on home-schooling for children over age three, with parents from to be dissuaded from enrolling them in underground Islamic structures, according to France 24. Doctors who issue “virginity certificates” would be fined or jailed.
- Officials would be banned from granting residency permits to polygamous applicants. Couples would be interviewed separately by city hall officials prior to their wedding to find out if they have been forced into marriage.
- Stricter punishments would be introduced for online hate speech. This is seen as a direct response to the killing of Paty, who was targeted in an online campaign before he was killed.

### **Northern Lights**

(Source: [Indian Express](#) )

**Context:** *Northern Lights, also known as aurora borealis, are usually witnessed far up in the polar regions or the high latitude regions of Europe, like in Norway. But, they were visible in regions that are more to the south, such as in the northern parts of Illinois and Pennsylvania in the US. This is happening due to a solar flare, which emerged from a Sunspot.*

#### **What causes an aurora?**

- Auroras occur when charged particles ejected from the Sun’s surface — called the solar wind — enter the Earth’s atmosphere. While flowing toward Earth, the fast-moving solar wind carries with it the Sun’s

magnetic field, which disrupts the magnetosphere — the region of space around Earth in which the magnetic field of our planet is dominant.

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

#### **What are the examples of high solar activity?**

- Solar activities include solar flares, solar energetic particles, high-speed solar wind and Coronal Mass Ejections (CME). These influence the space weather which originates from the Sun.
- The NOAA's Space Weather Prediction Center has forecasted a Level G3 or "strong" storm on our planet on Thursday, making it possible for auroral displays to be visible in relatively lower latitudes, such as in the US cities of Chicago, Detroit, Boston and Seattle.
- The recent geomagnetic storm is ranked third on the five-point scale used to measure geomagnetic storms. As per the NOAA, a G3 storm can require voltage corrections to be made in power systems, and false alarms can be triggered on some protection devices. Large storms usually occur at the peak of the 11-year solar cycle, or during the three years after the peak.

# Mains

## GS I

### Caste in the census

(Source: [The hindu](#) )

**Context:** *The Tamil Nadu government has decided to appoint a commission to formulate a methodology to collect caste-wise particulars of its population and use that to come up with a report. It is not clear if this will involve a full headcount of all members of every caste, or whether it is better described as a 'survey' than a 'census'. The Centre conducted a 'Socio-Economic Caste Census' (SECC) in 2011 throughout the country, but it did not make public the caste component of the findings. In Karnataka, the outcome of a similar exercise has not been disclosed to the public.*

#### **Is collection of caste details part of the census?**

- Caste was among the details collected by enumerators during the decennial Census of India until 1931. It was given up in 1941, a year in which the census operation was partially affected by World War II.
- In his report on the 1941 exercise, then Census Commissioner of India, M.W.M. Yeatts, indicated that tabulation of caste details separately involved additional costs. "The sanctioned tabulation for British India does not cover caste, but even had the full course been taken, there would have been no all-India caste table. Even in 1931, it was severely limited due to financial reasons; the time is past for this enormous and costly table...", he wrote.
- However, at the time of sorting the details, some provinces or States that wanted a caste record for administrative reasons were given some data on payment.

#### **Has there been criticism of including caste in the census?**

- The principal argument against taking caste particulars of individuals is that it tends to perpetuate the caste system.
- J.H. Hutton, the Census Commissioner in 1931, notes that on the occasion of each successive census since 1901, some criticism had been raised about taking any note of the fact of caste. "It has been alleged that the mere act of labelling persons as belonging to a caste tends to perpetuate the system," he writes.
- However, he rejects the criticism, arguing that there is nothing wrong in recording a fact, and ignoring its existence would be ostrich-like.

#### **What was the view after Independence?**

- R.A. Gopalaswami, the first Indian Registrar-General of independent India, said in the 1951 report: "The 1951 census was not [emphasis in the original] to concern itself with questions regarding castes, races and tribes, except insofar as the necessary statistical material related to 'special groups' and certain other material relating to backward classes collected and made over to the Backward Classes Commission."
- 'Special Groups' has been explained as referring to Scheduled Castes, Scheduled Tribes, Anglo-Indians and certain castes treated provisionally as 'backward' for the purposes of the census.
- This implies that BC data were collected, but not compiled or published.

#### **How have caste details been collected so far?**

- While SC/ST details are collected as part of the census, details of other castes are not collected by the enumerators. The main method is by self-declaration to the enumerator.



- So far, backward classes commissions in various States have been conducting their own counts to ascertain the population of backward castes. The methodology may vary from State to State.
- Details available about some commissions in the public domain suggest that these panels use methods like distribution of questionnaires, meeting with representatives of stakeholders, touring relevant areas and localities, and in some cases, such as the J.A. Ambasankar Commission in Tamil Nadu and the Venkataswamy Commission in Karnataka, door-to-door enumeration.

### What about SECC 2011?

- The Socio-Economic Caste Census of 2011 was a major exercise to obtain data about the socio-economic status of various communities. Even though there could be an overlap in the dataset of SECC 2011 with that of the census taken that year, the findings could be markedly different.
- The general census is conducted in a small window of a month, while the caste census is conducted over a longer period of time, and there is a good deal of revision and correction. The SECC 2011 had two components: a survey of the rural and urban households and ranking of these households based on pre-set parameters, and a caste census.
- However, only the details of the economic conditions of the people in rural and urban households were released. The caste data have not been released till now.
- While a precise reason is yet to be disclosed, it is surmised that the data were considered too politically sensitive. Fear of antagonising dominant and powerful castes that may find that their projected strength in the population is not as high as claimed may be an important reason.

### What is the legal imperative for a caste count?

- Over the last two decades, the Supreme Court has been raising questions about the basis for reservation levels being high in various States.
- In particular, it has laid down that there should be quantifiable data to justify the presence of a caste in the backward class list, as well as evidence of its under-representation in services.
- It has also called for periodical review of community-wise lists so that the benefits do not perpetually go in favour of a few castes.

## GS II

### Australia-China ties

(Source: [The Hindu](#) )

**Context:** “Repugnant,” was how Australia’s Prime Minister Scott Morrison earlier this week described a tweet by Zhao Lijian, a spokesperson for China’s Foreign Ministry, who shared a doctored image showing an Australian soldier holding a knife to the throat of an Afghan child. The image, created by a Chinese designer who calls himself a “wolf-warrior artist”, was shared on Twitter by Mr. Zhao, one of China’s most famous “wolf-warrior” diplomats — the name borrows from an eponymous and widely popular patriotic Chinese action film — who is no stranger to controversy, having angered U.S. President Donald Trump earlier this year by suggesting the U.S. military had brought the coronavirus to Wuhan.

### War crimes

- His aim was to bring attention to the reported war crimes of Australian soldiers, recently brought to light in an investigation by the Australian Defence Force (ADF), which found not only that 25 soldiers were



involved in the murders of 39 Afghan civilians between 2009 and 2013, but senior officers were encouraging junior soldiers to kill captives in cold blood in order to “blood them”.

- This was not, however, just a storm over one tweet. The trading of barbs last week was only the latest episode of a dramatic plunge in a relationship between two countries that was, until recently, broadly dominated by robust trading ties.
- For Australia, a close American ally, the emergence of China as its biggest trading partner has necessitated a delicate balancing act between trade and security. The trade dependence on China has grown rapidly, with Beijing accounting for as much as 39% of exports, mainly driven by natural resources such as iron ore, and 27% of imports, in 2019-20, according to the Australian Bureau of Statistics.
- China’s share of total trade has only grown this year, but that hasn’t stopped relations from drifting to the brink.
- Cracks began to show from 2018, when Australia blacklisted Huawei and ZTE from being involved in the rollout of its 5G networks.
- That same year, Australia passed a new foreign interference law that was widely being seen as aimed at China, with officials in Canberra pointing the finger at increasingly widespread Chinese influence operations primarily targeting the Chinese-Australian community, a claim dismissed by Beijing and its State media as hype tinged with racism.
- The cracks widened into a gaping rift this year when Australia in April called for an independent inquiry into the origins of the COVID-19 pandemic and criticised both China and the World Health Organization (WHO) for the initial handling of the coronavirus outbreak, a move that enraged China and brought an increasingly troubled relationship into open discord.

### Trade dispute

- Beijing retaliated with a slew of punitive economic measures, banning meat imports from four Australian plants and imposing an 80.5% tariff on barley, a major Australian export, in May.
- This broadened into a wider trading dispute, with Australia initiating its own anti-dumping investigations into Chinese steel and preventing Chinese company Mengniu Dairy from acquiring Australia-based Lion Dairy & Drinks, which owns some of the country’s most well-known brands.
- China then effectively banned Australian coal imports, leaving ships carrying millions of tonnes of coal stranded at Chinese ports for months awaiting clearance, and in November imposed tariffs of 107.1% to 212.1% on Australian wine labels, which have looked at China as an increasingly important market.
- China and Australia being among the 15 countries that signed the landmark Regional Comprehensive Economic Partnership (RCEP) agreement in November mattered little to declining ties, which took another turn for the worse that same month after a statement from Australia, New Zealand, Canada, the U.K. and the U.S. — dubbed the “Five Eyes” intelligence alliance — expressing concern over developments in Hong Kong.
- The statement on Hong Kong — touching the usual Chinese nerve of “internal affairs” — was followed by Mr. Zhao’s now infamous tweet and Foreign Ministry statements expressing concern over Australian actions in Afghanistan. Asked if the statements meant a shift in China’s stance on “internal affairs” of others, the Foreign Ministry said, “It is no longer a matter of the internal affairs of any country, and it should be strongly condemned by all people with conscience around the whole world.”
- The Communist Party-run Global Times put it in less diplomatic language: “Western people are very unaccustomed to criticism from Chinese people,” an editorial said. “The West seems like a tiger that no one dares touch its backside.”

### Negative views

- China, particularly angered by the COVID-19 inquiry call, has said the ball is in Australia’s court, while in Australia, negative public opinion about China, amid concerns over its assertiveness and on foreign interference, is growing.



- A Pew Research Center annual survey in October found negative views on China increased the most last year in Australia, where 81% have unfavourable views, up 24 points from the previous year. All of which has now left both sides scrambling to find a way back from the brink.

## **Challenges in achieving herd immunity through vaccination**

(Source: [The Hindu](#) )

**Context:** On December 1, Health Secretary Rajesh Bhushan said that the government has never spoken about vaccinating the entire country against COVID-19. Adding to that, Director-General of ICMR Dr. Balram Bhargava said: “If we’re able to vaccinate a critical mass of people and break virus transmission, then we may not have to vaccinate the entire population.” But the government’s idea of vaccinating a “critical mass of people” for the purpose of breaking the virus transmission chain is riddled with challenges.

### **Uneven transmission**

- Unlike the mRNA vaccines from Pfizer and Moderna, the interim analysis of Phase-3 trial of the Oxford vaccine has shown promise to prevent virus transmission. But the prime objective of the Phase-3 trials was to test the ability to prevent severe disease.
- It is only when the final analysis of Phase-3 data of the Oxford vaccine and other vaccines in development become available can the government be certain of breaking the transmission chain through vaccination.
- For instance, the levels of immunisation needed for herd immunity are determined by how the virus spreads in the population, and makes the assumption that spread is homogenous. But SARS-CoV-2 virus spread exhibits a high level of uneven transmission.
- This is the reason why there have been a number of super-spreading events where some infected individuals spread the virus to very a large number of people while most infected individuals transmit the virus only to a few or none.
- Considering that two doses of the vaccine are needed for full protection and increased vaccine hesitancy particularly as the vaccine development and testing are seen to be rushed, achieving herd immunity of 70% to break the chain would be challenging. According to Dr. Kang, it was only in January this year that India achieved 90% coverage of all vaccines to be given in infancy.
- If there is a drop in vaccine coverage in children beyond their first year of life in the immunisation programme, it becomes particularly difficult in the case of SARS-CoV-2.

### **Aim high**

- With COVID-19 vaccines, we will also need to reach age groups which are not currently targeted as part of the large-scale immunisation efforts. This will be a design, logistics and implementation challenge. All of these aspects are important to consider while considering the country-wide COVID-19 immunisation plans.
- Clinical trials test the efficacy of the vaccine, while the actual effectiveness of the vaccine will be known only when a large number of people are vaccinated post-licensure.
- Also, the duration of protection is not known and hence how frequently the vaccine has to be administered remains unknown. It is critically important to understand these to make sure that no resources are diverted from existing immunisation programmes that need to continue, she says.

### **Ethical challenges**



- Considering that the government has already listed out the high-priority groups that will receive the vaccine, the issue of choosing other sections of the population that needs to be vaccinated to achieve herd immunity will be ethically challenging.
- Objective, transparent processes for making priority-setting decisions are extremely important to maintain trust in the vaccination plans. These should be communicated publicly, including the rationale for the choices, and there should be a mechanism of appeal. Public inputs are crucial.
- Incidentally, the intent behind identifying the high-priority groups to receive the vaccine first was to safeguard them from severe disease and not to break the virus transmission chain.
- Breaking the chain of transmission with partial vaccination of populations is not a concept we understand. Control of transmission requires either very high levels of coverage or combining vaccination at a reasonable level with well implemented testing and isolation.

### Updating the evidence

- Another contentious area is the question of vaccinating those who have already been infected. The immunity offered by the natural infection is probably long term.
- Till date, we are not aware of the added benefits or risks of vaccinating the people who are already infected. It is time we start doing some quick trials to update the evidence based on the contextual needs.
- Oxford vaccine trial results that showed 90% efficacy in those who received half dose-full dose regimen, those who have had mild or no symptoms either due to low viral inoculation dose or with better immune response, or both might respond better with vaccination.

### Malnutrition in children

(Source: [The Hindu](#) )

**Context:** *How far India goes in realising its billion plus dreams over the next decade or two will be determined by how well it nourishes the physical well-being and mental potential of its people, particularly its children. If one has to pick the single gravest threat that blocks the promise of this young nation at the foundational level, it has to be arguably malnutrition.*

### Heavy burden

- Children who survive malnutrition do not do as well as they could. Without necessary nutrients, their brains do not develop to the fullest. No wonder then, they end up performing poorly at school than they otherwise would.
- Malnutrition places a burden heavy enough for India, to make it a top national priority. About half of all children under five years in the country were found to be stunted (too short) or wasted (too thin) for their height, estimated the Comprehensive National Nutrition Survey, carried out by the Ministry of Health and Family Welfare with support of UNICEF three years ago.
- The country has been making progress on nutrition for the last two decades, but it was after the Prime Minister launched the Prime Minister's Overarching Scheme for Holistic Nutrition (POSHAN) Abhiyaan in 2018, that a holistic approach to tackle malnutrition started gathering momentum.
- Under it, the government strengthened the delivery of essential nutrition interventions so that more children have the right start in life for optimum growth, health, development and a prosperous future.

### Post-COVID challenges

- As the flagship programme (POSHAN Abhiyaan) completes 1,000 days this week, it is time to renew our commitment to nutrition for two reasons.
  - First, because it conveys the deeply symbolic value of the first 1,000 days from conception of a child till the child turns two years old, marking the most crucial period for nutrition interventions

in a lifecycle, which once missed could result in irreversible damage to the child's physical and mental well-being.

- Second, focus on nutrition is critical as COVID-19 threatens to derail the gains India has made in nutrition in more than one way.
- For one, COVID-19 is pushing millions into poverty, reducing incomes of many more and disproportionately affecting the economically disadvantaged, who are also most vulnerable to malnutrition and food insecurities. Second, pandemic-prompted lockdowns disrupted essential services — such as supplementary feeding under anganwadi centres, mid-day meals, immunisation, and micro-nutrient supplementation which can exacerbate malnutrition.
- It is in this challenging backdrop, leaders from academia, civil society, development partners, community advocates and the private sector have come together as part of 'commitment to action' to seek and support the government in a six-pronged action that can save and build on the advances India has made in nutrition.
- These clear action points include commitments around sustained leadership, dedicated finances, multi-sectoral approach and increased uninterrupted coverage of a vulnerable population under programmes enhancing nutrition.
- One reason POSHAN Abhiyaan succeeded in galvanising action so fast was because it was led by the Prime Minister himself. That example must be sustained so that leadership of food and nutrition security rests with the Prime Minister at the national level, a Chief Minister at the State level, a district magistrate at the district and panchayat at the village level.
- This was already imperative for POSHAN Abhiyaan to succeed, but it has now become critical as COVID-19 compounds an already complex challenge.
- In terms of policies, vision, strategies, India already has some of the world's biggest early childhood public intervention schemes such as the Integrated Child Development Scheme, the mid-day meal programme, and Public Distribution System. India needs to ensure coverage of every single child and mother, along with 12 months of Poshan Maah (Nutrition Month), 52 weeks of breastfeeding weeks and 365 days of take-home ration.

### **Financial commitments**

- To ensure this, the country needs to retain its financial commitments for the nutrition schemes it already runs and earmark additional funds to preserve nutritional security in vulnerable communities, particularly women and children in slum areas, migrants, the population in tribal areas and districts with malnutrition rates.
- Pandemic spurred challenges have also negatively hit other proven underlying drivers of malnutrition. For instance, economic insecurities often force girls into early marriage, early motherhood, discontinue their schooling, and reduce institutional deliveries, cut access to micronutrient supplements, and nutritious food which largely tend to be perishable, all of which may worsen malnutrition. Accelerating efforts to address these will be needed to stop the regression into the deeper recesses of malnutrition.
- However, to truly grasp the depth and breadth of the COVID-19-caused nutrition crisis, the country must track nutrition indices through data systems. Evidence generated through data will also serve well to track the positive impact of POSHAN Abhiyaan, and course correct on the long journey to a well-nourished India.
- It takes time for nutrition interventions to yield dividends, but once those accrue, they can bring transformative generational shifts. Filling in the nutrition gaps will guarantee a level-playing field for all children and strengthen the foundations for the making of a future super-power.



## GS III

### Inflation's import in monetary matters

(Source: [The hindu](#) )

**Context:** The Monetary Policy Committee (MPC) of the Reserve Bank of India (RBI) announced its decision to hold the benchmark repo rate unchanged at 4%. Vowing to stick with its 'accommodative' policy stance in the next fiscal year to help support economic recovery amid the COVID-19 pandemic, the MPC opined that inflation was likely to remain elevated, "barring transient relief in the winter months from prices of perishables". This, it stressed, "constrains monetary policy at the current juncture from using the space available to act in support of growth".

#### **What is the projection on CPI inflation?**

- The rate-setting panel noted that the recovery appeared to be "far from being broad-based" and was dependent on sustained policy support, which the central bank offered through a raft of measures to ensure that credit availability remains adequate.
- Consumer Price Index (CPI) inflation, the RBI said, would average 6.8% for Q3 and 5.8% in Q4 — both levels above or close to the 6% upper bound of the target range for ensuring price stability — before easing to a 5.2% to 4.6% range in the first half of the next financial year, starting April 2021.

#### **How does India measure retail inflation?**

- Inflation is the rate of change in the prices of a given set of items. India bases its retail inflation metrics on the Consumer Price Index (CPI).
- The index records changes in prices for a sample of family budget items that are representative of what consumers typically spend their household income on — food, fuel, housing, clothing, health, education, amusement and even paan, tobacco and intoxicants. The measure is based on a weighted average.
- That is, some items in the index may get greater weightage depending on their priority in a typical family's budget.
- The CPI-based retail inflation is measured monthly and is published as a percentage value of change in the index from the corresponding year-earlier period. Data for a certain month are released by the Ministry of Statistics and Programme Implementation generally on the twelfth day of the subsequent month.

#### **Why is faster inflation a concern for policymakers?**

- Faster retail inflation is indicative of prices of household items rising quickly. While inflation affects everyone, it is often referred to as a 'tax on the poor' as the low-income stratum of society bears the brunt. Persistent high inflation pushes several items out of reach for this category of consumers.
- For example, onions and potatoes are generally a key staple in an average Indian family's diet. But, if the price of potatoes starts rising rapidly, a poor household is often forced to sharply reduce or forgo its consumption of this key source of essential nutrients, including carbohydrates.
- Over time, if unchecked, persistent high inflation erodes the value of money and hurts several other segments of the population, including the elderly living off a fixed pension. It hence ends up undermining a society's consumptive capacity, and thereby, economic growth itself.

#### **What is the RBI's role in tackling inflation?**

- The RBI's explicit mandate is to conduct monetary policy. "The primary objective of monetary policy is to maintain price stability while keeping in mind the objective of growth. Price stability is a necessary precondition to sustainable growth," the RBI states on its website.





- In 2016, the Reserve Bank of India Act, 1934, was amended to provide a statutory basis for the implementation of a flexible inflation-targeting framework, where the Centre and the RBI would review and agree upon a specific inflation target every five years.
- Under this, 4% was set as the Consumer Price Index (CPI) inflation target for the period from August 5, 2016, to March 31, 2021, with the upper tolerance limit of 6% and the lower tolerance limit of 2%.
- To the extent that ensuring price stability is its primary goal, the RBI through its MPC must constantly assess not just current levels of inflation and prices of various goods and services in the economy, but also take into consideration inflation expectations both of consumers and financial markets so as to use an array of monetary tools, including interest rates, to contain inflation within its target range.

#### **What is core inflation and why is it important?**

- Core inflation helps measure inflation after excluding the effects of temporary volatility, especially from prices of items such as fuel and food. For example, seasonal spikes in food prices may skew the inflation rate, but the effect is only transitory.
- The RBI's action on rates, however, affects the economy with a lag, by which time the spikes in the price of those food items may have reversed. Viewing inflation after stripping out such volatility helps give it a better picture of the underlying trend in prices.
- In the statement, the MPC noted: "Cost-push pressures continue to impinge on core inflation, which has remained sticky and could firm up as economic activity normalises and demand picks up."

### **The rise of the AI economy**

(Source: [The Hindu](#) )

**Context:** *The pandemic has taught us many lessons and opened our minds to new ways of doing things, including understanding the potential of technologies such as artificial intelligence (AI) and machine learning (ML). AI/ML models and algorithms have supplemented the work of healthcare professionals, medical researchers, public health authorities and local administrations in monitoring and predicting trends. Lockdowns have led to a boom in Internet consumption. According to the Department of Telecommunications, Internet consumption in India rose by 13% after the lockdown was announced. Higher consumption has generated goldmines of user data that online businesses can harness. COVID-19 has created an AI moment that India can ill afford to miss.*

#### **India's rising eminence in AI**

- We have made significant progress in AI capability-building in the past few years through government initiatives and private sector investments. NITI Aayog's national strategy for AI envisages 'AI for all' for inclusive growth, and identifies healthcare, agriculture, education, smart cities and infrastructure, and smart mobility and transportation as focus areas for AI-led solutions for social impact.
- The Telangana, Karnataka, Tamil Nadu and Maharashtra governments, among others, have announced policies and strategies for AI adoption. Technology companies have established AI centres of excellence to create solutions for global clients.
- India has a thriving AI start-up ecosystem with cutting-edge solutions being developed in areas such as cancer screening, smart farming and conversational AI for the use of enterprises. Our talent pool in AI/ML is fast growing, with over 5,00,000 people working on these technologies at present. India is thus poised to become the AI powerhouse of the world. And with that, there is a potential of the rise of an AI economy in the country.
- Data and AI services are expected to help boost India's economic growth in a big way. Nasscom believes that data and AI will contribute \$450 billion-\$500 billion to India's GDP by 2025, which is

around 10% of the government's aspiration of a \$5 trillion economy. The thrust will come from three key segments: consumer goods and retail, agriculture, and banking and insurance.

- As more opportunities are created, we can expect a net positive effect on employment generation. The growing AI economy is estimated to create over 20 million technical roles alone.
- AI can create not just niche solutions to specific problems that banks and other service providers are deploying, such as speeding up loan application processing or improving customer service; it can also provide solutions for better governance and social impact. For example, during the lockdown, the Telangana police used AI-enabled automated number plate recognition software to catch violations.
- The pandemic has thus provided technology companies in the country a great opportunity to test their own capabilities to create solutions for fast evolving, real-world situations. We are now better prepared for an AI-led future in which we not just solve business problems but also find answers to complex social issues.

### Top priorities for India

- The stakes are high for India. We need to speed up our readiness to seize the opportunities that the future presents. Three areas need our attention.
  - The first is talent development. No meaningful conversation on AI preparedness can take place unless we are able to meet the rising demand with the right talent. In 2019, we nearly doubled our AI workforce to 72,000 from 40,000 the year before. However, the demand continues to outpace the supply. That means our efforts to develop talent must pick up speed.
  - The second area is policies around data usage, governance and security. Without data, there cannot be AI. However, we need a balanced approach in the way we harness and utilise data. We need a robust legal framework that governs data and serves as the base for the ethical use of AI.
  - Third, though the use of digital technologies has gone up, the level of digitisation continues to be low. This poses a big challenge for organisations in finding the right amount of training data to run AI/ML algorithms, which in turn affects the accuracy of the results. Then there is the problem of availability of clean datasets. Organisations need to invest in data management frameworks that will clean their data before they are analysed, thus vastly improving the outcomes of AI models.
- The future for AI looks promising but to convert the potential into reality, India will need better strategies around talent development, stronger policies for data usage and governance, and more investments in creating a technology infrastructure that can truly leverage AI.

### Paris Agreement

(Source: [Down to Earth](#) )

**Context:** *Five years ago, when physical congregations were possible, the world met in freezing cold Paris to sign the Paris Agreement on climate change. Today, when the world is locked down because of a raging virus pandemic, it is time to take stock of what was agreed and what needs to be done.*

### Details:

- What is clear is in past five years, every part of the world has been wreaked by catastrophic weather events. So, even as the novel coronavirus disease (COVID-19) coma takes over our lives, the future's uncertainty must weigh heavy on all our minds — young and old, rich or poor.
- Climate change is a reality and we are beginning to see the devastating impacts, even as the global temperature rise, on average is just 1.2 degree Celsius since the 1880s — and Paris or no Paris agreement, it is expected to go to 3°C or more by this century end.

## Review of the agreement

- Paris 2015 changed the terms of the agreement on climate action fundamentally. Till then the world had set reduction targets of greenhouse gases (GHG) based on the responsibility of countries to the stock of emissions in the atmosphere. This created a framework for action — and built the foundations for the cooperative agreement.
- But countries like the United States, which had been long-term historical contributors, did not want this deal — it put too much onus on them to make reductions. They wanted to erase the very idea of the past and to focus on the need for all to act and for all to take actions based on what they believed they could do.
- Paris Agreement succumbed to this idea. It was an historical deal — and celebrated accordingly.
- In this way all countries threw in their targets into the ring, called the Nationally Determined Contributions (NDC); and even as Paris Agreement was grveled down, it was understood that the sum of these NDCs, would add up to at least 3°C temperature increase by century end.

## Hopes were high

- The US, for once had been roped in through this compromise. The words were salutary — Paris Agreement said it would “aspire” to keep the world below 1.5°C and “well below” 2°C from pre-industrial era of 1880.
- To get this done, three things were on the table.
  - One, to ‘ratchet’ up the NDCs — based on the fact that countries would realise the imperative of taking more drastic action as climate change impacts hit them.
  - Two, a global stocktaking in 2023 and then every five years to measure progress and to use this to ‘ratchet’ cuts.
  - And three, to develop market-based instruments that would allow countries to buy their way into emission reductions in the future.
- Now, five years later, when the conference of parties (COP) to the climate agreement will not even meet physically, the news is not good.
- Let’s not beat around the bush on this. Global emissions may have reduced marginally in the past year because of COVID-19, but this slowdown is temporary. The United Nations Environment Programme’s Emissions Gap Report 2020 finds that global GHG emissions have continued to rise in the past three years. In 2019 emissions were a record high.
- It is also known that countries like the US will not achieve even the meagre voluntary commitments they have set under the Paris Agreement. US emissions in 2019 were higher than in 2016. This even as the country reduced its energy-related emissions by a whopping 30 per cent in the past decade.
- It is also clear that at the current levels of emissions, the world will ‘exhaust’ the carbon budget by 2030 for 1.5°C target. This when large parts of the world, including India, will need the right to develop — which in today’s context where coal and natural gas, both fossil fuels, remain the most competitive fuels, would mean increase in emissions.
- It is clear that the transformation to new energy systems, driven by renewable, is still a way away. Even in most low-carbon advanced regions like the European Union, talk aside, coal is still as large a part of the energy system as is the new renewable technology — wind or solar.
- So, it is necessary to move towards this transformation in the still emerging world, but there are no enabling conditions, that will make this happen. Talk is cheap. Transformation is not.

## But the goal-post is already being shifted

- The new buzz-word is ‘net-zero’. Already many countries in the world have declared net-zero targets for 2050; China has joined the climate-emancipated to say it will be net-zero by 2060. Now the pressure is on all governments, including India, to set its future target.
- The problem is not with the ambition or intention to turn net-zero. The problem is that in most cases, this grandstanding declaration has no flesh — it is devoid of a plan to get there; or the pathway that would make greenhouse gas emissions go away.

- In very few cases, countries have come up with hard targets for this decade — how to get to reductions in 2030. In most cases, this drastic reduction in the immediate is not clear; but the ball has been kicked into the future.
- This is why we need more reality checks in the climate change narrative — the impacts are certain, but as yet, action is pusillanimous.





## Current Affairs Quiz

1) Consider the following statements with respect to Core Inflation

1. It excludes transitory or temporary price volatility, especially from prices of items such as fuel and food.
2. Core inflation is calculated using the Consumer Price Index (WPI).

Which of the statement(s) given above is/are correct?

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

Answer : c

2) Which of the following statements is/are incorrect with respect to Cannabis?

1. It is a generic term used to denote the several psychoactive preparations of the plant Cannabis sativa
  2. The UN Commission on Narcotic Drugs (CND) has recently voted to remove cannabis from Schedule IV of the 1961 Single Convention on Narcotic Drugs
  3. India had recently voted against the UN CND resolution to remove cannabis from the list of most dangerous substances.
- a) 1 and 2 only
  - b) 1 and 3 only
  - c) 3 only
  - d) 2 and 3 only

Answer : c

3) Consider the following pairs on products from Himachal Pradesh

- | Name               | - | Product               |
|--------------------|---|-----------------------|
| 1. Karsog Kulth    | - | A type of Horse Gram  |
| 2. Thangi of Pangi | - | A type of metal craft |
| 3. Chamba Chukh    | - | A type of Hazelnut    |

Which of the pair(s) given above is/are correctly matched?

- a. 1 only
- b. 1 and 3 only
- c. 2 and 3 only
- d. All of the above

Answer : a

**Thangi of Pangi** – A type of Hazelnut

**Chamba Chukh** - It's a chutney made from green and red chillies grown in Chamba, and prepared in traditional and unique ways

4) Which of the following statement/s are incorrect with respect to *Hayabusa2 Mission*?

1. Hayabusa2 mission was launched by Japanese Aerospace Exploration Agency (JAXA).
2. It brings back samples from asteroid Bennu that orbits the Sun.

Select the incorrect answer using the codes given below:

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

Answer : a

The spacecraft was sent on a six-year-long voyage to study the asteroid Ryugu and collect samples that it is now bringing back to the Earth.

5) Global Wage Report was released recently by?

- a. World Bank
- b. World Economic Forum
- c. International Monetary Fund
- d. International Labour Organization

Answer : d

6) Which of the following is the first Union Territory in India to become 100 per cent organic?

- a. Chandigarh
- b. Lakshadweep Islands
- c. Andaman & Nicobar Islands
- d. Dadra and Nagar Haveli and Daman and Diu

Answer : b

- After Sikkim, Lakshadweep is the first Union Territory to become 100 per cent organic as all farming is carried out without the use of synthetic fertilisers and pesticides, providing access to safer food choices and making agriculture a more environment-friendly activity.

7) Which of the following statements is/are correct with respect to China's Artificial Sun?





1. It is HL-2M Tokamak reactor, China's largest and most advanced nuclear fusion experimental research device.
2. It uses a powerful magnetic field to fuse hot plasma and can reach temperatures 50 times hotter than the core of the sun.

Select the correct answer using the codes given below:

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

Answer : a

It uses a powerful magnetic field to fuse hot plasma and can reach temperatures of over 150 million degrees Celsius, approximately ten times hotter than the core of the sun.

8. Global Biodiversity Outlook report is published by

- a) UN Environment Programme (UNEP)
- b) World Wide Fund for Nature (WWF)
- c) UN Convention of Biological Diversity (CBD)
- d) World Economic Forum

Answer: c)

9. National Investment and Infrastructure Fund (NIIF) is an investment vehicle that cannot fund in which of the following sectors?

1. Green energy
2. Affordable and mid-income housing
3. Social infrastructure
4. Manufacturing and logistics
5. Infrastructure services

Select the correct answer code:

- a) 1 and 3 only
- b) 2 and 3 only
- c) 3 and 4 only
- d) None of the above

Answer: d)

It can fund in all of the above options.

10. Quantum dots (QDs) are man-made nanoscale crystals that can transport electrons. Potential applications of quantum dots include

1. Solar Cells
2. LEDs
3. Quantum Computing
4. Medical Imaging
5. Cell Biology Research

Select the correct answer code:

- a) 1, 2 and 3 only
- b) 2, 3 and 4 only
- c) 1, 3, 4 and 5 only
- d) All of the above

Answer: d)

11) Production Gap report 2020 was published recently by?

- a. World Economic Forum
- b. World Trade Organization
- c. UN Environment Programme
- d. UN Conference on Trade and Development

Answer : c

This report highlights the discrepancy between countries' planned fossil fuel production levels and the global levels necessary to limit warming to 1.5°C or 2°C.

12) Consider the following statements with respect to Organochlorides

1. They are a group of chlorinated compounds that belong to the class of persistent organic pollutants (POPs).
2. They are widely used as pesticides.

Which of the statement(s) given above is/are correct?

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

Answer : c

- A 'mystery disease' has left 450 patients in Eluru, Andhra Pradesh with seizures, nausea, dizziness and headaches.
- It is being investigated that organochlorines may be behind the unknown illness.

13) Climate Change Performance Index (CCPI) is published annually by?

- a. UN Environment Programme
- b. German Watch
- c. UN Framework Convention on Climate Change
- d. None of the above

Answer : b

14) Which of the following statements is/are correct with respect to Tharu Tribes?

1. They belongs to the Terai lowlands, amid lower Himalayas and can be found only in India.



2. They speak various dialects of Tharu, and variants of Hindi, Urdu, and Awadhi.

Select the correct answer using the codes given below:

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

Answer : b

The Tharus live in both India and Nepal.

15. Havana syndrome, recently seen in news is related to

- a) Neurological illness
- b) Communicable Disease
- c) HIV
- d) Severe acute respiratory syndrome (SARS)

Answer: a)

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

16. The Least Developed Countries Report 2020 was released recently by?

- a. UNDP
- b. UN Conference on Trade and Development
- c. UN Sustainable Development Solutions Network
- d. Organisation of Economic Cooperation and Development

Answer : b

- 17) Consider the following statements with respect to Narcotic Drugs and Psychotropic Substances (NDPS) Act

- 1. It has provisions for the court to grant immunity from prosecution to an addict involved in a small quantity of drugs.
- 2. Charas an important crop in Himachal Pradesh was banned in India under the NDPS Act.

Which of the statement(s) given above is/are correct?

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

Answer : c

18. Geographical Indication tags are typically given for

- 1. Agricultural products
- 2. Foodstuffs
- 3. Handicrafts
- 4. Industrial products
- 5. Wines and spirit drinks

Select the correct answer code:

- a) 1, 3, 4 and 5 only
- b) 1, 2, 4 and 5 only
- c) 1 and 3 only
- d) All of the above

Answer: d)

19. Consider the following statements with respect to Northern Lights Phenomena:

- 1. These are usually witnessed far up in the Polar Regions or the high latitude regions of Europe and America.
- 2. These Auroras occurs when solar wind enter the Earth’s atmosphere.

Which of the statement(s) given above is/are correct?

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

Answer : c

20. Which of the following pairs on Lunar Missions are matched incorrectly?

Mission	Nation
1. ARTEMIS	- USA
2. Kaguya	- European Union
3. Beresheet	- UAE
4. LUNA	- Russia

Select the correct answer code:

- a. 1 & 3 only
- b. 2 and 3 only
- c. 1, 2 & 3 only
- d. 1 & 4 only

Answer : b

- **Beresheet** It was Israel's first lunar mission and the first attempt by a private company to land on the Moon.
- **Kaguya** - is a Japanese Space Agency (JAXA) lunar orbiter mission.

## **Special Issue**

December (Week 2)

### **Contents**

What are the rules for approval of Covid-19 vaccines in India? .....	2
----------------------------------------------------------------------	---





## **What are the rules for approval of Covid-19 vaccines in India?**

(Source: [Indian Express](#) )

**Context:** *Three vaccine developers have now made applications to the Central Drug Standard Control Organisation (CDSCO), India's drug regulator, seeking emergency use approval for their candidate Covid-19 vaccines which are still under trials. None of these has yet generated data about the effectiveness of their vaccine from phase-III trials conducted in India, which is a mandatory requirement in the normal process of approval. And each of the three presents a slightly different case, which the CDSCO will have to evaluate and decide on.*

### **What are these vaccine candidates?**

- **COVISHIELD:** Pune-based Serum Institute of India has sought approval for its version of the vaccine developed by Oxford University and AstraZeneca, which it has been testing in India for the last few months. The candidate is currently in phase-III trials in India. In its application, Serum has submitted the safety data from phase I and phase II trials, while the effectiveness data has been sourced from phase-III trials of the same vaccine in the UK and Brazil.
- **COVAXIN:** Bharat Biotech, a Hyderabad-based company which is developing a vaccine, Covaxin, in collaboration with National Institute of Virology, an ICMR institute in Pune, has started phase-III trials only recently, and is yet to enrol all the participants as per its design. Its application is based mainly on the safety data from phase-I and phase-II trials.
- **BNT162b2:** US pharmaceutical major Pfizer hasn't carried out clinical trials in India of its vaccine, developed in collaboration with BioNTech, but has still sought an approval to use it here based on the results of the trials conducted in the US. The Pfizer-BioNTech vaccine is the first one to receive the regulator's approval anywhere in the world, having been granted emergency use authorisation in the UK last week.

### **What are the regulatory provisions for approval of vaccines in India?**

- Clinical trials of new drugs and vaccines, and their approvals, are governed by the New Drugs and Clinical Trials Rules, 2019. These Rules do not use the term "emergency use authorisation".
- This term is used mainly by the regulatory agencies in the US and some other countries, and has become popular in the context of the current epidemic. However, that does not mean that the Indian regulatory system does not have provisions for "special situations" like the current one.
- The 2019 rules provide for "accelerated approval process" in several situations that would include the one like the current pandemic. In such situations, there is a provision for granting approval to a drug that is still in clinical trials, "provided there is a prima facie case of the product being of meaningful therapeutic benefit".
- "Accelerated approval may also be granted to a new drug if it is intended for the treatment of a serious, or life-threatening condition, or disease of special relevance to the country, and addresses unmet medical needs," one of the relevant provisions of the Rules says. The definition of new drug in the 2019 Rules includes a vaccine.
- Further, it makes it clear that a new drug, or a vaccine, can be considered for approval if "remarkable" effectiveness is reported even from phase-II trials.
- "If the remarkable efficacy is observed with a defined dose in the phase-II clinical trials of the investigational new drug for the unmet medical needs of serious and life threatening disease in the country, it may be considered for grant of marketing approval by the central licensing authority based on phase-II clinical trial data. In such cases, additional post licensure studies may be required to be conducted after approval to generate the data on larger population...", the Rules say.



- Accordingly, the approval granted to drugs or vaccines that are still in clinical trials is temporary, and valid only for one year. Such a provision, therefore, makes even Bharat Biotech eligible to apply for approval, although it is still in early stages of phase-III clinical trials.

#### **How different are Indian regulations from those elsewhere?**

- Some provisions in the 2019 Rules, like those mentioned above, are different compared to what has been prescribed by the US Food and Drugs Administration (FDA), which had issued very specific guidelines for approval of vaccines for Covid-19.
- The FDA has made it clear that an emergency use authorisation can be considered only after sufficient data from phase-3 trials are generated, and an application cannot be made on the basis of data only from phase-1 or phase-2 trials.
- It has also said that preliminary phase-3 data should show at least 50% effectiveness in preventing the disease, and that this data needed to be generated from “well over” 3,000 trial participants.

#### **What about vaccines that have done well in trials outside the country?**

- The 2019 Rules do not say anything specific about whether data from a trial conducted in another country can be considered while assessing an application for accelerated approval to a drug or vaccine to be used in India. But the Indian health authorities have said they were keeping an open mind, and it would all depend on what scientists and experts make of the data that are presented to them.
- They stressed that in evaluating the vaccine applications, the subject expert committees will carefully weigh the risks with the potential benefits to assess whether the vaccine was likely to provide a significant breakthrough in containing the current epidemic.
- This is in line with the stated principle of the US FDA as well. The FDA has said that an emergency use authorisation would be granted only after it has been determined that the “known and potential benefits outweigh the known and potential risks of the vaccine”.
- In making this assessment, the expert committee in India would be willing to look at data generated during trials conducted in other countries as well, as is the case with the applications made by Serum Institute and Pfizer.
- The Indian authorities also pointed out that an application need not always result in an approval, which will be granted only after a rigorous scientific analysis of the data presented. The subject expert committees can reject an application or ask for more data if it is not satisfied.



## December (Week 3)

### INDEX

#### Contents

<b>Prelims</b> .....	3
<b>NATIONAL</b> .....	3
Delimitation .....	3
Seventh Schedule .....	4
Kaziranga National Park .....	7
Maharashtra bill on sexual crime .....	7
International Bharathi Festival.....	9
Dispute Settlement Mechanism .....	10
Launch of Himgiri.....	10
Human Development Index .....	11
ISRO launches satellite for communications-CMS-01.....	12
<b>INTERNATIONAL</b> .....	13
S-400 deal .....	13
Meteor shower .....	13
Exoplanet – Planet Nine.....	14
CAATSA.....	14
The Great Conjunction.....	15
Currency Manipulation .....	16
<b>Mains</b> .....	18
<b>GS II</b> .....	18
Is ‘One Nation, One Election’ possible?.....	18
Israel-Morocco deal .....	19
Shifting the Rohingya to Bhashan Char.....	20
Rethinking our nutrition agenda .....	22
The many challenges for WTO.....	23
The long road to food security .....	25
<b>GS III</b> .....	26
The roots of the agricultural crisis .....	26
Hazardous ideas for the Himalayas.....	28
Innovations for cleaner air .....	30
The PM-WANI project .....	31
How did climate change alter the world this year?.....	32

Current Affairs Quiz .....	35
----------------------------	----



# Prelims

## NATIONAL

### Delimitation

(Source: [The Hindu](#) )

**Context:** A paper released by the Pranab Mukherjee Foundation (PMF) on the eve of the late President's birth anniversary suggested that the next delimitation exercise should be a two-step process: first a Delimitation Commission should be set up to redraw boundaries of constituencies on the basis of the 2031 Census and then a State Reorganisation Act be passed to split States into smaller ones.

#### What is delimitation and why is it needed?

- Delimitation is the act of redrawing boundaries of Lok Sabha and Assembly seats to represent changes in population. In this process, the number of seats allocated to a state may also change.
- The objective is to provide equal representation for equal population segments, and a fair division of geographical areas, so that no political party has an advantage.
- The Delimitation Commission's orders cannot be questioned before any court.

#### Why is delimitation needed?

- Delimitation is the act of redrawing boundaries of Lok Sabha and state Assembly seats to represent changes in population. In this process, the number of seats allocated to different states in Lok Sabha and the total number seats in a Legislative Assembly may also change.
- The main objective of delimitation is to provide equal representation to equal segments of a population. It also aims at a fair division of geographical areas so that one political party doesn't have an advantage over others in an election.
- Delimitation is carried out by an independent Delimitation Commission. The Constitution mandates that its orders are final and cannot be questioned before any court as it would hold up an election indefinitely.

#### How is delimitation carried out?

- Under Article 82, the Parliament enacts a Delimitation Act after every Census. Once the Act is in force, the Union government sets up a Delimitation Commission made up of a retired Supreme Court judge, the Chief Election Commissioner and the respective State Election Commissioners.
- The Commission is supposed to determine the number and boundaries of constituencies in a way that the population of all seats, so far as practicable, is the same.
- The Commission is also tasked with identifying seats reserved for Scheduled Castes and Scheduled Tribes; these are where their population is relatively large.
- All this is done on the basis of the latest Census and, in case of difference of opinion among members of the Commission, the opinion of the majority prevails.
- The draft proposals of the Delimitation Commission are published in the Gazette of India, official gazettes of the states concerned and at least two vernacular papers for public feedback. The Commission also holds public sittings.
- After hearing the public, it considers objections and suggestions, received in writing or orally during public sittings, and carries out changes, if any, in the draft proposal.

- The final order is published in the Gazette of India and the State Gazette and comes into force on a date specified by the President.

### How often has delimitation been done in the past?

- The first delimitation exercise in 1950-51 was carried out by the President (with the help of the Election Commission), as the Constitution at that time was silent on who should undertake the division of states into Lok Sabha seats.
- This delimitation was temporary as the Constitution mandated redrawing of boundaries after every Census.
- Hence, another delimitation was due after the 1951 Census. Pointing out that the first delimitation had left many political parties and individuals unhappy, the EC advised the government that all future exercises should be carried out by an independent commission.
- This suggestion was accepted and the Delimitation Commission Act was enacted in 1952. Delimitation Commissions have been set up four times — 1952, 1963, 1973 and 2002 under the Acts of 1952, 1962, 1972 and 2002. There was no delimitation after the 1981 and 1991 Censuses.

### Why was there no delimitation then?

- The Constitution mandates that the number of Lok Sabha seats allotted to a state would be such that the ratio between that number and the population of the state is, as far as practicable, the same for all states.
- Although unintended, this provision implied that states that took little interest in population control could end up with a greater number of seats in Parliament. The southern states that promoted family planning faced the possibility of having their seats reduced.
- To allay these fears, the Constitution was amended during Indira Gandhi's Emergency rule in 1976 to suspend delimitation until 2001.
- Despite the embargo, there were a few occasions that called for readjustment in the number of Parliament and Assembly seats allocated to a state.
- These include statehood attained by Arunachal Pradesh and Mizoram in 1986, the creation of a Legislative Assembly for the National Capital Territory of Delhi, and creation of new states such as Uttarakhand.
- Although the freeze on the number of seats in Lok Sabha and Assemblies should have been lifted after the 2001 Census, another amendment postponed this until 2026. This was justified on the ground that a uniform population growth rate would be achieved throughout the country by 2026.
- So, the last delimitation exercise — started in July 2002 and completed on May 31, 2008 — was based on the 2001 Census and only readjusted boundaries of existing Lok Sabha and Assembly seats and reworked the number of reserved seats.

## Seventh Schedule

(Source: [The Hindu](#) )

**Context:** Fifteenth Finance Commission chairman N.K. Singh has called for a fresh look at the Constitution's Seventh Schedule, which forms the basis for allocating subjects to the Centre and States, and hinted at the need to fill an 'institutional vacuum' created by the abolition of the Planning Commission.

### What is 7<sup>th</sup> Schedule?

- The seventh schedule under Article 246 of the constitution deals with the division of powers between the union and the states. It contains three lists Union List, State List and Concurrent List.
- The union list details the subjects on which Parliament may make laws while the state list details those under the purview of state legislatures. The concurrent list on the other hand has subjects in which both



Parliament and state legislatures have jurisdiction. However the Constitution provides federal supremacy to Parliament on concurrent list items in case of a conflict.

- The constitutional provisions in India on the subject of distribution of legislative powers between the Union and the States are defined under several articles; the most important in this regard being specifically under **articles 245 & 246** of the Constitution of India.
- The Seventh Schedule to the Constitution of India defines and specifies allocation of powers and functions between Union & States. It contains three lists; i.e. 1) Union List, 2) State List and 3) Concurrent List.

#### **Union List:**

- The Union List is a list of 100 (Originally 97) numbered items as provided in the Seventh Schedule to the Constitution of India. The Union Government or the Parliament of India has exclusive power to legislate on matters relating to these items. Few important items are:
  - Defence of India
  - Naval, military and air forces; any other armed forces of the Union.
  - Delimitation of cantonment areas, local self-government
  - Atomic energy and mineral resources necessary for its production.
  - Industries declared by Parliament by law to be necessary for the purpose of defence or for the prosecution of war.
  - Central Bureau of Intelligence and Investigation.
  - Preventive detention for reasons connected with Defence, Foreign Affairs, or the security of India; persons subjected to such detention.
  - War and peace.
  - Citizenship, naturalisation and aliens.
  - Pilgrimages to places outside India.
  - Highways declared by or under law made by Parliament to be national highways.
  - Shipping and navigation on inland waterways.
  - Currency, coinage and legal tender; foreign exchange.
  - Post Office Savings Bank.
  - Trade and commerce with foreign countries import and export across customs frontiers definition of customs frontiers.
  - Inter-State trade and commerce.
  - Establishment of standards of weight and measure.
  - Regulation of mines and mineral.
  - Regulation of labour and safety in mines and oil-fields.
  - Regulation and development of inter-State rivers and river
  - Fishing and fisheries beyond territorial waters.
  - The institutions known at the commencement of this Constitution as the National Library, the Indian Museum, the Imperial War Museum, the Victoria Memorial and the Indian War Memorial
  - The institutions known at the commencement of this Constitution as the Benares Hindu University, the Aligarh Muslim University and the Delhi University.
  - Elections to Parliament, to the Legislatures of States and to the offices of President and Vice-President; the Election Commission.
  - Salaries and allowances of members of Parliament, the Chairman and Deputy chairman of the Council of States and the Speaker and Deputy Speaker of the House of the People.
  - Constitution, organisation, jurisdiction and powers of the Supreme Court.
  - Constitution and organisation (including vacations) of the High Courts.
  - Jurisdiction and powers of all courts, except the Supreme Court.

#### **State List:**





- The State List is a list of 61 (Originally 66) items in the Schedule Seven to the Constitution of India. The respective state governments have exclusive power to legislate on matters relating to these items. Few important items are:
  - Public order but not including the use of any naval, military or air force or any other armed force of the union.
  - Police
  - Officers and servants of the High Court
  - Prisons, reformatories, Borstal institutions
  - Local government
  - Public health and sanitation; hospitals and dispensaries.
  - Pilgrimages, other than pilgrimages to places outside India.
  - Intoxicating liquors, that is to say, the production, manufacture, transport, purchase and sale of intoxicating liquors.
  - Libraries, museums and other similar institutions
  - Communications, that is to say, roads, bridges, ferries, and other means of communication not specified.
  - Agriculture
  - Preservation, protection and improvement of stock and prevention of animal diseases; veterinary training and practice.
  - Fisheries
  - Regulation of mines and mineral development subject
  - Trade and commerce within the State subject
  - Elections to the Legislature of the State
  - Salaries and allowances of members of the legislature of the State, of the Speaker and Deputy Speaker of the Legislative Assembly and, if there is a Legislative Council, of the Chairman and Deputy Chairman thereof.
  - Taxes on professions, trades, callings and employments.

#### **Concurrent List:**

- There are 52 (Originally 47) items currently in the list: This includes items which are under joint domain of the Union as well as the respective States. However, given that there can be conflict when it comes to ***laws passed by Parliament and state legislatures on the same subject, the Constitution provides for a central law to override a state law.***
  - Criminal procedure
  - Preventive detention for reasons connected with the security of a State, the maintenance of public order, or the maintenance of supplies and services essential to the community; persons subjected to such detention.
  - Removal from one State to another State of prisoners
  - Marriage and divorce
  - Transfer of property other than agricultural land
  - Bankruptcy and insolvency.
  - Trust and Trustees.
  - Evidence and oaths, recognition of laws, public acts and records, and judicial proceedings.
  - Civil procedure
  - Contempt of court, but not including contempt of the Supreme Court.
  - Vagrancy; nomadic and migratory tribes.
  - Lunacy and mental deficiency.
  - Prevention of cruelty to animals.
  - Adulteration of foodstuffs and other goods.
  - Drugs and poisons
  - Economic and social planning.



- Trade unions, industrial and labour disputes.
- Social security and social insurance; employment and unemployment.
- Welfare of labour
- Education
- Legal, medical and other professions.
- Relief and rehabilitation of persons displaced from their original place of residence
- Charities and charitable institutions
- Prevention of the extension from one State to another of infectious or contagious diseases or pests affecting men, animals or plants.
- Price control.
- Newspapers, books and printing presses.
- Archaeological sites
- Stamp duties.

### **Transferred Subjects:**

- Through the 42nd Amendment Act of 1976, Five subjects were transferred from State to Concurrent List. They are:
  - Education
  - Forests
  - Weights & Measures
  - Protection of Wild Animals and Birds
  - Administration of Justice

### **Kaziranga National Park**

(Source: [The Hindu](#) )

**Context:** *Elephants and jeeps are no longer the only modes of regulated transport to call on the rhino in the Kaziranga National Park and Tiger Reserve, billed as the best-conserved home of the one-horned animal. The park can now be explored by boats while bicycle tracks are also being finalised. One can go trekking too. But the new activities are beyond the 1,302 sq km Kaziranga's core area of 482 sq km.*

### **Kaziranga National Park**

- Kaziranga National Park lies partly in Golaghat District and partly in Nagaon District of Assam. It is the oldest park in Assam covers an area of 430 Sq kms along the river Brahmaputra on the North and the Karbi Anglong hills on the South.
- The National Highway 37 passes through the park area and tea estates, hemmed by table-top tea bushes. One can even see the rhinos and wild elephants straying near the highway.
- Kaziranga National Park a world heritage site is famous for the Great Indian one horned rhinoceros, the landscape of Kaziranga is of sheer forest, tall elephant grass, rugged reeds, marshes & shallow pools. It has been declared as National Park in 1974.
- Kaziranga National Park is one of the last areas in eastern India undisturbed by a human presence. It is inhabited by the world's largest population of one-horned rhinoceroses, as well as many mammals, including tigers, elephants, panthers and bears, and thousands of birds.
- Kaziranga national park is located fairly in the Golaghat and Nagaon regions of Assam in India. It is also placed beside the Brahmaputra River on the North and the Karbi Anglong mounts on the South India.

### **Maharashtra bill on sexual crime**

(Source: [Indian Express](#) )



**Context:** *The Maharashtra government this week presented a draft bill making changes to existing laws on violence against women and children. The Bill, proposed to be enacted as Shakti Act, 2020, has provisions for enhancing punishment including death penalty for rape, fine up to Rs 10 lakh on perpetrators of violence, faster investigations and quicker disposal of cases.*

#### **What is the reason given by Maharashtra to bring in a new law?**

- The main reason given by the government for bringing in the new law is an increase in the number of cases of violence, specifically sexual violence against women and children.
- “In order to effectively control the heinous sexual offences against women and children, it is necessary to complete the investigation and the trial of these cases within a time frame, which may deter the perpetrators from committing such offences. Stringent punishment, including heavy fines and death penalty, needs to be prescribed,” the statement of objects and reasons of the Bill says.

#### **Which laws are proposed to be amended?**

- The draft Bill proposes to make changes to the Indian Penal Code, the Code of Criminal Procedure and the Protection of Children from Sexual Offences Act. The changes are proposed in existing sections of rape, sexual harassment, acid attack and child sexual abuse.
- The Bill proposes death penalty in cases of rape, gangrape, rape by persons in authority, aggravated sexual assault of minors and in cases of acid attack when grievous injury is caused. The death penalty is proposed “in cases which are heinous in nature and where adequate conclusive evidence is available and circumstances warrant exemplary punishment”.
- The Bill also proposes to add a heavy fine amount of up to Rs 10 lakh on those found guilty. The existing law had provisions for a fine but did not specify the amount in most sections. In cases of acid attacks, where grievous injury is caused to a victim, a fine of up to Rs 10 lakh is proposed to be paid to the victim for treatment including plastic surgery and reconstruction.
- The Bill has also proposed to enhance punishment in the existing law increasing punishment in some sections from five years to seven and from seven to ten years in aggravated cases of sexual violence.
- The Bill also proposes amendments to the Criminal Procedure Code, directing for an investigation in these cases to be completed within 15 days after an FIR is filed, extendable only by seven days. If it is not done within this time, the investigating officer will have to explain the reasons in a written report to the commissioner of police or special inspector general.
- The Bill also states that a trial has to be completed within 30 days after the chargesheet is filed against an accused. An appeal filed before a higher court is proposed to be disposed of within 45 days. The Bill proposes setting up exclusive courts for this purpose.
- While such provisions for speedy disposal of cases and setting of special courts are also present in the POCSO Act, the disproportionate ratio between cases filed and the existing infrastructure including in forensics, judiciary leads to higher pendency.

#### **Provisions related to social media**

- The draft Bill proposes an additional law to deal with abuse of women on social media. Section 354E is added to include intentional acts creating “a sense of danger, intimidation, fear to a woman” apart from insulting her modesty by any act, deed or words including offensive communication will be an offence with a maximum punishment of two years and a Rs 1 lakh fine.
- This also includes uploading morphed videos of women or threatening them with uploading of photos, videos which could defame, cause disrepute to them or violate their privacy.
- The Bill also makes it mandatory for Internet, telephone providers and social media platforms to share electronic records, data for probes in cases of sexual violence against women and children within seven days or a punishment of simple imprisonment for one month and fine up to Rs 5 lakh can be imposed.

#### **Provisions for “false” information and “implied consent”**

- The Bill also makes provision for making a “false complaint” or provides false information in respect of offence committed stating that anyone who does that “solely with the intention to humiliate, extort or threaten or defame or harass” a person shall face imprisonment for a term up to one year or fine or both.
- The Bill also proposes to add an explanation to Section 375 (rape) of the IPC. “Rape committed in circumstance including but not limited to some form of assurance including promise of marriage or understanding between the parties, where they are consenting adults, and from conduct it appears that act has been committed with consent or ‘implied consent’ may be presumed that valid consent is given.”
- The existing law does not have a blanket assumption of consent being implied in such cases.

#### **Other provisions**

- The Bill also proposes setting up of a “Women and Children Offenders Registry” linked to the National Registry of Sexual Offenders and will be made available to law enforcement agencies with details of persons convicted of specified offences of sexual violence against women and children. A separate police team will also be set up in each district to probe such cases.
- The Bill also states that the government will set up institutions like the One Stop Centre for providing victims rehabilitation, legal aid, counselling, medical support. Many of these are already proposed under various schemes like Manodhairya in the state.

### **International Bharathi Festival**

(Source: [PIB](#) )

**Context:** Prime Minister Shri Narendra Modi addressed International Bharathi Festival 2020 through video conferencing which was organised by Vanavil Cultural Centre to celebrate the 138th birth anniversary of Mahakavi Subramanya Bharathi.

#### **Subramanya Bharathi**

- Popularly known as “Mahakavi Bharathi”, he was a Tamil writer, poet, journalist, Indian independence activist, social reformer and polyglot.
- He fought for the emancipation of women, against child marriage, stood for reforming Brahminism and religion.
- Bharati, as a young man began his career as a journalist and as a sub-editor in “Swadesamitran” in 1904.
- He brought out a weekly, “India” in May 1906. It declared as its motto the three slogans of the French Revolution: Liberty, Equality and Fraternity.
- Bharati was against casteism. He undertook several revolutionary measures challenging orthodoxy, by adorning many Dalits in Tamil Nadu with the upanayana (sacred thread).
- Bharati advocated and ensured entry of Dalits into temples.
- He visualised ‘woman’ as Shakti or Power. Bharati also brought out a front cover for the magazine, “Chakravarthini”, in 1906, which focussed mainly on the empowerment of Indian women.
- He also advocated and campaigned for women to participate in politics, their rights and education.

#### **Bharathi Award**

- It was instituted in 1994 by Vanavil Cultural Centre.
- Every year it is being conferred on eminent persons who have done laudable service in any field of social relevance and thus worked towards the fulfilment of Bharathi’s dreams.



## **Dispute Settlement Mechanism**

(Source: [Indian Express](#) )

**Context:** *In its bid to placate farmers protesting on the borders of the national capital for over three weeks against the new farm laws, the Centre offered to significantly water down key provisions of these laws. Among the changes proposed is the rollback of a unique dispute resolution mechanism for issues between farmers and buyers, and instead bringing such disputes under the jurisdiction of a civil court.*

### **What is the dispute settlement mechanism?**

- The Farmers' Produce Trade and Commerce (Promotion and Facilitation) Act, 2020, provides a buyer a right to engage in trade and commerce of a farmer's produce across the country. This means a farmer has freedom to engage in intra-state and inter-state trade with buyers, expanding her choices beyond a traditional market.
- The law also provides for a dispute resolution mechanism in Chapter 3 of the Act. Section 8 of the Act, which lays down the "dispute resolution mechanism for farmers" states that "in case of any dispute arising out of a transaction between the farmer and a trader", a Conciliation Board appointed by the Sub-Divisional Magistrate will settle the dispute.
- It says the settlement by the Conciliation Board will be binding on the parties.

### **How will the Board decide the dispute?**

- The law provides that the Board will consist of a chairperson and two to four such members as the Sub-Divisional Magistrate may deem fit. Parties will first have to make an application to the SDM seeking a "mutually acceptable solution through conciliation".
- Then the Board will take up the dispute. The parties themselves can recommend one or two members each as members to the Board along with the Chairperson, who will be a government employee appointed by the Sub-Divisional Magistrate.

### **What if the parties cannot reach a settlement?**

- If the dispute is not settled within 30 days of being brought to the Board, the SDM will hear the dispute acting as the "Sub-Divisional Authority" for settlement of such dispute.
- The Sub-Divisional Authority is empowered to pass three kinds of orders under the law: (a) pass an order for the recovery of the amount payable to the farmers and traders; (b) impose a penalty as stipulated in sub-section (2) of section 11; or (c) suspend for such period as he deems fit or cancel the right to operate as an electronic trading and transaction platform.
- The law also provides for an appeal against the orders of the Sub-Divisional Authority, which is within 60 days from the date of the order to an officer not below the rank of Joint Secretary to the Government of India, to be nominated by the Central Government for this purpose.

## **Launch of Himgiri**

(Source: [PIB](#) )

**Context:** *Himgiri is being built under Project 17A.*

### **Details:**





- Under the Project 17A program, a total of seven ships, four at Mazagon Dock Shipbuilders Limited (MDL) and three ships at Garden Reach Shipbuilders and Engineers Limited (GRSE) are being built with enhanced stealth features, advanced indigenous weapon and sensor fit along with several other improvements.
- The launch of 'Himgiri' has showcased GRSE's commitment towards the building of three state-of-the-art warships of P17A for Indian Navy.
- P17A ships are the first gas turbine propulsion and largest combat platforms ever built at GRSE.

### Project 17A

- Project 17A frigates is a design derivative of the Shivalik class stealth frigates.
- 'Integrated Construction (IC)' has been employed here, wherein the blocks are pre-outfitted before joining to reduce the build period of warships.
- INS Nilgiri is the first ship of Project 17A.

## Human Development Index

(Source: [The Hindu](#) )

**Context:** India dropped two ranks in the United Nations' Human Development Index this year, standing at 131 out of 189 countries. However, if the Index were adjusted to assess the planetary pressures caused by each nation's development, India would move up eight places in the ranking, according to the report.

**For the first time, the United Nations Development Programme introduced a new metric to reflect the impact caused by each country's per-capita carbon emissions and its material footprint, which measures the amount of fossil fuels, metals and other resources used to make the goods and services it consumes.**

### What Is the Human Development Index (HDI)

- The Human Development Index (HDI) is a statistic developed and compiled by the United Nations to measure and various countries' levels of social and economic development.
- It is composed of four principal areas of interest: mean years of schooling expected years of schooling, life expectancy at birth, and gross national income per capita. This index is a tool used to follow changes in development levels over time and to compare the development levels of different countries.
- The Human Development Index (HDI) was established to place emphasis on individuals, more precisely on their opportunities to realize satisfying work and lives. Evaluating a country's potential for individual human development provides a supplementary metric for evaluating a country's level of development besides considering standard economic growth statistics, such as gross domestic product (GDP).
- This index can also be used to examine the various policy choices of nations; if, for example, two countries have approximately the same gross national income (GNI) per capita, then it can help to evaluate why they produce widely disparate human development outcomes. Proponents of the HDI hope it can be used to stimulate such productive public policy debate.

### How Is the HDI Measured?

- The HDI is a summary measurement of basic achievement levels in human development. The computed HDI of a country is an average of indexes of each of the life aspects that are examined: knowledge and understanding, a long and healthy life, and an acceptable standard of living.
- Each of the four components is normalized to scale between 0 and 1, and then the geometric mean of the three components is calculated.



- The health aspect of the HDI is measured by the life expectancy, as calculated at the time of birth, in each country, normalized so that this component is equal to 0 when life expectancy is 20 and equal to 1 when life expectancy is 85.
- Education is measured on two levels: the mean years of schooling for residents of a country and the expected years of schooling that a child has at the average age for starting school. These are each separately normalized so that 15 mean years of schooling equals one, and 18 years of expected schooling equals one, and a simple mean of the two is calculated.
- The metric chosen to represent the standard of living is GNI per capita based on purchasing power parity (PPP), a common metric used to reflect average income. The standard of living is normalized so that it is equal to 1 when GNI per capita is \$75,000 and equal to 0 when GNI per capita is \$100.
- The final Human Development Index score for each country is calculated as a geometric mean of the three components by taking the cube root of the product of the normalized component scores.

### **ISRO launches satellite for communications-CMS-01**

(Source: [The Hindu](#) )

**Context:** *The Indian Space Research Organisation (ISRO) successfully placed into a transfer orbit India's 42nd communications satellite, CMS-01, carried on board the PSLV-C50.*

#### **Details:**

- CMS-01 is a communications satellite envisaged for providing services in extended C Band of the frequency spectrum and its coverage will include the Indian mainland and the Andaman & Nicobar and Lakshadweep islands, the ISRO said.
- The satellite is expected to have a life of over seven years.
- The new satellite CMS-01 will take over the mantle from the ageing telecommunication satellite GSAT-12 that has outlived its planned operational period by rendering seamless service for 11 years.

## INTERNATIONAL

### S-400 deal

(Source: [Indian Express](#) )

**Context:** *The United States has imposed sanctions on Turkey over Ankara's acquisition of Russian S-400 air defence systems. Ankara acquired the Russian S-400 ground-to-air defenses in mid-2019 and says they pose no threat to NATO allies. Washington has long been threatening sanctions on Turkey and had removed the country from an F-35 jet program last year.*

#### **What is the S-400 air defence missile system?**

- The S-400 Triumf, (NATO calls it SA-21 Growler), is a mobile, surface-to-air missile system (SAM) designed by Russia. It is the most dangerous operationally deployed modern long-range SAM (MLR SAM) in the world, considered much ahead of the US-developed Terminal High Altitude Area Defense system (THAAD).
- The system can engage all types of aerial targets including aircraft, unmanned aerial vehicles (UAV and ballistic and cruise missiles within the range of 400km, at an altitude of up to 30km.
- The system can track 100 airborne targets and engage six of them simultaneously.
- It represents the fourth generation of long-range Russian SAMs, and the successor to the S-200 and S-300. The S-400's mission set and capabilities are roughly comparable to the famed US Patriot system.
- The S-400 Triumf air defence system integrates a multifunction radar, autonomous detection and targeting systems, anti-aircraft missile systems, launchers, and command and control centre. It is capable of firing three types of missiles to create a layered defence.
- The S-400 is two-times more effective than previous Russian air defence systems and can be deployed within five minutes. It can also be integrated into the existing and future air defence units of the Air Force, Army, and the Navy.
- The first S-400 systems became operational in 2007 and is responsible for defending Moscow. It has been deployed in Syria in 2015, to guard Russian and Syrian naval and air assets. Russia has also stationed S-400 units in Crimea to strengthen Russia's position on the recently annexed peninsula.

### Meteor shower

(Source: [Indian Express](#) )

**Context:** *The Geminids meteor shower, believed to be the strongest of the year, is active from December 4-December 20, with December 13 and 14 considered to be the best nights for viewing these meteor showers. Soon after the Geminids meteor shower, viewers in the northern hemisphere can expect to see the Ursids meteor shower, which will be active from December 17-December 26 and will peak right before Christmas on the night of December 21-December 22.*

#### **What are meteor showers?**

- Meteors are bits of rock and ice that are ejected from comets as they manoeuvre around their orbits around the sun. For instance, the Orionids meteors emerge from the comet 1P/Halley and make their yearly presence in October.



- Meteor showers are witnessed when Earth passes through the trail of debris left behind by a comet or an asteroid.
- When a meteor reaches the Earth, it is called a meteorite and a series of meteorites, when encountered at once, is termed a meteor shower. According to NASA, over 30 meteor showers occur annually and are observable from the Earth.
- As meteors fall towards the Earth, the resistance makes the space rocks extremely hot and, as meteorites pass through the atmosphere, they leave behind streaks of glowing gas that are visible to the observers and not the rock itself.

## **Exoplanet – Planet Nine**

(Source: [Indian Express](#) )

**Context:** *A strange exoplanet, orbiting a double-star 336 light years away, has caught the interest of astronomers. The oddball behaviour of the planet, HD106906 b, provide clues about our own mysterious Planet Nine — if it exists.*

### **What is this exoplanet, and what is Planet Nine?**

- HD106906 b is not a new discovery: It appears in archival images taken by the Hubble Space Telescope in 2004.
- But at the time, people did not recognise the object to be a planet.
- It was not until follow-up observations were taken in 2013 of the system using a different telescope (specifically the Magellan Telescopes in Chile) that people figured out that this was actually a distinct planet.
- Using data on the object's motion over 14 years, astronomers have now precisely calculated its orbit and other key details.
- **Planet Nine** is an elusive, distant planet in our own Solar System. Although it has not been found yet, it has been predicted by a series of studies over the last few years, and has been described by astronomers as “hiding in plain sight”. If it exists, Planet Nine is 10 times as massive as Earth.

### **Why is Planet Nine believed to exist?**

- These predictions arise from the peculiar behaviour and alignment of various objects in the Solar System. Astronomers believe all this is happening under the influence of Planet Nine.
- For example, in the outer reaches of the Solar System, beyond Neptune, there is a region called the Kuiper belt, populated by icy debris. Some of the objects in this region have been found to be very peculiarly aligned, and Planet Nine is likely responsible for this, according to a paper published in 2016 by Konstantin Batygin and Michael Brown of the California University of Technology.
- Then in 2018, astronomers reported the peculiar behaviour of another object in the Solar System, called 2015 BP519. The object orbits our Sun — but at an extreme tilt (54°) when compared to the orbits of Earth and the other seven planets. Simulations showed that the influence of Planet Nine (if it exists) would explain this tilt. Without Planet Nine, the tilt would be unexplained.

## **CAATSA**

(Source: [The Hindu](#) )

**Context:** *The U.S. has imposed sanctions on NATO-ally Turkey for its purchase of Russia's S-400 missile defence system. The issue of sanctions under Section 231 of the Countering America's Adversaries Through*



*Sanctions Act (CAATSA) for purchase of Russian arms is of particular interest to New Delhi, which is also in the process of buying the S-400 from Moscow.*

### CAATSA

- The Countering America's Adversaries Through Sanctions Act (CAATSA), passed by Congress and reluctantly signed into law by President Donald Trump in August last year, aims at taking punitive measures against Russia, Iran, and North Korea.
- Title II of the Act primarily deals with sanctions on the Russian oil and gas industry, defence and security sector, and financial institutions, in the backdrop of its military intervention in Ukraine and its alleged meddling in the 2016 US presidential elections.
- Section 231 of the Act empowers the US President to impose at least five of 12 listed sanctions — enumerated in Section 235 — on persons engaged in a “significant transaction” with the Russian defence and intelligence sectors.
- The State Department has notified 39 Russian entities — including almost all major Russian defence manufacturing and export companies/entities like Rosoboronexport, Almaz-Antey, Sukhoi Aviation, Russian Aircraft Corporation MiG, and United Shipbuilding Corp — “significant transactions” with which could make third parties liable to sanctions.
- Almaz-Antey Air and Space Defence Corporation JSC, the manufacturers of the S-400 system, are in the list of 39. If implemented stringently, CAATSA would impact Indian defence procurement from Russia — not just S-400s, but also Project 1135.6 frigates and Ka-226T helicopters — as well as joint ventures like Indo Russian Aviation Ltd, Multi-Role Transport Aircraft Ltd and Brahmos Aerospace.
- It would also affect purchase of spares, components, raw materials and other assistance. The bulk of India's military equipment is of Soviet/Russian origin — including the nuclear submarine INS Chakra, the Kilo-class conventional submarine, the supersonic Brahmos cruise missile, the MiG and Sukhoi fighters, the Il transport aircraft, the T-72 and T-90 tanks, the Mi helicopters, and the Vikramaditya aircraft carrier.

### The Great Conjunction

(Source: [Indian Express](#) )

**Context:** *After nearly 400 years, Saturn and Jupiter – the two largest planets in our solar system – will be brought closest in the night sky by an astronomical event called the “great conjunction” and popularly referred to as the “Christmas Star”. On December 21, almost all the viewers across the world will be able to see the two gas giants very close to each other, while they will still be hundreds of millions of miles apart in space. The event will coincide with the winter solstice (shortest day of the year in terms of hours of sunlight received) in the Northern Hemisphere and summer solstice in the Southern Hemisphere.*

### What is the “Great Conjunction”?

- A conjunction is not unique to Saturn and Jupiter however, it is the name given to any event where planets or asteroids appear to be very close together in the sky when viewed from the Earth.
- In June 2005 for instance, as a result of the “spectacular” conjunction, Mercury, Venus and Saturn appeared so close together in the sky that the patch of sky where the three planets were could be covered by a thumb. Astronomers use the word “great” for the conjunction of Jupiter and Saturn because of the planets' sizes.
- The “Great Conjunction” happens once in about 20 years because of the time each of the planets take to orbit around the Sun. Jupiter takes roughly 12 years to complete one lap around the Sun and Saturn takes 30 years (Saturn has a larger orbit and moves more slowly because it is not as strongly influenced by the Sun's gravitational force as planets that are closer to the Sun).





- As the two planets move along their orbits, every two decades, Jupiter catches up with Saturn resulting in what astronomers call the great conjunction.

### Currency Manipulation

(Source: [Indian Express](http://www.indianexpress.com) )

**Context:** *The United States has once again included India in its monitoring list of countries with potentially “questionable foreign exchange policies” and “currency manipulation”. This comes a year after India was removed from the watchlist in the US Treasury Department’s semi-annual foreign-exchange report to the US Congress.*

#### **What does the term ‘currency manipulator’ mean?**

- This is a label given by the US government to countries it feels are engaging in “unfair currency practices” by deliberately devaluing their currency against the dollar.
- The practice would mean that the country in question is artificially lowering the value of its currency to gain an unfair advantage over others.
- This is because the devaluation would reduce the cost of exports from that country and artificially show a reduction in trade deficits as a result.

#### **What are the parameters used?**

- An economy meeting two of the three criteria in the Trade Facilitation and Trade Enforcement Act of 2015 is placed on the Monitoring List. This includes:
  1. A “significant” bilateral trade surplus with the US — one that is at least \$20 billion over a 12-month period.
  2. A material current account surplus equivalent to at least 2 percent of gross domestic product (GDP) over a 12-month period.

3. “Persistent”, one-sided intervention — when net purchases of foreign currency totalling at least 2 percent of the country’s GDP over a 12 month period are conducted repeatedly, in at least six out of 12 months.

- Once on the Monitoring List, an economy will remain there for at least two consecutive reports to help ensure that any improvement in performance versus the criteria is durable and is not due to temporary factors department.
- The administration will also add and retain on the Monitoring List any major US trading partner that accounts for a “large and disproportionate” share of the overall US trade deficit, “even if that economy has not met two of the three criteria from the 2015 Act”.

#### **Why is India back in the Monitoring List again?**

- India, which has for several years maintained a “significant” bilateral goods trade surplus with the US, crossed the \$20 billion mark, according to the latest report. Bilateral goods trade surplus totalled \$22 billion in the first four quarters through June 2020.
- Based on the central bank’s intervention data, India’s net purchases of foreign exchange accelerated notably in the second half of 2019.
- Following sales during the initial onset of the pandemic, India sustained net purchases for much of the first half of 2020, which pushed net purchases of foreign exchange to \$64 billion—or 2.4% of GDP—over the four quarters through June 2020.



# Mains

## GS II

### Is 'One Nation, One Election' possible?

(Source: [The Hindu Businessline](#) )

**Context:** Prime Minister Narendra Modi has been repeatedly emphasising on 'One Nation, One Election' as a necessity for development. There is an election in India almost every month — Madhya Pradesh, Manipur and Bihar, among other States, had elections recently — which involves a lot of money. Modi has asked the presiding officers of elected bodies to ponder over the idea of having one election and one voters' list.

#### Details:

- After the passing away of Pandit Jawaharlal Nehru, India's political spectrum turned murky. Elected representatives became victims of greed for money and power. Assured of a fixed tenure by getting elected, they started bargaining for power and pelf. Crossing over parties became the norm.
- Elected chief ministers were unseated by no-confidence motions. MLAs had no scruples over switching loyalties. India's contribution to the Constitutional dictionary is the phrase 'Aaya Rams and Gaya Rams'.
- The anti-defection law is special to India. It has, however, failed in its mission. Split and merger gave room for conflict between the Speaker's jurisdiction and the court's role. The prime cause for the instability of elected governments must be traced to the decision of the party in power at the Centre to dismiss State governments run by opposition parties.
- At one stage, nine State governments were dissolved at one stroke under Article 356 of the Constitution.
- The practice would have continued unabated but for the Supreme Court ruling the *Bommai* case. Destabilisation of elected State governments is shamelessly resorted to by all political parties. Elected representatives enjoy 'resort' politics — remember Koovathoor, Bengaluru, Mumbai, and Jaipur?

#### Is there a remedy?

- The Prime Minister is right in pointing out that frequent elections hampered development due to the huge expenditure involved. Ours is a quasi-federal structure. In England, the king reigns but does not govern. In the US, the President both reigns and governs.
- The Indian President neither governs nor reigns. The Governor in India is a tool in the hand of the Union Government.
- In the US, the State Governor, like the President, is elected directly. He is not vulnerable to the whims of the federal government. We chose to emulate the British cabinet system.
- According to political scientist Herman Finer, the Cabinet in the UK is controlled but not stultified, threatened but not executed, questioned but not mistrusted; politically partisan but not personally malicious, restrained as much as by the spirit of responsible power as by its institutions and sanctions, and Janus-like, it looks at once to the people and to the Lords.
- Under the Indian system, a minority government always fears execution at any time and most governments, especially at the State level, have shown a weakness for being both politically and personally malicious. Morality is sacrificed at the altar of expediency. The Charan Singh government was overthrown within four months. Last year, the Fadnavis government had to quit in three days. Do we have alternatives?
- Russian President Vladimir Putin altered the law to enable himself to be the President of Russia till 2036. China went through the one candidate election. "And one by one, the 2,956 party-chosen delegates of the National People's Congress cast their vote for the leader of their party in an election that had no

candidate other than Xi Jinping. Xi won the elections with 99.86 per cent of the votes. It was the most perfectly organised election.”

### Can we dream of such changes in our Constitution?

- What will happen to the anti-CAA protests, the farmers stir and the *jallikattu* imbroglio ? We in India cannot afford a Tiananmen Square.
- We may be proud of such achievements like the Golden Quadrilateral, Digital India, One Nation One Ration Card, etc.
- ‘One Nation, One Poll’ and one voters’ list can never be achieved without draconian changes in our Constitution.

### Israel-Morocco deal

(Source: [The Hindu](#) )

**Context:** Morocco has become the fourth Arab country to normalise ties with Israel in five months. On December 10, U.S. President Donald Trump announced the deal, claiming that the series of normalisation agreements between Arab countries (the UAE, Bahrain, Sudan and now Morocco) and the Jewish state was bringing peace to West Asia.

#### Details:

- In return for Morocco’s decision to establish formal ties with Israel, the U.S. has recognised Rabat’s sovereignty over Western Sahara, a disputed territory in northwestern Africa, which has been under Moroccan control for decades.
- Morocco has long been campaigning internationally, using economic pressure and diplomacy, for recognition of its claims to Western Sahara.
- It got what it wanted from the deal with Israel, a country with which it had developed covert ties for decades.

#### The dispute

- This large, arid and sparsely populated region that shares borders with Morocco, Algeria and Mauritania and has a long Atlantic coast was a Spanish colony.
- The region is home to the Sahrawi tribe. In the 1970s, when international and local pressure mounted on Spain to vacate its colonies in Africa, Libya and Algeria helped found a Sahrawi insurgency group against the Spanish rule in Western Sahara. The Popular Front for the Liberation of Saguia el Hamra and Rio de Oro, known as the Polisario Front, started guerilla warfare against Spanish colonialists.
- In 1975, as part of the Madrid Accords with Morocco and Mauritania, Spain decided to leave the territory, which was then called Spanish Sahara. According to the accords, Spain would leave before February 28, 1976 and until then, the Spanish Governor General would administer the territory, with help from two Moroccan and Mauritanian Deputy Governors. The Polisario Front and Algeria opposed the agreements.
- Both Morocco and Mauritania moved troops to Western Sahara to assert their claims. Polisario, backed by Algeria, continued the guerilla resistance, demanding their withdrawal. On February 27, 1976, a day before Spain ended its presence, the Polisario Front declared the Sahrawi Arab Democratic Republic (SADR) in Western Sahara. The SADR has been recognised by several African countries and is a member of the African Union.

#### Morocco’s claim

- Morocco and Mauritania had laid claims to Western Sahara even when it was a Spanish colony. In 1974, the International Court of Justice was asked by the UN General Assembly to look into the legal ties, if any, that existed between Western Sahara and Morocco and Mauritania at the time of its colonisation by Spain in the 19th century.
- The court found no evidence “of any ties of territorial sovereignty” between the Western Sahara and either Morocco or Mauritania, but stated that there were “indications” that some tribes in the territory were loyal to the Moroccan Sultan.
- In its conclusion, the court endorsed the General Assembly Resolution 1541 that affirmed that to ensure decolonisation, complete compliance with the principle of self-determination is required.
- But King Hassan II of Morocco hailed the court’s opinion as a vindication of Rabat’s claims and moved troops across the northern border to Western Sahara. Mauritania joined in later. It set the stage for a three-way fight with the Polisario Front resisting both countries.

### Current status

- The three-way conflict lasted for almost four years. In August 1979, Mauritania signed a peace treaty with Polisario, bringing the country’s military involvement in Western Sahara to an end. When Mauritanian forces withdrew from the southern part of the desert that they had occupied, Morocco swiftly advanced troops.
- The war continued between Moroccan troops and the Polisario Front. In 1991, when a ceasefire was finally achieved, upon the promise of holding an independence referendum in Western Sahara, Morocco had taken control of about 80% of the territory.
- The war had forced almost 200,000 Sahrawis to flee the territory to neighbouring Algeria, where Polisario is running squalid refugee camps. The SADR is operating largely from the eastern flank of Western Sahara.
- Moroccan troops have built a huge sand wall called Berm, from the Atlantic coast to the mountains of Morocco, dividing the territories they control from that of Polisario. “It’s Africa’s last colony”, according to Polisario fighters.

### Impact of the deal

- The normalisation deal between Morocco and Israel itself will not have any direct bearing on Western Sahara. But the concession the U.S. has given to Morocco — Washington’s recognition of Moroccan occupation of Western Sahara — could flare up the conflict.
- The independence referendum, promised in the 1991 ceasefire, is yet to take place. Last month, Morocco launched an offensive into the UN-controlled buffer zone between the two sides, and in return, Polisario said it would resume armed conflict.
- After the Trump administration’s recognition of Morocco’s claim, Polisario said it would keep fighting until Moroccan troops are forced to withdraw. The U.S. move would upset Algeria, the biggest backer of Polisario. Among the nations that condemned the U.S. decision is Russia, which said the recognition of Moroccan sovereignty over Western Sahara “is a violation of international law”.

### Shifting the Rohingya to Bhashan Char

(Source: [The Hindu](http://TheHindu.com) )

**Context:** Agencies reported that a United Nations (UN) human rights investigator had requested Bangladesh to allow a safety assessment of the remote islet of Bhashan Char, where the government had shipped 1,600-odd Rohingya refugees. Reuters reported that the UN said it was not involved in the transfer of the refugees there. Thomas Andrews, the UN human rights investigator for Myanmar, told the news



*agency that the assessment and verification process to ensure that the refugees were not forced to go were in the “best interest of all”. Other human rights agencies have also criticised the move.*

### **Is the islet safe?**

- Bhashan Char is a char-land of around 13,000 acres, formed by the accumulation of silt where the river Meghna meets the Bay of Bengal carrying rich alluvial deposits. Char-lands are a common feature in Meghna and Padma rivers and literally mean “shifting landmass”.
- As the name reveals, the char was not part of the permanent land feature of Bangladesh, but appeared recently.
- Bhashan Char is surrounded by a mangrove forest that has given it geographical stability. Sensing a tourism opportunity, the Bangladesh government had declared Bhashan Char as a protected forest land in 2013. It is a two-and-a-half-hours boat ride away from Cox’s Bazar in Chittagong.
- The main argument for the char-land being unsafe is that these lands are known to be unstable and flood-prone. The other fear factor includes the tropical cyclones that visit the area every year.

### **What is the arrangement for the Rohingya?**

- Over the past few years, Bangladesh has constructed roads and brought modern telecommunication networks to Bhashan Char.
- The Bangladesh government has earmarked around 1,350 acres for the Rohingya refugees, of which 432 acres is dedicated to their rehabilitation and the rest remains for future projects.
- The government has constructed a large number of housing units in the section designated for the Rohingya. The country sent 1,642 Rohingya refugees to the islet from their temporary camps in Kutupalong, near Cox’s Bazar, on December 4.
- They are being housed in red-roofed residential units and most houses are built four feet above the ground to help them withstand unexpected high tidal waves.

### **Why is Bangladesh moving the refugees?**

- Rohingya refugees of Kutupalong have been living in a large refugee camp near the forested borders with Myanmar since 2017, when they were forced to traverse the forest and the rivers that constitute the border between Bangladesh and Myanmar’s Rakhine province.
- Ever since their arrival, the refugees, numbering 1.1 million, have been living in Kutupalong under bamboo and tarpaulin structures.
- The camp is located on a hillock, which was a sanctuary for elephants and other wild animals. Kutupalong has also been in the news for its rising crime rate. Bangladesh argues that the islet will provide a safer place.

### **Why are human rights agencies upset?**

- Amnesty International said Bangladesh must “drop” its plans to shift Rohingya refugees to Bhashan Char as the char-land had not yet been declared safe for habitation by the United Nations.
- Omar Waraich of Amnesty International claimed that many Rohingya who were asked to relocate said they were coerced.
- Any decisions relating to the relocation of refugees must be transparent and involve the full participation of the Rohingya people. In the meantime, plans for any further relocation must be abandoned.

### **What happens next?**

- Diplomatic sources have confirmed that Dhaka does not plan to relocate the entire refugee settlement and only aims at reducing the congestion in Kutupalong.
- The country’s long-term plan for Rohingya refugees is to seek their repatriation to the Rakhine province of Myanmar.

## **Rethinking our nutrition agenda**

(Source: [The Hindu](#) )

**Context:** *The Ministry of Health and Family Welfare has released data fact sheets for 22 States and Union Territories (UTs) based on the findings of Phase I of the National Family Health Survey-5 (NFHS-5). The 22 States/ UTs don't include some major States such as Tamil Nadu, Rajasthan, Punjab, Uttar Pradesh, Jharkhand, Odisha and Madhya Pradesh. While the national picture will only be clear when the survey is completed and data are released for all the States and UTs, what we have so far paints a troubling picture in relation to nutrition outcomes.*

### **Worrying findings**

- Of the 22 States and UTs, there is an increase in the prevalence of severe acute malnutrition in 16 States/UTs (compared to NFHS-4 conducted in 2015-16). Kerala and Karnataka are the only two big States among the six States and UTs where there is some decline.
- The percentage of children under five who are underweight has also increased in 16 out of the 22 States/UTs. Anaemia levels among children as well as adult women have increased in most of the States with a decline in anaemia among children being seen only in four States/UTs (all of them smaller ones — Lakshadweep, Andaman and Nicobar Islands, Dadra and Nagar Haveli and Daman and Diu, and Meghalaya).
- There is also an increase in the prevalence of other indicators such as adult malnutrition measured by those having a Body Mass Index of less than 18.5kg/m<sup>2</sup> in many States/ UTs.
- What is also a matter of concern is that most States/UTs also see an increase in overweight/obesity prevalence among children and adults, once again drawing attention to the inadequacy of diets in India both in terms of quality and quantity.
- The data report an increase in childhood stunting (an indicator of chronic undernutrition and considered a sensitive indicator of overall well-being) in 13 of the 22 States/UTs compared to the data of NFHS-4.
- Among the remaining nine States, five see an improvement of less than 1 percentage point (pp) in this five-year period. Sikkim (7.3 pp), Manipur (5.5 pp), Bihar (5.4 pp) and Assam (1.1 pp) are the four States which see some improvement although even these are below the goals set by the government.
- There was a 10 pp decline in stunting among children under five (low height for age) between 2005-06 (NFHS-3) and 2015-16 (NFHS-4), from 48% to 38%, averaging 1 pp a year. Although in the right direction, this was considered to be a very slow pace of improvement. Poshan Abhiyaan, one of the flagship programmes of the Prime Minister, launched in 2017, aimed at achieving a 2 pp reduction in childhood stunting per year.
- All indications from these initial results of NFHS-5 are that we are likely to see an increase in prevalence of childhood stunting in the country during the period 2015-16 to 2019-20.
- This is extremely alarming and calls for serious introspection on not just the direct programmes in place to address the problem of child malnutrition but also the overall model of economic growth that the country has embarked upon. The World Health Organization calls stunting “a marker of inequalities in human development”.
- Over the last three decades, there have been phases where India has experienced high rates of economic growth. But this period has also seen increasing inequality, greater informalisation of the labour force, and reducing employment elasticities of growth.
- Some expansion in social protection schemes and public programmes such as the Mahatma Gandhi National Rural Employment Guarantee Scheme, the Public Distribution System, the Integrated Child Development Scheme (ICDS), and school meals have contributed to reduction in absolute poverty as well as previous improvements in nutrition indicators.

- However, there are continuous attempts to weaken these mechanisms through underfunding and general neglect. For instance, in a response to a parliamentary question in December 2019, the Minister for Women and Child Development presented data which showed that only about 32.5% of the funds released for Poshan Abhiyaan from 2017-18 onwards had been utilised.
- The last few years particularly have been bad with slowdown in economic growth, stagnant rural wages and highest levels of unemployment. This is also reflected, for instance, in the rising number of reported starvation deaths from different parts of the country.
- Volunteers of the Right to Food campaign have listed over 100 starvation deaths based on media and/or verified fact-finding reports since 2015. While these data present a bleak picture as far as nutrition is concerned, what is worrying is that the situation would be even worse now as a result of the pandemic and lockdown-induced economic distress.
- Field surveys such as the recent 'Hunger Watch' are already showing massive levels of food insecurity and decline in food consumption, especially among the poor and vulnerable households.
- In the Hunger Watch survey carried out in 11 States, two-thirds of the respondents reported that the nutritional quality and quantity of their diets worsened in September-October compared to before the lockdown. All of this calls for urgent action with commitment towards addressing the issue of malnutrition.
- The NFHS-5 fact sheets, which also present data related to health, nutrition and other socioeconomic indicators, show some positive trends as well.
- There are some improvements seen in determinants of malnutrition such as access to sanitation, clean cooking fuels and women's status – a reduction in spousal violence and greater access of women to bank accounts, for example. In these too, gaps remain and some States perform better than others.

#### **A piecemeal approach**

- What these overall poor nutritional outcomes therefore also show is that a piecemeal approach addressing some aspects (that too inadequately) does not work. Direct interventions such as supplementary nutrition (of good quality including eggs, fruits, etc.), growth monitoring, and behaviour change communication through the ICDS and school meals must be strengthened and given more resources.
- Universal maternity entitlements and child care services to enable exclusive breastfeeding, appropriate infant and young child feeding as well as towards recognising women's unpaid work burdens have been on the agenda for long, but not much progress has been made on these.
- At the same time, the linkages between agriculture and nutrition both through what foods are produced and available as well as what kinds of livelihoods are generated in farming are also important. Overall, one of the main messages is that the basic determinants of malnutrition – household food security, access to basic health services and equitable gender relations – cannot be ignored any longer.
- An employment-centred growth strategy which includes universal provision of basic services for education, health, food and social security is imperative. There have been many indications in our country that business as usual is not sustainable anymore.
- It is hoped that the experience of the pandemic as well as the results of NFHS-5 serve as a wake-up call for serious rethinking of issues related to nutrition and accord these issues priority.

### **The many challenges for WTO**

(Source: [The Hindu](#) )

**Context:** *For the first time in its 25-year history, the World Trade Organization (WTO) will be led by a woman, as both the contending candidates for the Director-General (D-G) post are women, from Nigeria and South Korea respectively.*



#### Details:

- The prestige aside, the D-G's job will require perseverance and outstanding negotiating skills for balancing the diverse and varied interests of the 164 member countries, and especially, for reconciling competing multilateral and national visions, for the organisation to work efficiently.
- The next D-G will have to grapple with the global economic fallout of the COVID-19 pandemic and work towards carrying out reforms of the multilateral trading system for reviving the world economy. On all these issues, her non-partisan role will be watched carefully.
- The current impasse in the WTO negotiations has led member countries to believe in the necessity of carrying out urgent reforms, even as the debate is likely to throw up some difficult choices for developing countries like India. At the core of the divide within the WTO is the Doha Development Agenda, which the developed countries sought to jettison in favour of a new agenda that includes, amongst others, e-commerce, investment facilitation, MSMEs and gender.
- Salvaging the 'development'-centric agenda is critical for a large number of developing countries as they essentially see trade as a catalyst of development. Restoring the WTO dispute settlement mechanism, especially the revival of its Appellate body, is also crucial for the organisation's efficient functioning.
- The push for a change in the definition of "developing country" under the principle of special and differential treatment (S&DT), aimed at upgrading certain developing countries, will deeply impinge on the status of emerging economies such as India, China, South Africa, Turkey, Egypt, et cetera.
- The assumption that some countries have benefited immensely from the WTO rules since its formation in 1995 is flawed, at least in the case of India. And even if there may be no consensus of views on measuring 'development', India will remain a developing country no matter which parameter is used.
- The way out for India could be to negotiate a longer phase-out period, or an acceptable formula based on development indices, etc.
- Among the current negotiations at the WTO, nothing commands more attention than the fisheries subsidies negotiations. India can lead the way in finding a landing zone by urging others to settle for the lowest common denominator, while seeking permanent protection for traditional and artisanal farmers who are at the subsistence level of survival.
- The danger lies in seeking larger carve-outs, which, if universally applicable to all, could result in developed countries ploughing precious fisheries resources in international waters.
- The consensus-based decision-making in the WTO, which makes dissension by even one member stop the process in its track, gives developing countries some heft and influence at par with developed countries.
- The D-G would need to tread cautiously on this front, as some will allude to the successful implementation of the Trade Facilitation Agreement in 2017, that allowed member countries to take commitments in a phased manner in accordance with their domestic preparedness.

#### Lessons from COVID-19

- The COVID-19 crisis has revealed the urgent and enduring need for international cooperation and collaboration, as no country can fight the pandemic alone.
- The D-G can help mitigate the effects of the pandemic by giving clear directions on ensuring that supply chains remain free and open, recommending a standard harmonised system with classification for vaccines, and by the removal of import/export restrictions.
- Voluntary sharing and pooling of Intellectual Property Rights (IPR) is required for any global effort to tackle the pandemic, but with the fear of vaccine nationalism looming large, several countries are seeking to secure future supply of leading COVID-19 vaccines.
- Our Prime Minister's reiteration that India's vaccine production and delivery capacity will help the whole of humanity will require the D-G to play a responsible role in removing barriers to intellectual property and securing a legal framework within the WTO TRIPS Agreement, by lending salience to the effective interpretation of Articles 8 and 31 of the Agreement, that allow compulsory licensing and agreement of a patent without the authorisation of its owner under certain conditions.





- Most imminently, the next D-G will need to build trust among its members that the WTO needs greater engagement by all countries, to stitch fair rules in the larger interest of all nations and thwart unfair trade practices of a few.

## **The long road to food security**

(Source: [The Hindu](#) )

**Context:** *India's malnutrition levels are almost twice the level of many African countries. The Global Hunger Index 2020 report has given India the 94th rank among 107 countries, much behind Bangladesh, Pakistan, and Nepal. As per a UN-FAO report, 194 million people go hungry every day in India, comprising about 23% of the world's undernourished population. This flies in the face of the landmark Right to Food case, in which the Supreme Court declared Right to Food as part of Article 21 of the Constitution, that is, the Right to Life.*

### **Details:**

- It is a grim failure that 73 years after Independence, India continues to be gripped by a paradox of plenty in the realm of food security.
- The country reached self-sufficiency in agricultural production some time ago, and yet, mass hunger is rampant across States. India produces more than the estimated amount required to feed the entire population (in 2018-19, India produced 283.37 million tons of food grains).
- The country ranks first in millets and second in rice and wheat production in the world. India's horticultural crops, such as fruits and vegetables, are also in surplus (over 313 million tons in 2018-19).

### **Struggling ecosystem**

- However, according to data released by the Department of Consumer Affairs, almost 62,000 tons of food grains were damaged in Food Corporation of India warehouses between 2011 and 2017. In 2016-17 alone, over 8,600 tons of food grains were lost.
- A study conducted by the Indian Council for Research on International Economic Relations found that while there is a proliferation of millions of ineligible and bogus ration cards, there are also, simultaneously, a multitude of genuinely poor families that do not even possess ration cards. These data expose the poor management of the food ecosystem in India.
- To ensure India's food security, a two-pronged policy is needed. Firstly, the government must ensure remunerative prices for farm produce. For this, the Minimum Support Price (MSP) should be made available to the maximum range of farm products.
- This will enhance the purchasing power of farmers so that they can purchase essential food items. Secondly, it is crucial that India improves the Public Distribution System and Public Procurement.

### **The Annapurna scheme**

- The situation could be further improved by revamping the Annapurna Yojana. Under this scheme, ten kilograms of food grains are distributed per month free of cost to destitute persons above 65 years of age, with no or meagre subsistence.
- The Centre has fixed the target of 20% of the number of persons who are eligible for National Old Age Pension, but who are not receiving such pension. It may be noted that as far as Kerala is concerned, social security pension covers almost all the sections of people in the community.
- Thus, almost all eligible people are excluded from the Annapurna Yojana. This problem demands immediate attention and resolution.
- Further, according to the Global Pulse Confederation, pulses are part of a healthy, balanced diet and have been shown to have an important role in preventing illnesses such as cancer, diabetes, and heart disease.



- The World Food Programme (WFP) includes 60 grams of pulses in its typical food basket, alongside cereals, oils and sugar and salt.
- The Background Note for the Parliamentary Standing Committee on Food, Consumer Affairs and Public Distribution titled Price Rise of Essential Commodities - Causes and Effects (2020), says, “With dietary shift in favour of proteins, in an otherwise vegetarian society, the consumption of pulses is growing but the production has not kept pace ... However, production of pulses has increased during the last two years which has resulted partly from continuous increase in MSP, increased procurement, and creation of buffer stock of pulses.”
- Hence, this is an ideal time to include pulses too in our Public Distribution System.

### GS III

#### The roots of the agricultural crisis

(Source: [The Hindu](#) )

**Context:** *The stand-off between farmers and the government continues even after a few rounds of discussion and more than a fortnight of protest at the Delhi border by the farmers. The latest proposal by the government indicates its willingness to amend the three agriculture-related Acts passed in September. On the contentious issues of registration of private traders, levy of taxes on trade outside the Agricultural Produce Market Committee (APMC) mandis, the government has proposed amendments which will empower the States to frame rules on these issues. Similar assurances have been given on access to the judiciary for dispute resolution and continuation of the Minimum Support Price (MSP) mechanism. However, farmer unions have rejected the proposal and continue to demand complete withdrawal of the three Acts along with making MSP a guarantee.*

#### **Many protests, one thread**

- It is likely that the issue may ultimately get resolved and an amicable solution is found to resolve the impasse. However, this will only be a temporary reprieve from the vexatious issue of declining farmer income and the nature of state support to agriculture.
- The last four years have seen a series of large protests in most of the States. While a group of farmers from Tamil Nadu camped in Delhi for over 100 days, Maharashtra was witness to the ‘Kisan Long March’ of farmers on more than one occasion. Similar protests have erupted in Rajasthan, Uttar Pradesh, Haryana, Gujarat, Karnataka and Chhattisgarh. At least five farmers were killed in police firing in Mandsaur in Madhya Pradesh three years ago.
- Clearly, farmers’ unrest is not new and has been building up for quite some time. The latest round of protests may have seen spirited protests from farmers from Punjab and Haryana but has found the support of farmers from the other States as well.
- While they may appear to be fragmented and localised, the issues concerning these instances of unrest have a common thread — of declining agricultural incomes, stagnant wages and withdrawal of state support to agriculture.
- The immediate trigger for the current protests is the enactment of the three Acts, on agricultural marketing, contract farming and stocking of agricultural produce, which deregulates the existing Acts on these.



- The farmers see them as an attempt to dilute the nature of these safeguards provided to them — by providing unfair advantage to the private sector, read corporate sector, vis-à-vis APMC mandis.
- The current crisis is entirely a creation of the government at a time when the country was struggling with novel coronavirus-caused lockdowns, supply disruptions, job losses and falling incomes in an economy which was already slowing down even before the pandemic.
- While the reforms embedded in the three Acts are unlikely to help resolve the structural issues facing Indian agriculture, even their withdrawal is unlikely to change the ground reality which has existed even before the Acts were passed.
- It is precisely because of this that withdrawal of the three Acts by the government will only offer a temporary truce. Such a step is unlikely to contain farmers' anger and unrest which is likely to increase with a slowing economy and falling demand for agricultural commodities.

### **Changing face of agriculture**

- The real issue is the lack of remunerative prices for a majority of agricultural commodities, a sharp increase in price variability in recent years, and an unpredictable and arbitrary government policy regime, none of which is likely to change in the near future.
- It is these which have led to a recurrence of distress in the agricultural sector with regular farmers' protests which have only grown in frequency in recent years.
- Part of the problem is the changing nature of agriculture which has seen increased dependence on markets, increasing mechanisation along with increasing monetisation of the agrarian economy. The increased dependence on markets has contributed to increasing variability in output prices.
- With limited intervention by the government in protecting farmers' income and stabilising prices through MSP-led procurement operations, the variability has increased in frequency as well as the spread of it. Other than rice and wheat — and to some sporadic instances, of pulses — most crops suffer from inadequate intervention from MSP operations.
- However, even these procurement operations are unable to stabilise prices with falling demand and a slowing economy. A perfect example of this is wheat which has seen a steady decline in year-on-year inflation based on Wholesale Price Index (WPI) since July and is negative for the last three months of August, September and October despite record procurement by the government.
- Not only has the procurement operation failed to arrest the decline in prices, the uneven nature of procurement has meant that in many States of eastern India, wheat is sold at 20-40% lower prices compared to MSP.
- It is the same in the case of paddy where most States have seen market prices significantly lower than the MSP. The situation is far more worrying for crops such as maize which sold at 40-60% lower than the MSP in most States.
- Unfortunately, none of this is new. In the last five years, three years have witnessed negative inflation for cereals. While the withdrawal of the Acts is unlikely to ensure price stability, even the demand of making MSP a guarantee for private trade is meaningless if the government is unable to ensure procurement for a majority of the 23 crops for which it announces MSP.
- Even for crops such as wheat and paddy for which there is procurement, the regional concentration makes it irrelevant for most of the eastern and southern States.

### **Factors behind vulnerability**

- While output prices continue to show high variation with frequent spells of low prices, increasing mechanisation and monetisation have led to an increase in cash requirement. Most of these are met by non-institutional sources including middlemen which has contributed to the rising cost of cultivation and increase in loan defaults.
- The demand for loan waivers is unlikely to subside with rising cost of inputs. Some of these trends have accentuated after 2010-11 when the Nutrient Based Subsidy (NBS) for fertilizers regime led to an increase in fertilizer prices.

- But the withdrawal of diesel subsidy and rise in electricity prices also contributed to making agriculture unviable. With agricultural investment declining in the first four years of this government, the result was rising input costs and falling output prices.
- Not to mention, the shocks such as demonetisation and the lockdown imposed after the pandemic broke out which only increased the uncertainty and vulnerability in the agricultural sector both on input and output prices.

### Policy overhaul needed

- Even if the current impasse due to the farmers' agitation gets resolved, there is no certainty that the structural factors which have contributed to the farmers' unrest will get resolved.
- The existing policy framework with excessive focus on inflation management and obsession with fiscal deficit will likely lead to lower support from the government either in price stabilisation or reduction in cost of cultivation through fiscal spending.
- The agricultural sector needs comprehensive policy overhaul to recognise the new challenges of agriculture which is diversifying and getting integrated with the non-agricultural sector.
- This not only entails a better understanding of the structural issues but also innovative thinking to protect farmers' livelihood from the uncertainty of these changes.
- Above all, it requires fiscal support and institutional structures to support the agricultural sector and protect it. In the absence of these, any rhetoric of doubling farmers' income is only wishful thinking.

### Hazardous ideas for the Himalayas

(Source: [The Hindu](#) )

**Context:** In an article published on the website of the Central Committee of the Communist Youth League, China announced that it is planning to build a major hydropower project as a part of its 14th Five-Year Plan (2021-25), on the Yarlung Zangbo River, in Mêdog County in Tibet. The hydropower generation station is expected to provide 300 billion kWh of electricity annually. The Chinese authorities say the project will help the country realise its goal of reaching a carbon emission peak before 2030 and carbon neutrality before 2060. Indian counterparts were quick to reiterate their plans to dam the Himalayas on this side of the border. India is reportedly considering a 10-GW hydropower project in an eastern State.

### Misadventures

- In this mad rush of one-upmanship, both countries ignore how unviable such 'super' dams projects are, given that they are being planned in an area that is geologically unstable. It is high time that India and China sat together to deliberate on the consequences of such misadventures in an area where massive earthquakes are bound to take place.
- Over the past 20 years, both China and India have been competing with each other to build hydroelectric dams in this ecologically fragile and seismically vulnerable area. There are two hydropower projects in the works in Arunachal Pradesh on the tributaries of the Brahmaputra: the 600 MW Kameng project on the Bichom and Tenga Rivers and the 2,000 MW Subansiri Lower Hydroelectricity Project.
- On the other side of the border, China has already completed 11 out of 55 projects that are planned for the Tibetan region. In executing these hydroelectric projects at a maddening pace, the two countries overestimate their economic potential and grossly underestimate the earthquake vulnerability of the region.
- Consider this: High seismic zones coincide with areas of high population concentration in the Himalayan region where landslides and glacial lake outburst floods are common. About 15% of the great earthquakes of the 20th century (with a magnitude of more than 8) occurred in the Himalayan region.

The northeast Himalayan bend has experienced several large earthquakes of magnitude 7 and above in the last 100 years, more than the share from other parts of the Himalayas.

- The 1950 earthquake just south of the McMahon Line was of 8.6 magnitude. It was the largest continental event ever recorded, and devastated Tibet and Assam. The earthquake killed thousands, and caused extensive landslides, widespread land level changes and gaping fissures.
- It resulted in water and mud oozing in the Himalayan ranges and the upper Assam valley. This dammed the rivers. Later the dams were breached generating flash floods in the downstream sides, seriously silting the drainage systems.
- The earthquake was felt over an extensive area comprising parts of India, Tibet, erstwhile East Pakistan and Myanmar. This event gives us grim pointers of what we can expect in the north-eastern bend of the Himalayas if a similar event was to take place in the background of the fast-developing hydro projects.
- To take a more recent example, the 2015 Gorkha earthquake of magnitude 7.8 in central Nepal resulted in huge losses in the hydropower sector. Nepal lost about 20% of its hydropower capacity consequent to the earthquake. About 30 projects with a capacity of 270 MW, mostly located along the steep river valleys, were damaged.
- The cost of physical damage is calculated to be about \$200 million. The study published in a 2018 paper in Geophysical Research Letters, by Wolfgang Schwanghart and others, for example, is quite revelatory on the earthquake-borne damage sustained by hydropower projects in Nepal.
- The main mechanisms that contributed to the vulnerability of hydropower projects were found to be landslides, which depend on the intensity of seismic ground shaking and slope gradients.
- Heavy siltation from giant landslides expected in the project sites and headwater region from future earthquakes will severely reduce the water-holding capacity and life expectancy of such dams. Even without earthquakes, the steep slopes made of soft rocks are bound to slide due to deforestation and road-building.
- These activities will get intensified as part of the dam-building initiatives. Desilting of dams is not an economically viable proposition and is technologically challenging.
- From these perspectives, the northeast Himalayan bend with its deep gorges is the most unsuitable locale within the Himalayas for giant dams. Also, we do not know how reservoirs with their water load would alter the existing stresses and strains on the earth's crust in the long term, impacting the frequency of earthquakes and their mechanisms.

### **Under threat**

- The Himalayan range is a transnational mountain chain and is the chief driver of the Asian climate. It is a source for numerous Asian river systems and glaciers which are now under the threat of degradation and retreat due to global warming; these river systems provide water for billions of people.
- This legacy of humanity has now become highly contentious with territorial disputes between two nuclear powers — India and China.
- The ongoing low-level military confrontations between these two countries have led to demands for further infrastructural development on both sides, including all-weather roads, much to the peril of regional biodiversity and the livelihoods of the indigenous population.
- In a recent article in Nature, Maharaj K. Pandit, a Himalayan ecologist, says in recent years, the Himalayas have seen the highest rate of deforestation and land use changes.
- He suggests that the upper Himalayas should be converted into a nature reserve by an international agreement. He also says the possibility of a Himalayan River Commission involving all the headwater and downstream countries needs to be explored.
- Rather than engaging in unsustainable dam-building activities, India and China, the major players in the region, would be well advised to disengage from military adventurism and seek ways of transforming this 'roof of the world' into a natural reserve for the sake of humanity. Carbon neutrality should not be at the expense of the environment.



## **Innovations for cleaner air**

(Source: [The Hindu](#) )

**Context:** *Over the past decade, India has made significant progress in monitoring air pollution. There are more than 250 continuous ambient air quality monitoring stations and more than 800 ambient air quality monitoring stations operating across the country. It is owing to these that we are able to understand the magnitude of the challenge of air pollution. There has been a tremendous effort in improving awareness of citizens through campaigns around air pollution and its adverse impact on health and environment. However, while these efforts need to amplify, it is equally important to have systemic changes at the policy and strategy levels.*

### **Welcoming policy interventions**

- Public policy is already responding positively. The budget allocation for air pollution increased substantially in 2020-21 from what it was in 2018-19 to ensure cleaner air in cities having populations above one million. The establishment of the Commission for Air Quality Management with penal provisions against polluters in the NCR and adjoining areas is a welcome move.
- India has jumped from BSIV to BSVI vehicles. There is an increased focus on e-mobility. Through the Pradhan Mantri Ujjwala Yojana, there has been an effort to reduce indoor air pollution in rural areas by increasing LPG coverage. While these measures will have a major impact in the long term, India needs innovations to deliver on the promise of cleaner air in the immediate future.
- There are many institutions involved in developing solutions. The Indian Agricultural Research Institute's PUSA Bio Decomposer, which turns crop residue into manure in 15-20 days, could become a cost-effective alternative to tackle stubble burning.
- UNDP is also promoting startup-led innovations such as a filter-less retrofit device for cutting particulate matter at source in industries and vehicles, and a nature-based solution to amplify air purification through breathing roots technology for improving indoor air quality.
- Air pollution in India has numerous sources that are spread across vast geographies, which is a challenge for environmental regulators with limited capacity and manpower. In such conditions, it is imperative to leverage advance digital technologies, such as geospatial technology and AI, to upgrade our capacities to identify, monitor, regulate and mitigate air pollution hotspots.
- For instance, the GeoAI platform for brick kilns, developed by UNDP in partnership with the University of Nottingham, is supporting environment regulators to identify non-complaint brick kilns from space. The platform has already mapped over 37,000 brick manufacturing units across the Indo-Gangetic plains.
- Given the complexity and magnitude of air pollution, India needs context-specific innovations not only in the technological but also in the economic, social, legal, educational, political and institutional domains. It is important for it to develop a single window online platform for showcasing innovations with the potential to mitigate the challenges of air pollution.

### **What more should be done?**

- The need of the hour is provide an enabling ecosystem for innovations to address context-specific air pollution challenges. There needs to be significant government support for enterprises to come up with scalable pollution abatement technologies. Resources need to be allocated to support testing, certifying and scaling of innovative solutions and also to extend support for intellectual property rights protection.
- It is equally important to mobilise private sector participation. Businesses and enterprises need to innovate their operations and functioning, building in emission and pollution controls and reducing institutional carbon footprint to the lowest possible levels.



- The private sector has strong potential to develop commercially viable products to combat air pollution and boost the innovation ecosystem.
- Also, if one quantifies the impact of interventions that reduce air pollution with healthcare cost, disability-adjusted life years, or economic cost, it could lead to diversification of funding sources for that intervention.

### **The PM-WANI project**

(Source: [The Hindu](#) )

**Context:** *The Prime Minister's Wi-Fi Access Network Interface, or PM WANI fits the 'game changer' tag. This provides for "Public Wi-Fi Networks by Public Data Office Aggregators (PDOAs) to provide public Wi-Fi service through Public Data Offices (PDOs) spread across [the] length and breadth of the country to accelerate proliferation of Broadband Internet services through Public Wi-Fi network in the country".*

#### **What the data shows**

- Essentially, this would mean the ability to connect to a Wi-Fi broadband connection almost anywhere. This can help to bridge the increasing digital divide in India. Recently, the NITI Aayog chief executive officer had said that India can create \$1 trillion of economic value using digital technology by 2025.
- However, as per the latest Telecom Regulatory Authority of India (TRAI) data, about 54% of India's population has access to the Internet.
- The 75th round of the National Statistical Organisation survey shows that only 20% of the population has the ability to use the Internet. The India Internet 2019 report shows that rural India has half the Internet penetration as urban, and twice as many users who access the Internet less than once a week.
- To illustrate this point, let us look at the Umang App (Unified Mobile Application for New-age Governance), which allows access to 2,084 services, across 194 government departments, across themes such as education, health, finance, social security, etc.
- The ability to access and utilise the app enhances an individual's capabilities to benefit from services that they are entitled to. With each move towards digitisation, we are threatening to leave behind a large part of our population to suffer in digital poverty.
- It is clear that the focus is on last mile delivery, especially when you see how the Telecom Minister has compared it to the public call office model of past decades. This is what the government is trying to achieve with PM-WANI, where anyone living in their house, a paan shop owner or a tea seller can all provide public Wi-Fi hot posts, and where anyone within range can access it.
- This will also help to reduce the pressure on mobile Internet in India. Going back to the India Internet report, it shows that 99% of all users in India access the Internet on mobile, and about 88% are connected on the 4G network.
- This leads to a situation where everyone is connected to a limited network, which is getting overloaded and resulting in bad speed and quality of Internet access.

#### **Key links**

- There are three important actors here. First is the Public Data Office (PDO). The PDO can be anyone, and it is clear that along with Internet infrastructure, the government also sees this as a way to generate revenue for individuals and small shopkeepers.
- It is important to note that PDOs will not require registration of any kind, thus easing the regulatory burden on them. Next, is the PDOA, who is basically the aggregator who will buy bandwidth from Internet service provider (ISPs) and telecom companies and sell it to PDOs, while also accounting for data used by all PDOs. Finally, you have the app provider, who will create an app through which users can access and discover the Wi-Fi access points.

- Further details can be found in the report by TRAI on a public open Wi-Fi. Two pillars have been given as a baseline for public Wi-Fi.
  - The first is interoperability, where the user will be required to login only once and stay connected across access points.
  - The second is multiple payment options, allowing the user to pay both online and offline.
- The report also talks about how products should start from low denominations, starting with ₹2. It is suggested in the report that the requirement of authentication through a one-time password for each instance of access may be cumbersome and automatic authentication through stored e-know your customer (KYC) is encouraged, which inevitably means a linking with Aadhaar.

### **Aiding rural connectivity**

- The PM-WANI has the potential to change the fortunes of Bharat Net as well. Bharat Net envisions broadband connectivity in all villages in India.
- The project has missed multiple deadlines, and even where the infrastructure has been created, usage data is not enough to incentivise ISPs to use Bharat Net infra to provide services. One of the reasons for the lack of demand is the deficit in digital literacy in India.
- The other reason is simply the lack of last mile availability of the Internet. In terms of digital literacy, it is not enough to look at digital literacy as a set of specific skills, because the skills required to navigate technology keep changing.
- A more appropriate framework is to see it as an evolving decentralised concept, which depends on how people interact with technology in other aspects of their life, and is influenced by local social and cultural factors.
- The PM-WANI seems to fit within this framework, simply because it seeks to make accessing the Internet as easy as having tea at a chai shop. This is not a substitute for the abysmal digital literacy efforts of the government, but will definitely help.

### **Security, privacy issues**

- There are some concerns, mainly with respect to security and privacy. A large-scale study conducted at public Wi-Fi spots in 15 airports across the United States, Germany, Australia, and India discovered that two thirds of users leak private information whilst accessing the Internet.
- Further, the TRAI report recommends that ‘community interest’ data be stored locally, raising questions about data protection in a scenario where the country currently does not have a data protection law in place. These are however, problems of regulation, state capacity and awareness and do not directly affect the framework for this scheme.
- With the PM-WANI, the state is expanding the reach of digital transformation to those who have been excluded till now. It is a game-changer because it has the potential to move Digital India to Digital Bharat.

### **How did climate change alter the world this year?**

(Source: [Down to Earth](#) )

**Context:** *A look back at 2020 evokes an unsettling picture: It was, after all, the year when the novel coronavirus SARS-CoV-2 held the world by a thread, causing massive economic setbacks and upending lives. At the same time, the climate crisis — while it took a backseat in the face of the health crisis — continued to contribute to volatile weather events.*

### **Details:**



- Optimism had prevailed when the lockdown was announced; observers believed that the shutting down of all economic activities to curb the spread of the virus would bring down the greenhouse gas (GHG) emissions.
- The belief, however, was only a blip in the long-term GHG emission trends, as the latest *State of the Global Climate* provisional report by World Meteorological Organisation (WMO) found.
- The report stated that the reduction in GHG gases “will be practically indistinguishable from the natural inter-annual variability, driven largely by the terrestrial biosphere.” It added that the real-time data from specific locations indicated increasing levels of carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>) and nitrous oxide (N<sub>2</sub>O) in 2020.
- CO<sub>2</sub>, CH<sub>4</sub> and N<sub>2</sub>O are the three primary GHGs that cause anthropogenic global warming. N<sub>2</sub>O seems to be becoming the next big concern in terms of its increasing concentrations in the atmosphere and global warming potential.
- Human emissions of N<sub>2</sub>O — which is 300 times more potent than CO<sub>2</sub> — increased by 30 per cent between 1980 and 2016, according to a research paper published in *Nature* October 7, 2020.
- Nitrous oxide is a dangerous gas for the sustainable existence of humans on Earth. It has the third-highest concentration — after CO<sub>2</sub> and methane — in our atmosphere among greenhouse gases responsible for global warming.
- N<sub>2</sub>O can live in the atmosphere for up to 125 years. Its global concentration levels increased from 270 parts per billion (ppb) in 1750 to 331 ppb in 2018 — a jump of 20 per cent. The growth has been the quickest in the past five decades because of human emissions.
- As the GHG emissions continue to be on the rise Earth is also getting warmer. The development has spiralled into motion several catastrophic events this year alone.

### Global temperature rise

- The planet was warmer by 1.2 degrees Celsius from January to October in 2020 than the pre-industrial average measured between 1850 and 1900, according to the *Nature* report. This is the second-warmest recorded when compared to similar periods in historical data.
- The year is on course to become the third-warmest year on record. The record heat in 2020 has been despite near-La Niña conditions prevailing in the equatorial Pacific Ocean since August and moderate La Niña conditions prevailing since late September.
- The La Niña phase of the El Niño Southern Oscillation (ENSO) phenomenon has a cooling effect on many parts of the world. The warmest year on record was 2016, which had very strong El Niño conditions which is the warming phase of the ENSO. This portends that 2020 has been almost as warm as 2016, if not for the opposing ENSO conditions in both year.
- In fact a WMO report in July stated that one of the next five years may be witness to global average temperatures of 1.5 degree Celsius above pre-industrial levels. There is a 20 per cent possibility of the event.
- The report titled *The Global Annual to Decadal Climate Update* added that the global average temperature rise would likely be above 1°C in each of the next five years.
- The range of temperatures is likely to be between 0.91 and 1.59°C. There is also a 70 per cent chance that the 1.5°C rise above pre-industrial levels barrier will happen in one or more months in this time. This is when countries under the 2015 Paris Agreement of the United Framework Convention for Climate Change have agreed to limit the planet’s warming to 2°C by the end of century.
- The extent of warming makes the goal challenging and brings a lot of consequences in its wake. These include increase in sea levels, melting ice sheets in the Arctic and Antarctic and extreme weather events such as marine heat waves, tropical cyclones, heavy rainfall, floods, droughts and wildfires.

### Heat accumulation

- Ocean heat content (OHC) is one of the most crucial indicators of global warming as 90 per cent of excess heat in the atmosphere is taken up by the seas and oceans. The heat content of oceans in the depth

from 0-2000 metres was at a peak in 2019 and the trend is expected to hold in 2020 and the coming years as well, according to 15 different international datasets of OHC.

- All datasets agree that OHC increased significantly in the last two decades. Heat accumulation has occurred in the last 60 years in ocean depth of 700-2000 metres.
- Temperatures over ocean surfaces were so high in 2020 that 80 per cent of ocean areas experienced at least one marine heat wave (MHW) till date. During such times, the average temperatures of the ocean surface (up to a depth of 300 feet or more) rise by 5-7°C above normal.
- MHWs can be caused by locally formed heat fluxes between the atmosphere and the ocean or due to large-scale drivers of the Earth's climate like the ENSO. There were also much stronger MHWs (43 per cent) over the oceans in 2020 than the moderate ones (28 per cent).
- Global sea-level rise in 2020 was also similar to 2019 values and the general decreasing trend has continued. This was mainly due to the increased melting of the ice sheets in Greenland and Antarctica.
- In Greenland alone, ice weighing 152 gigatonnes melted between September 2019 and August 2020, which was on the high end of the 40-year satellite records.

### **Melting of ice sheets**

- The melting of the ice sheets has been driven by record temperatures in polar regions. When the mercury rose to 38°C in Verkhoyansk in Siberia on June 20, 2020, it was reported as the highest temperature ever recorded in the Arctic Circle region.
- This was around 18°C higher than the normal temperature for that time of the year for the place. The WMO officials at the time were certain about the observational accuracy of the data.
- Even though the town is in the Guinness book of world records for the largest temperature range it experiences — from some -67°C to some 37°C — this new record has an imprint of global warming.
- The soaring temperatures also cause wildfires in parts of the Arctic region.
- This event was also symptomatic of a much greater problem as the Arctic region is the climate capital of the world. It controls and influences climate in most other regions and has been warming at twice the rate as compared to the rest of the planet as a result of Arctic amplification, wherein the melting ice hastens warming by exposing areas that are not good at reflecting back heat into the atmosphere.
- This creates a feedback loop between melting ice and rising temperatures, amplifying the impact of warming. The climate in the Arctic region impacts weather systems further south through the changing nature of the Arctic jet stream, which is a band of winds over the region that keeps the region insulated from winds in the lower latitudes.
- This jet stream as a result of warming is becoming wavy and allowing cold winds to get out — and warm winds from outside to get in — thereby disrupting long-term weather conditions everywhere.





## Current Affairs Quiz

1. Consider the following statements regarding Herd immunity.

1. It is the resistance to the spread of a contagious disease within a population.
2. It occurs when high proportion of individuals are resistant to the disease.
3. It may occur due to immunization or naturally.

Which of the above statements is/are correct?

- a) 1, 2 and 3 only
- b) 2 only
- c) 2 and 3 only
- d) 1 and 3 only

Answer: a)

2. An Agricultural produce market committee (APMC) is established by which of the following?

- a) State Government
- b) Central Government
- c) Local Government
- d) All of the above

Solution: a)

3. Consider the following statements:

1. All food grain procurement operations in India are undertaken by the Food Corporation of India (FCI).
2. Minimum Support Price (MSP) may be both lower or higher than the prevailing market price of the particular crop.

Which of the above statements is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Answer: b)

Not all procurements are done by FCI. State cooperative agencies and other state-level distribution agencies also play a crucial role.

4. Emissions Gap Report 2020 is released by:

- a) Germanwatch
- b) World Wide Fund for Nature
- c) World Economic Forum
- d) United Nations Environment Programme (UNEP)

Answer: d)

5) Which of the following statements is/are correct with respect to National Family Health Survey (NFHS) 2019

1. International Institute for Population Sciences (IIPS) is nodal agency responsible for co-ordinating NFHS.
2. For the first time data on percentage of women and men who have ever used the Internet was included in the survey.

Select the correct answer using the codes given below:

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

Answer : c

6. Consider the following statements regarding Meteor shower.

1. A series of meteorites, when encountered at once, is termed a meteor shower.
2. Meteor showers are witnessed when Earth passes through the trail of debris left behind by a comet or an asteroid.
3. According to NASA, meteor shower is a very rare event which happens once in 100 years.

Which of the above statements is/are correct?

- a) 1 and 2 only
- b) 1 and 3 only
- c) 2 and 3 only
- d) 1, 2 and 3

Answer: a)

According to NASA, over 30 meteor showers occur annually and are observable from the Earth.

7) Consider the following statements in context of Project 17A

1. Under the Project, a total of seven ships are being built with enhanced stealth features.
2. Himgiri, which was launched recently, is the first ship of the Project 17A.

Which of the statement(s) given above is/are correct?

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2





Answer : c

8) The World's largest hybrid renewable energy park is being setup in?

- Gujarat
- Tamil Nadu
- West Bengal
- Chhattisgarh

Answer : a

- These projects include world's biggest Renewable Energy Park which aims to generate 30,000 MW power through solar panels and windmills on 72,600 hectares area along the India-Pakistan border in Gujarat's Kutch district.

9) Consider the following statements with respect to UNESCO State of the Education Report for India

- The report provides useful inputs for the implementation of New Education Policy 2020 (NEP)
- It aims to support skills development under the Skill India Mission.

Which of the statement(s) given above is/are correct?

- 1 only
- 2 only
- Both 1 and 2
- Neither 1 nor 2

Answer : c

10) Which of the following statements is/are correct with respect to Geminids Meteor Shower

- They emerge from an asteroid or an extinct comet.
- They travel at speed that is 1000 times faster than a cheetah.

Select the correct answer using the codes given below:

- 1 only
- 2 only
- Both 1 and 2
- Neither 1 nor 2

Answer : c

11) Which of the following statements is/are correct with respect to Himalayan Serow

- Himalayan serow resembles a cross between a goat, a donkey, a cow, and a pig.
- It is listed under Schedule I of The Wildlife Protection Act, 1972, which provides absolute protection.

Select the correct answer using the codes given below:

- 1 only
- 2 only
- Both 1 and 2
- Neither 1 nor 2

Answer : c

12) Consider the following statements with respect to Chandra X-ray Observatory

- It is sensitive to X-ray sources 100 times fainter than any previous X-ray telescope.
- It can detect X-ray emissions from very hot regions of the universe such as exploded stars, and matter around black holes.

Which of the statement(s) given above is/are correct?

- 1 only
- 2 only
- Both 1 and 2
- Neither 1 nor 2

Answer : c

13. Consider the following statements regarding the Sessions of Parliament in India.

- India does have a fixed parliamentary calendar and meets for three sessions in a year.
- Usually the Budget session has the longest period.
- The summoning of Parliament is based on the provisions of the Government of India Act, 1935.

Which of the above statements is/are correct?

- 1 and 3 only
- 2 and 3 only
- 1 and 2 only
- All of the above

Answer: b)

India does not have a fixed parliamentary calendar. By convention, Parliament meets for three sessions in a year.

14. S-400 air defence missile system, recently seen in news is developed by

- Russia
- Japan
- USA
- Israel

Answer: a)



15. Consider the following statements regarding Countering America's Adversaries through Sanctions Act (CAATSA).

1. It empowers the US President to impose some sanctions on persons engaged in a "significant transaction" with Russian defence and intelligence sectors.
2. Its core objective is to counter Iran, Russia and North Korea through punitive measures.

Which of the above statements is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Answer: c)

16. Consider the following statements with respect to IUCN Red Data Book

1. It is mainly created to document and protect species that are newly identified from a particular area.
2. So far, none of the Indian grasshopper species have been listed in the Red Data Book.

Which of the statement(s) given above is/are incorrect?

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

Answer : a

This book is mainly created to identify and protect those species which are on the verge of extinction.

17. Consider the following statements

1. S-400 Triumf is a mobile, surface-to-air missile system (SAM) designed by Israel.
2. The United States has recently imposed sanctions on Morocco pursuant to Countering America's Adversaries through Sanctions Act (CAATSA), citing its acquisition of S-400 air defense systems.

Which of the statement(s) given above is/are correct?

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

Answer : d

- S-400 Triumf is a mobile, surface-to-air missile system (SAM) designed by Russia

- The United States has recently imposed sanctions on **Turkey** over Ankara's acquisition of Russian S-400 air defence systems.

18. Which of the following statements is/are correct with respect to National Water Informatics Centre

1. It is an independent organization established by Ministry of Jal Shakti under National Hydrology Project.
2. National Hydrology Project is a central sector scheme to strengthen the capacity of targeted water resource management institutions in India.

Select the correct answer using the codes given below:

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

Answer : c

19. Which of the following are Communication Satellites of India

1. GSAT
2. IRNSS
3. CMS
4. RISAT
5. INSAT

Select the correct answer using the codes given below:

- a. 1, 2, and 3 only
- b. 1, 4, and 5 only
- c. 1, 3 and 5 only
- d. All of the above

Answer : c

#### **Communication Satellites of India**

- **CMS-01** - ISRO is gearing up for the launch of India's communication satellite CMS-01 using the rocket PSLV-C50.
- **GSAT** - The GSAT (Geostationary Satellite) satellites are India's indigenously developed communications satellites, used for digital audio, data and video broadcasting.
- As of now 20 GSAT satellites of ISRO have been launched out of which 14 satellites are in service.
- **INSAT** - The Indian National Satellite (INSAT) system is one of the largest domestic communication satellite systems in Asia-Pacific region with nine operational



communication satellites placed in Geo-stationary orbit.

20) Consider the following statements with respect to Currency Manipulator

1. China issues such label to countries that deliberately devaluing their currency against the Yuan.
2. Only criteria to place a country under such watch list is “significant” bilateral trade surplus with China that is at least \$20 billion.

Which of the statement(s) given above is/are incorrect?

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

Answer : c

- The term ‘currency manipulator’ is a label given by the US government to countries it feels are engaging in “unfair currency practices” by deliberately devaluing their currency against the dollar.
- An economy meeting two of the **three criteria** in the Trade Facilitation and Trade Enforcement Act of 2015 is placed on the Monitoring List, as follows:
  1. A “significant” bilateral trade surplus with the US — one that is at least \$20 billion over a 12-month period.
  2. A material current account surplus equivalent to at least 2 percent of gross domestic product (GDP) over a 12-month period.
  3. “Persistent”, one-sided intervention — when net purchases of foreign currency totalling at least 2 percent of the country’s GDP over a 12 month period are conducted repeatedly, in at least six out of 12 months.

# **Special Issue**

December (Week 3)

## **Contents**

How to measure a mountain .....	2
How Parliament is convened .....	4
How does India choose its Republic Day Chief Guest? .....	5





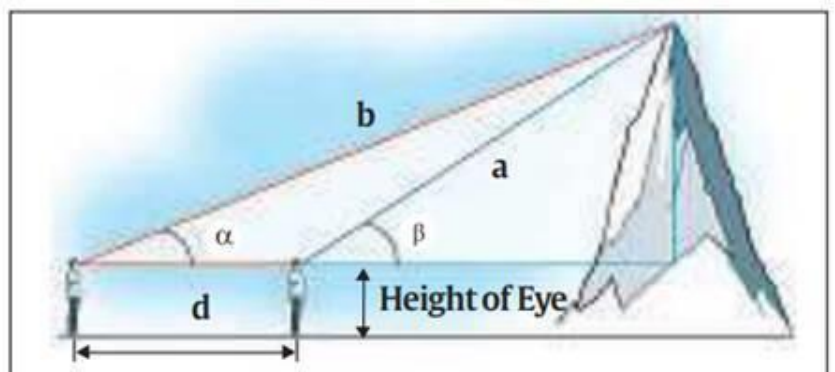
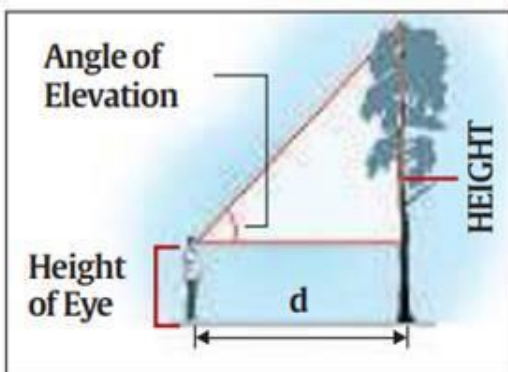
## How to measure a mountain

(Source: [Indian Express](#) )

**Context:** In a new measurement, China and Nepal have announced Mount Everest is 86 cm taller than the 8,848 m accepted globally so far. How was the original height calculated by Survey of India? What does the revision mean?

### How is the height of any mountain measured?

- The basic principle that was used earlier is very simple, and uses only trigonometry which most of us are familiar with, or at least can recall.
- There are three sides and three angles in any triangle. If we know any three of these quantities, provided one of them is a side, all the others can be calculated. In a right-angled triangle, one of the angles is already known, so if we know any other angle and one of the sides, the others can be found out.
- This principle can be applied for measuring the height of any object that does not offer the convenience of dropping a measuring tape from top to bottom, or if you can't climb to the top to use sophisticated instruments.



- Let's say, we have to measure the height of a pole, or a building. We can mark any arbitrary point on the ground some distance from the building. This can be our point of observation. We now need two things — the distance of the building from the point of observation, and the angle of elevation that the top of the building makes with the point of observation on the ground. The distance is not difficult to get. The angle of elevation is the angle that an imaginary line would make if it was joining the point of observation on the ground to the top of the building. There are simple instruments with the help of which this angle can be measured.
- So, if the distance from the point of observation to the building is  $d$  and the angle of elevation is  $E$ , then the height of the building would be  $d \times \tan(E)$ .
- The responsibility of the Survey of India is to prepare authoritative maps, and its work involves carrying out extensive land surveys and mapping topographical features.
- Starting in 1952, the Survey of India undertook an exercise to measure the height of Mount Everest (then known as Peak XV). That exercise measures the height at 8,848 m (29,028 feet), which remained the globally accepted standard, until now.

### Can it be that simple for measuring a mountain?

- The principle is the same, and ultimately, we use the same method, but there are a few complications. The main problem is that though you know the top, the base of the mountain is not known. The question is from which surface you are measuring the height.
- Generally, for practical purposes the heights are measured above mean sea level (MSL). Moreover, we need to find the distance to the mountain. It seems easy today, but there were no GPS or satellite images





in the 1950s. So, how to find the distance of a mountain where you cannot physically go? Till that time nobody had even climbed the Mount Everest.

- We can get around this problem by measuring the angles of elevation from two different points of observation in the same line of view. The distances between these different points of observations can be measured. We will now be dealing with two different triangles, but with a common arm, and two different angles of elevation.
- Again, by following simple rules of high-school trigonometry, the height of the mountain can be calculated, fairly precisely. In fact, this is how we used to do it before the advent of GPS, satellites and other modern techniques.

### **How accurate is this?**

- For small hills and mountains, whose top can be observed from relatively close distances, this can give quite precise measurements. But for Mount Everest and other high mountains, there are some other complications.
- These again arise from the fact that we do not know where the base of the mountain is. In other words, where exactly does the mountain meet flat ground surface. Or, whether the point of observation and the base of the mountain at the same horizontal level.
- The Earth's surface is not uniformly even at every place. Because of this, we measure heights from mean sea level. This is done through a painstaking process called high-precision levelling. Starting from the coastline, we calculate step by step the difference in height, using special instruments. This is how we know the height of any city from mean sea level.
- But there is one additional problem to be contended with — gravity. Gravity is different at different places. What that means that even sea level cannot be considered to be uniform at all places. In the case of Mount Everest, for example, the concentration of such a huge mass would mean that the sea level would get pulled upwards due to gravity. So, the local gravity is also measured to calculate the local sea level. Nowadays sophisticated portable gravimeters are available that can be carried even to mountain peaks.
- But the levelling cannot be extended to high peaks. So we have to fall back on the same triangulation technique to measure the heights. But there is another problem. The density of air reduces as we go higher.
- This variation in air density causes the bending of light rays, a phenomenon known as refraction. Due to the difference in heights of the observation point and the mountain peak, refraction results in an error in measuring the vertical angle. This needs to be corrected. Estimating the refraction correction is a challenge in itself.

### **Use of Technology**

- These days GPS is widely used to determine coordinates and heights, even of mountains. But, GPS gives precise coordinates of the top of a mountain relative to an ellipsoid which is an imaginary surface mathematically modelled to represent Earth. This surface differs from mean sea level. Similarly, overhead flying planes equipped with laser beams (LiDAR) can also be used to get the coordinates.
- But these methods, including GPS, do not take gravity into consideration. So, the information obtained through GPS or laser beams is then fed into another model that account for gravity to make the calculation complete.
- Considering that during 1952-1954, when neither GPS and satellite techniques were available nor the sophisticated gravimeters, the task of determining the height of Mount Everest was not easy.
- Nepal and China have said they have measured Mount Everest to be 86 cm higher than the 8,848 m that it was known to be. What would that mean?
- The 8,848-metre (or 29,028-foot) measurement was done by the Survey of India in 1954 and it has been globally accepted since then. The measurement was carried out in the days when there was no GPS or other modern sophisticated instruments. This shows how accurate they were even during that time.



- In recent years, several attempts have been made to re-measure Everest, and some of them have been produced results that vary from the accepted height by a few feet. But these have been explained in terms of geological processes that might be altering the height of Everest. The accuracy of the 1954 result has never been questioned.
- Most scientists now believe that the height of Mount Everest is increasing at a very slow rate. This is because of the northward movement of the Indian tectonic plate that is pushing the surface up. It is this very movement that created the great Himalayan mountains in the first place. It is this same process that makes this region prone to earthquakes.
- A big earthquake, like the one that happened in Nepal in 2015, can alter the heights of mountains. Such events have happened in the past. In fact, it was this earthquake that had prompted the decision to re-measure Everest to see whether there had been any impact.
- A 86-cm rise would not be surprising. It is very possible that the height has increased in all these years. But, at the same time, 86 cm in a height of 8,848 metres is a very small length.
- The detailed results of the Nepali and Chinese efforts at measuring Everest are still to be published in a journal. The real significance of this measurement would become evident only after that.

### **How Parliament is convened**

(Source: [Indian Express](#) )

**Context:** *In response to a letter from the Congress leader in Lok Sabha Adhir Ranjan Chowdhury seeking a short session of Parliament to discuss the new farm laws, Parliamentary Affairs Minister Pralhad Joshi has said that some opposition parties “have expressed concerns about the ongoing pandemic and opined of doing away with winter session”.*

#### **Sessions of Parliament**

- The power to convene a session of Parliament rests with the government. The decision is taken by the Cabinet Committee on Parliamentary Affairs, which currently comprises nine ministers, including those for Defence, Home, Finance, and Law. The decision of the Committee is formalised by the President, in whose name MPs are summoned to meet for a session.
- India does not have a fixed parliamentary calendar. By convention, Parliament meets for three sessions in a year. The longest, the Budget Session, starts towards the end of January, and concludes by the end of April or first week of May. The session has a recess so that Parliamentary Committees can discuss the budgetary proposals.
- The second session is the three-week Monsoon Session, which usually begins in July and finishes in August. The parliamentary year ends with a three week-long Winter Session, which is held from November to December.
- A general scheme of sittings was recommended in 1955 by the General Purpose Committee of Lok Sabha. It was accepted by the government of Prime Minister Jawaharlal Nehru, but was not implemented.

#### **What the Constitution says**

- The summoning of Parliament is specified in Article 85 of the Constitution. Like many other articles, it is based on a provision of The Government of India Act, 1935. This provision specified that the central legislature had to be summoned to meet at least once a year, and that not more than 12 months could elapse between two sessions.
- Dr B R Ambedkar stated that the purpose of this provision was to summon the legislature only to collect revenue, and that the once-a-year meeting was designed to avoid scrutiny of the government by the



legislature. On the floor of the Constituent Assembly, he said: “We thought and personally I also think that the atmosphere has completely changed and I do not think any executive would hereafter be capable of showing this kind of callous conduct towards the legislature.”

- His drafting of the provision reduced the gap between sessions to six months, and specified that Parliament should meet at least twice a year. He argued that “The clause as it stands does not prevent the legislature from being summoned more often than what has been provided for in the clause itself. In fact, my fear is, if I may say so, that the sessions of Parliament would be so frequent and so lengthy that the members of the legislature would probably themselves get tired of the sessions.”
- During the debate, members of the Constituent Assembly highlighted three issues: (i) the number of sessions in a year, (ii) the number of days of sitting and, (iii) who should have the power to convene Parliament.
- Prof K T Shah from Bihar was of the opinion that Parliament should sit throughout the year, with breaks in between. Others wanted Parliament to sit for longer durations, and gave examples of the British and American legislatures which during that time were meeting for more than a hundred days in a year.
- Prof Shah also wanted the presiding officers of the two Houses to be empowered to convene Parliament in certain circumstances. These suggestions were not accepted by Dr Ambedkar.

### **Moved, delayed, stretched**

- Over the years, governments have shuffled around the dates of sessions to accommodate political and legislative exigencies. In 2017, the Winter Session was delayed on account of the Gujarat Assembly elections. In 2011, political parties agreed to cut short the Budget Session so they could campaign for Vidhan Sabha elections in five states.
- Sessions have also been cut short or delayed to allow the government to issue Ordinances. For example, in 2016, the Budget Session was broken up into two separate sessions to enable the issuance of an Ordinance.
- Sessions have been stretched — in 2008, the two-day Monsoon Session (in which a no-confidence motion was moved against the UPA-I government over the India-US nuclear deal) was extended until December. The ostensible reason was to prevent the moving of another no-confidence motion. It meant that there were only two sessions that year.

### **Fewer House sittings**

- Over the years, there has been a decline in the sittings days of Parliament. During the first two decades of Parliament, Lok Sabha met for an average of a little more than 120 days a year. This has come down to approximately 70 days in the last decade.
- One institutional reason given for this is the reduction in the workload of Parliament by its Standing Committees, which, since the 1990s, have anchored debates outside the House. However, several Committees have recommended that Parliament should meet for at least 120 days in a year.
- Congress leader Pawan Kumar Bansal, during his tenure as member of Rajya Sabha, made this proposal in his private member Bills. Sitting Rajya Sabha MP Naresh Gujral, in his 2017 private member Bill, suggested that Parliament should meet for four sessions in a year, including a special session of 15 days for debating matters of urgent public importance.
- This year, Parliament has met for 33 days. The last time it met for fewer than 50 days was in 2008, when it met for 46 days.

## **How does India choose its Republic Day Chief Guest?**

(Source: [Indian Express](#) )



**Context:** Prime Minister Boris Johnson of the United Kingdom will be the Chief Guest at the forthcoming Republic Day parade.

### **Why is the invitation to attend India's Republic Day a special honour?**

- While the visit of the Chief Guest at the Republic Day parade is similar to a State visit by any foreign high dignitary, given the ceremony involved, it is the highest honour that India accords to a guest in protocol terms.
- The Chief Guest is given the ceremonial guard of honour at Rashtrapati Bhavan, he attends the reception in the evening hosted by the President of India, he lays a wreath at Rajghat, there is a banquet in his honour, a lunch hosted by the Prime Minister, and calls by the Vice-President and the External Affairs Minister.
- The centrepiece of the visit is that the Chief Guest accompanies the President of India, flanked by the horse-mounted President's Bodyguards, to the saluting base on Rajpath from where the President reviews the Republic Day parade.
- According to Ambassador Manbir Singh, a former Indian Foreign Service officer who served as Chief of Protocol between 1999 and 2002, the visit of the Chief Guest is full of symbolism — "it portrays the Chief Guest as participating in India's pride and happiness, and reflects the friendship between the two peoples represented by the President of India and the Chief Guest".

### **How does India choose the Chief Guest for Republic Day?**

- The government extends its invitation to a Head of State or Government after careful consideration. This process commences almost six months ahead of Republic Day.
- According to Ambassador Manbir Singh, the Ministry of External Affairs (MEA) considers a number of issues, the most important of which is the nature of India's relationship with the country concerned.
- Other factors include political, economic, and commercial relations, the neighbourhood, military cooperation, prominence in regional groupings, or past association in the Non Aligned Movement, in which newly independent countries united in a common struggle against colonialism, apartheid, and the domination of the developed countries.
- All these considerations often point in different directions — and choosing a Chief Guest, therefore, often poses a challenge.

### **What happens after the MEA has zeroed-in on its options?**

- The MEA, after deliberations, seeks the Prime Minister's approval, after which the clearance of Rashtrapati Bhavan is sought. Thereafter, India's ambassadors in the concerned countries try to ascertain discreetly the potential Chief Guests' programme and availability for Republic Day.
- This is an important step, as it may well be that the high dignitary has an unavoidable engagement at that time, such as a session of Parliament in their country, or perhaps an important incoming State visit.
- Once this laborious process has been completed, the territorial divisions in the MEA work towards meaningful talks and agreements, while the Chief of Protocol works on the details of the programme and logistics.
- The Protocol Chief explains to his counterpart from the visitor's side the detailed programme which, for the Republic Day ceremonies, has to be followed minute-by-minute with military precision.
- All aspects of the visit are gone through, such as security, logistics, medical requirements, if necessary, with the active cooperation of the concerned Departments of the Government of India and the governments of the states which the Chief Guest may visit before coming to New Delhi, or after Republic Day.

### **What if there are disagreements during the consultation process?**

- This is an important consideration, because while some discussions on timings and the meetings may take place, there is no flexibility with regard to the Republic Day ceremonies and their schedules.





- However, Ambassador Singh wrote that in his experience, there has been no Chief Guest who did not — for whatever reason — adhere to India's protocol requirements or programme timings.
- It must be noted that even United States President Barack Obama, the most powerful man in the world at the time, sat through the entire programme as was required.

#### **And what can go wrong during the ceremony?**

- There are so many things to coordinate, and so many moving parts in the grand show that there is always a possibility of a glitch. This is true of all state visits, including that of the Republic Day Chief Guest.
- During state visits, it has happened that the VIP, due to health reasons, has been late for engagements, or has been unable to walk through the Tri-Services Guard of Honour.
- During the monsoon, there is a constant threat of rain, and every contingency needs to be thought of, alternative arrangements made, and rehearsed to perfection. But in spite of all precautions, on rare occasions, some errors do occur.

#### **Who have been India's Republic Day Chief Guests so far?**

- The list includes an impressive list of world leaders, and reflects both India's foreign policy priorities and the way the world has perceived it over the decades.
  - 1950: President Sukarno, Indonesia
  - 1951: King Tribhuvan Bir Bikram Shah, Nepal
  - 1952 and 1953: No Chief Guest
  - 1954: King Jigme Dorji Wangchuck, Bhutan
  - 1955: Governor General Malik Ghulam Muhammad, Pakistan
  - 1956: Two guests: Chancellor of the Exchequer Rab Butler, United Kingdom; Chief Justice Kotaro Tanaka, Japan
  - 1957: Minister of Defence Georgy Zhukov, Soviet Union
  - 1958: Marshal Ye Jianying, China
  - 1959: Duke of Edinburgh Prince Philip, United Kingdom
  - 1960: Chairman Kliment Voroshilov, Soviet Union
  - 1961: Queen Elizabeth II, United Kingdom
  - 1962: Prime Minister Viggo Kampmann, Denmark
  - 1963: King Norodom Sihanouk, Cambodia
  - 1964: Chief of Defence Staff Lord Louis Mountbatten, United Kingdom
  - 1965: Food and Agriculture Minister Rana Abdul Hamid, Pakistan
  - 1966: No Chief Guest
  - 1967: King Mohammed Zahir Shah, Afghanistan
  - 1968: Two guests: Chairman Alexei Kosygin, Soviet Union; President Josip Broz Tito, Yugoslavia
  - 1969: Prime Minister Todor Zhivkov, Bulgaria
  - 1970: King Baudouin, Belgium
  - 1971: President Julius Nyerere, Tanzania
  - 1972: Prime Minister Seewoosagur Ramgoolam, Mauritius
  - 1973: President Mobutu Sese Seko, Zaire
  - 1974: Two guests: President Josip Broz Tito, Yugoslavia; Prime Minister Sirimavo Bandaranaike, Sri Lanka
  - 1975: President Kenneth Kaunda, Zambia
  - 1976: Prime Minister Jacques Chirac, France
  - 1977: First Secretary Edward Giermek, Poland
  - 1978: President Patrick Hillery, Ireland
  - 1979: Prime Minister Malcolm Fraser, Australia
  - 1980: President Valéry Giscard d'Estaing, France
  - 1981: President Jose Lopez Portillo, Mexico
  - 1982: King Juan Carlos I, Spain





- 1983: President Shehu Shagari, Nigeria
- 1984: King Jigme Singye Wangchuck, Bhutan
- 1985: President Raúl Alfonsín, Argentina
- 1986: Prime Minister Andreas Papandreou, Greece
- 1987: President Alan Garcia, Peru
- 1988: President J. R. Jayewardene, Sri Lanka
- 1989: General Secretary Nguyen Van Linh, Vietnam
- 1990: Prime Minister Anerood Jugnauth, Mauritius
- 1991: President Maumoon Abdul Gayoom, Maldives
- 1992: President Mário Soares, Portugal
- 1993: Prime Minister John Major, United Kingdom
- 1994: Prime Minister Goh Chok Tong, Singapore
- 1995: President Nelson Mandela, South Africa
- 1996: President Fernando Henrique Cardoso, Brazil
- 1997: Prime Minister Basdeo Panday, Trinidad and Tobago
- 1998: President Jacques Chirac, France
- 1999: King Birendra Bir Bikram Shah, Nepal
- 2000: President Olusegun Obasanjo, Nigeria
- 2001: President Abdelaziz Bouteflika, Algeria
- 2002: President Cassam Uteem, Mauritius
- 2003: President Mohammed Khatami, Iran
- 2004: President Luiz Inácio Lula da Silva, Brazil
- 2005: King Jigme Singye Wangchuck, Bhutan
- 2006: King Abdullah bin Abdulaziz al-Saud, Saudi Arabia
- 2007: President Vladimir Putin, Russia
- 2008: President Nicolas Sarkozy, France
- 2009: President Nursultan Nazarbayev, Kazakhstan
- 2010: President Lee Myung Bak, South Korea
- 2011: President Susilo Bambang Yudhoyono, Indonesia
- 2012: Prime Minister Yingluck Shinawatra, Thailand
- 2013: King Jigme Khesar Namgyel Wangchuck, Bhutan
- 2014: Prime Minister Shinzo Abe, Japan
- 2015: President Barack Obama, United States
- 2016: President François Hollande, France
- 2017: Crown Prince Mohammed bin Zayed Al Nahyan, United Arab Emirates
- 2018: Ten Chief Guests, Heads of ASEAN States:
  - Sultan Hassanal Bolkiah, Brunei
  - Prime Minister Hun Sen, Cambodia
  - President Joko Widodo, Indonesia
  - Prime Minister Thongloun Sisoulith, Laos
  - Prime Minister Najib Razak, Malaysia
  - State Counsellor Aung San Suu Kyi, Myanmar
  - President Rodrigo Duterte, Philippines
  - Prime Minister Lee Hsien Loong, Singapore
  - Prime Minister Prayut Chan-o-cha, Thailand
  - Prime Minister Nguyễn Xuân Phúc, Vietnam
- 2019: President Cyril Ramaphosa, South Africa
- 2020: President Jair Bolsonaro, Brazil
- 2021: Prime Minister Boris Johnson, United Kingdom



## December (Week 4)

### INDEX

#### Contents

<b>Prelims</b> .....	2
<b>NATIONAL</b> .....	2
Sentinelese .....	2
Himalayan Trillium.....	3
Khudiram Bose .....	3
New irrigation model – SSPV.....	4
Postal ballots .....	5
Pathalgadi movement.....	6
Leopards in India .....	7
Dhokra Art .....	8
Electricity (Rights of Consumers) Rules, 2020 .....	8
<b>INTERNATIONAL</b> .....	10
Cairn arbitration case .....	10
Winter Solstice.....	11
Israel’s controversial nation state law .....	12
<b>Mains</b> .....	14
<b>GSI</b> .....	14
Srinivasa Ramanujan .....	14
<b>GS II</b> .....	16
Losing the plot on women’s safety .....	16
NRIs and Postal Voting rights .....	17
S-400 at length .....	19
Access to drinking water, sanitation improve across states, urban-rural divide remains: NFHS-5.....	21
<b>GS III</b> .....	22
Carbon capture technology .....	22
<b>GS IV</b> .....	23
Ethical challenges of vaccinating people with comorbidities.....	23
Current Affairs Quiz .....	26

# Prelims

## NATIONAL

### Sentinelese

(Source: [The Hindu](#) )

**Context:** Any exploitation of the North Sentinel Island of the Andamans for commercial and strategic gain would spell the death knell for its occupants, the Sentinelese, a most secluded, particularly vulnerable tribal group (PVTG) who reside in complete isolation on the island, the Anthropological Survey of India (AnSI) has said.

#### Who are they?

- The Sentinelese, a negrito tribe who live on the North Sentinel Island of the Andamans, have not faced incursions and remain hostile to outsiders.
- The inhabitants are connected to the Jarawa on the basis of physical, as well as linguistic similarities, researchers say.
- Based on carbon dating of kitchen middens by the Anthropological Survey of India, Sentinelese presence was confirmed in the islands to 2,000 years ago.
- Genome studies indicate that the Andaman tribes could have been on the islands even 30,000 years ago.

#### How are they protected?

- The Govt. of India issued the Andaman and Nicobar Islands (Protection of Aboriginal Tribes) Regulation, 1956 to declare the traditional areas occupied by the tribes as reserves, and prohibited entry of all persons except those with authorisation.
- Photographing or filming the tribe members is also an offence. The rules were amended later to enhance penalties. But restricted area permits were relaxed for some islands recently.

#### Have they made contact?

- The Sentinelese have been fiercely hostile to outside contact. But in 1991 they accepted some coconuts from a team of Indian anthropologists and administrators.
- Some researchers argue that the Sentinelese have been mostly left alone even from colonial times, unlike other tribes such as the Onges, Jarawas and Great Andamanese, because the land they occupy has little commercial attraction.

#### How many are there?

- From 1901 to 1921 they were estimated to be 117 people. In 1931, the number dropped to 50, a figure used for the 1961 Census too.
- In 1991 their head count was put at 23. Census 2001 counted 39 inhabitants.



## **Himalayan Trillium**

(Source: [The Hindu](#) )

**Context:** *The Himalayan trillium (Trillium govanianum), a common herb of the Himalayas was declared 'endangered' by the International Union for Conservation of Nature (IUCN) last week.*

### **Details:**

- In recent years, the plant has become one of the most traded commercial plants of the Himalayan region, due to its high medicinal quality.
- It has been used in traditional medicine to cure diseases like dysentery, wounds, skin boils, inflammation, sepsis, as well as menstrual and sexual disorders.
- Recent experiments have shown that the rhizome of the herb is a source of steroidal saponins and can be used as an anti-cancer and anti-aging agent. This increased its market value and has now become an easy target for poachers.
- Found in temperate and sub-alpine zones of the Himalayas, at an altitude from 2,400-4,000 metres above sea level, the existence of the plant has been traced across India, Bhutan, Nepal, China, Afghanistan and Pakistan.
- In India, it is found in four states only- Himachal Pradesh, Jammu and Kashmir, Sikkim, and Uttarakhand. Often called Nagchatri, in local areas this herb grows to a height of 15-20 cm.
- There are several factors threatening the survival of the plant such as over-exploitation, long life cycle - slow to reach reproductive maturity - and poor capacity for seed dispersal. The highly specific habitat requirement, high trade value, and increasing market demand are all causing its decline.

## **Khudiram Bose**

(Source: [Indian Express](#) )

**Context:** *Union Home Minister Amit Shah visited the native village of Bengali revolutionary Khudiram Bose in Midnapore, West Bengal.*

### **Who was Khudiram Bose?**

- Bose was born in 1889 at a small village in Midnapore district. From his adolescent years he was drawn towards revolutionary activities, being inspired by a series of public lectures given by Sri Aurobindo and sister Nivedita, when the duo visited Midnapore in the early 1900s.
- In 1905, when Bengal was partitioned, he actively participated in protests against the British. At the age of 15, Bose joined the Anushilan Samiti, an early 20th century organisation that propounded revolutionary activities in Bengal. Within a year, he had learnt how to make bombs and would plant them in front of police stations.
- The deciding moment of Bose's life came in 1908 when he along with another revolutionary, Prafulla Chaki were assigned the task of assassinating the district magistrate of Muzaffarpur, Kingsford. Before being transferred to Muzaffarpur, Kingsford was a magistrate in Bengal.
- His tortuous clamping down on revolutionaries, had earned him the ire of this young group of nationalists who decided to hurl a bomb on him.

### **What happened during Kingsford's assassination attempt?**





- There were multiple attempts to assassinate Kingsford. Initially the plan was to throw the bomb in the court. However, after much deliberation it was decided to avoid the court since a lot of civilians might get injured.
- Thereafter, on April 30, 1908, Bose threw a bomb on a carriage which he suspected was carrying Kingsford. But it turned out that it was carrying the wife and daughter of a barrister named Pringle Kennedy, who lost their lives, as Kingsford escaped.
- By midnight the entire town was aware of the incident and the Calcutta police was summoned to catch the duo. Bose was arrested from a railway station called Waini where he had reached next morning after having walked 25 miles. Chaki on the other hand, killed himself before he could get arrested.
- As Bose was brought handcuffed to the police station at Muzaffarpur, the entire town crowded around to take a look at the teenaged boy.
- The following morning's Statesman carried a vivid account of the scene as it reported, "The Railway station was crowded to see the boy. A mere boy of 18 or 19 years old, who looked quite determined. He came out of a first-class compartment and walked all the way to the phaeton, kept for him outside, like a cheerful boy who knows no anxiety... on taking his seat the boy cheerfully cried 'Vandemataram'." Bose took full responsibility for the incident.
- On May 21, 1908, the historic trial of Bose began presided by Judge Corndoff, Nathuni Prasad and Janak Prasad in the Jury. Bose's lawyer Narendra Kumar argued that he was too young to be able to make bombs. However, the judges had evidence of more revolutionary activities planned.
- On July 13, 1908, Bose was finally sentenced to death. When the English judge asked him if he understood the meaning of the sentence, Bose is known to have smiled and calmly said, "Yes, I do and my lawyer said that I was too young to make bombs. If you allow me some time before I'm taken away from here, I can teach you the skills of making bombs too."
- Soon after, the streets of Calcutta swelled up in large protests by the student community for several days. He was executed on August 11, 1908.

### **New irrigation model – SSPV**

(Source: [The Hindu](#) )

**Contexte:** *A new model of minor irrigation through sub-surface porous vessels (SSPV) being developed here is set to benefit the farmers with small land holdings in the villages of the Thar desert. Experiments have indicated a higher yield of farm produce and improvement in the nutrient value of soil after the installation of frustum-shaped vessels at the mounds formed on land.*

#### **Details:**

- The initiative, supported by Indian Institute of Technology-Delhi's Rural Technology Action Group, was taken up earlier this year, after the COVID-19 lockdown was announced, to address the issues of non-availability of food material, malnutrition among children and the villagers' inability to earn livelihood in the cities. The model has effectively modified watering by pitchers and competes with drip irrigation.
- At the small Moklawas village in Jodhpur district, the vegetable farming through SSPV has started on the campus of 'Arna Jharna', which functions as the desert museum showcasing the arid landscape.
- The local villagers have created heaped piles of earth and are growing vegetables such as brinjal, tomato, spinach and lady's fingers with the new model.
- A SSPV is made of location-specific clay and sawdust, mixed in a proportion to suit the desert sand, press-formed to the frustum shape and baked at a temperature of 750-800 degree Celsius with the addition of a carbon layer in its structure.
- A team of local potters has been identified in Jodhpur for manufacturing the vessels in the open-hearth furnaces at their households.



- The SSPVs, with the storage of 8 to 9 litres of water, supplies it to a radius of land measuring 1.25 metres.

## **Postal ballots**

(Source: [The Hindu](#) )

**Context:** *The Election Commission (EC), in response to concerns raised by the Communist Party of India (Marxist) general secretary Sitaram Yechury over the provision of postal ballots to NRIs (Non-Resident Indians), said last week that its proposal to the Law Ministry was an extension of its efforts to facilitate voting by overseas electors.*

### **What is postal voting?**

- A restricted set of voters can exercise postal voting.
- Through this facility, a voter can cast her vote remotely by recording her preference on the ballot paper and sending it back to the election officer before counting.

### **Who can avail this facility?**

- Members of the armed forces like the Army, Navy and Air Force, members of the armed police force of a state (serving outside the state), government employees posted outside India and their spouses are entitled to vote only by post.
- In other words, they can't vote in person. Voters under preventive detention can also vote only by post.
- Special voters such as the President of India, Vice President, Governors, Union Cabinet ministers, Speaker of the House and government officers on poll duty have the option to vote by post. But they have to apply through a prescribed form to avail this facility.
- A postal ballot box is seen at a distribution center in Ghatkopar in 2019. (Express Photo: Amit Chakravarty)
- Recently, the Law Ministry, at the Election Commission's behest, introduced a new category of 'absentee voters', who can now also opt for postal voting. These are voters employed in essential services and unable to cast their vote due to their service conditions. Currently, officials of the Delhi Metro Rail Corporation, Northern Railway (Passenger and Freight) Services and media persons are notified as absentee voters.
- Last month, senior citizens above the age of 65 and voters who test positive for COVID19 or are suspected to be COVID-affected were allowed to cast their vote by post.

### **How are votes recorded by post?**

- The Returning Officer is supposed to print ballot papers within 24 hours of the last date of nomination withdrawal and dispatch them within a day. This is done so that the ballot papers reach the concerned voter well before the polling date and she has enough time to send it back before the counting day.
- Postal ballot papers for members of the Armed Forces are sent through their record offices. For members of the armed police force of a state (serving outside the state), government employees posted outside India and their spouses, the ballot paper can be sent through post or electronically. For remaining categories ballot papers can be delivered personally or through post.
- After receiving it, the voter can mark her preference with a tick mark or cross mark against the candidate's name. They also have to fill up a duly attested declaration to the effect that they have marked the ballot paper.
- The ballot paper and the declaration are then placed in a sealed cover and sent back to the Returning Officer before the time fixed for the commencement of counting of votes.



## **Pathalgadi movement**

(Source: [Indian Express](#) )

**Context:** *Soon after taking charge, the Hemant Soren-led government in Jharkhand had decided to drop “all cases” related to the Pathalgadi movement of 2017-2018.*

### **What is Pathalgadi and how did the movement begin?**

- The word pathalgadi is drawn from a tribal custom of erecting stone plaques on the tomb of tribal people in Jharkhand, which has 32 tribal communities. It is also done in honour of their ancestors, to announce important decisions regarding their families and villages or to simply mark the boundary of their villages.
- When the Provisions of the Panchayats (Extension to Scheduled Areas) Act (PESA) came into force, former IAS officer BD Sharma, now deceased, started the practice of erecting stone plaques in villages with provisions of the Act inscribed on it.
- This was done to empower people belonging to the 5th Schedule area on their legal and constitutional safeguards.
- The pathals also quoted several orders of High Courts and Supreme Court such as Samatha judgement which says to preserve the tribal autonomy, their culture and economic empowerment, to ensure social, economic and political justice, and preservation of peace and good governance; P Rami Reddy vs Andhra Pradesh 1988 orders which says that ‘special legislations cannot be held to be unconstitutional on the ground of violation of other fundamental rights, such as Article 14 and 19(1)(g)’ and others.
- The villagers said that they read these provisions and orders to reiterate supremacy of powers of traditional Gram Sabha and traditional Adivasi governance systems; rights of Adivasis over land; the restricted rights of non-advasis and outsiders in the scheduled areas to settle down and work and; that Adivasis are the original inhabitants and owners of India.
- The Raghubar Das government had attempted to tweak Chhotanagpur Land Tenancy Act, 1908 and the Santhal Pargana Tenancy Act, 1949 – in which a tribal can buy or sell their land only to another tribal – by passing an ordinance amending Land Acquisition Act (Jharkhand Amendment) in 2017 and awaited Governor’s approval.
- However, the bill never got the go ahead due to massive protest by tribal communities. This led to violence in the state capital and protests were held in various parts of the state.
- As an extension to this protest, the tribals of Khunti, Gumla, Simdega, Saraikela, West Singhbhum area started erecting stones in their villages with PESA provisions highlighting their rights which came to be known as Pathalgadi movement.

### **What are the powers to safeguard and protect the interest of tribal population?**

- Tribals form more than 1/4th of Jharkhand’s population and areas of Dumka, Godda, Deogarh, Sahabgunj, Pakur, Ranchi, Singhbhum (East & West), Gumla, Simdega, Lohardaga, Palamu, Garwa (some districts have partly tribal blocks) are part of the 5th Schedule.
- It vests the Governor of a state with special powers to safeguard and protect the interests of the tribal population, which includes examining the laws enacted by the parliament or legislature and accordingly restrain or allow it keeping the interests of the tribals in tune with customary law, social and religious practices among others.
- However, in the absence of this in Jharkhand, the tribal population tried to assert their rights on their own.
- For instance, there is less clarity on the role of Gram Sabhas in case of minor minerals, ownership of minor forest produce or power to manage the agri-produce market. Experts say that participation of the tribal population in the decision-making apparatus remains very low.





The word pathalgadi is drawn from a tribal custom of erecting stone plaques on the tomb of tribal people in Jharkhand, which has 32 tribal communities.

### What was seen during the Pathalgadi movement?

- During the Pathalgadi movement, many villages saw people gathering from surrounding areas with bows and arrows to 'assert their rights'. In August 2017, it was claimed that a police officer was not allowed to leave a village by the villagers.
- In 2018, it was also claimed that former Khunti's MP Kariya Munda's bodyguards were abducted by Pathalgadi supporters, who in turn claimed that 'their people' were held by the police. This resulted in a crackdown leading to the death of a tribal, Birsu Munda – named after the freedom fighter. Following this, cases were registered against several villagers.

### What were the demands of the Pathalgadis?

- Pathalgadis started asking for self-rule and said that the government should enter their area with Gram Sabha permission. Quoting Article 19 (5) of the Indian Constitution, they said outsiders are not allowed to live and work in adivasi villages without permission.
- The administration's pamphlet calls this unconstitutional and violative of fundamental rights. They did not believe in Voter-ID cards or Aadhar cards, saying that it is for 'common people', and they did not follow it since they "khas admi".
- A section of Pathalgadis also follow 'Kunwar Keshri Singh of the Sati-Pati cult from Gujarat's Tapi district' who said they did not believe in constitution and also they rejected government services.
- A fact finding body which had gone to the Pathalgadi areas, in its report, said, "...While most of the interpretations of Constitutional clauses written on the pathals may be wrong or far-fetched, they are based on the valid issues and demands of the people and the basic idea about the supremacy of Gram Sabha is not wrong."

## Leopards in India

(Source: [PIB](http://PIB) )

**Context:** India now has 12,852 leopards as compared to the previous estimate of 7910 conducted in 2014. This is an increase of over 60%.

### About leopards in India:



- The Indian leopard (*Panthera pardus fusca*) is a leopard subspecies widely distributed on the Indian subcontinent.
- It is listed as vulnerable on the IUCN Red List.
- Its populations have declined following habitat loss and fragmentation, poaching for the illegal trade of skins and body parts, and persecution due to conflict situations.
- The Indian leopard is distributed in India, Nepal, Bhutan and parts of Pakistan. There are occasional sightings in Bangladesh.

## **Dhokra Art**

(Source: [PIB](#) )

**Context:** *Dhokra decorative pieces added to the Tribes India collection.*

### **About Dhokra art:**

- Dhokra is a non-ferrous metal casting style which uses the lost-wax technique.
- This style of metal casting has been in vogue in all parts of India for centuries.
- The dhokra products reflect the simplicity and motifs of tribal and folk life.
- They are popular both in India and abroad.
- Dhokra art is basically metal figurines made from chiefly bronze and copper.
- While Dhokra art originated in West Bengal, over time the tribes moved to Jharkhand, West Bengal, Odisha and Chhattisgarh as well as places like Kerala and Rajasthan. Hence, the art has now spread all over India.

## **Electricity (Rights of Consumers) Rules, 2020**

(Source: [PIB](#) )

**Context:** *The Ministry announced the notification of the Electricity (Rights of Consumers) Rules, 2020.*

### **Provisions:**

- These rules provide for rights of consumers and obligations of distribution licensees, release of new connection and modification in existing connection, metering arrangement, billing and payment, among others.
- An automatic compensation mechanism will be put in place. It will include no supply to a consumer beyond a particular duration and certain number of interruptions in supply, which will be specified by the regulatory commission.
- Reliability of supply:
  - The distribution licensee shall supply 24×7 power to all consumers. However, the commission may specify lower hours of supply for some categories of consumers like agriculture.
    - This relaxation has been allowed since pumps do not need to be run 24×7 for supplying water to fields.
- The rules stated it is the duty of every distribution licensee to supply electricity on request made by an owner or occupier of any premises in line with the provisions of the Act.
  - A new connection has to be given within a maximum time period of seven days in metro cities, 15 days in other municipal areas, and 30 days in rural areas.
- It is the right of consumer to have minimum standards of service for supply of electricity from the distribution licensee.
- Rules regarding metering:





- No connection shall be given without a meter
- Meter shall be the smart pre-payment meter or pre-payment meter
- Provision of testing of meters
- Provisions for replacement of defective or burnt or stolen meters specified
- Consumer as prosumer
  - While the prosumers will maintain consumer status and have the same rights as the general consumer, they will also have right to set up Renewable Energy (RE) generation unit including roof top solar photovoltaic (PV) systems – either by himself or through a service provider.
- The consumer grievance redressal has been made easy by making it multi-layered and the number of consumer's representatives have been increased from one to four.
- Maximum timeline of 45 days is specified for grievance redressal.



## INTERNATIONAL

### Cairn arbitration case

(Source: [Indian Express](#) )

**Context:** *The Permanent Court of Arbitration at The Hague has ruled that the Indian government was wrong in applying retrospective tax on Cairn. In its ruling, the international arbitration court said that Indian government must pay roughly Rs 8,000 crore in damages to Cairn.*

#### **What is the dispute all about?**

- Like Vodafone, this dispute between the Indian government and Cairn also relates to retrospective taxation. In 2006-07, as a part of internal rearrangement, Cairn UK transferred shares of Cairn India Holdings to Cairn India.
- The Income Tax authorities then contented that Cairn UK had made capital gains and slapped it with a tax demand of Rs 24,500 crore. Owing to different interpretations of capital gains, the company refused to pay the tax, which prompted cases being filed at the Income Tax Appellate Tribunal (ITAT) and the High Court.
- While Cairn had lost the case at ITAT, a case on the valuation of capital gains is still pending before the Delhi High court.
- In 2011, Cairn Energy sold majority of its India business, Cairn India, to mining conglomerate Vedanta. Cairn UK was however not allowed to sell a minor stake of about 10 per cent by the income tax authorities. Authorities had also siezed Cairn India shares as well as dividends that the company paid to its parent UK firm.

#### **What has the arbitration court said?**

- In its judgment, the Permanent Court of Arbitration at The Hague said Cairn Tax Issue was not just a tax related issue but an investment related dispute, and therefore under the jurisdiction of the international arbitration court.
- Akin to the ruling in the Vodafone arbitration case, the PCA at The Hague has once again ruled that the Indian government's retrospective demand was "in breach of the guarantee of fair and equitable treatment".
- It has noted that Cairn UK's argument that the demand on them was made after the Vodafone retrospective tax demand, which has since been set aside by Indian courts.

#### **Permanent Court of Arbitration**

- PCA is an intergovernmental organization established by treaty at the First Hague Peace Conference, Netherland in 1899.
- It is not a court in the traditional sense, but a permanent framework for arbitral tribunals constituted to resolve specific disputes. PCA seeks to facilitate arbitration and other forms of dispute resolution involving various combinations of states, state entities, international organizations and private parties.
- It was the first permanent intergovernmental organization that provided a forum for the resolution of international disputes through arbitration and other peaceful means.
- The Permanent Court of Arbitration is the oldest global institution for the settlement of international disputes. The Court offers a wide range of services for the resolution of international disputes which the parties concerned have expressly agreed to submit for resolution under its auspices.
- The PCA is not a court, but rather an organizer of arbitral tribunals to resolve conflicts between member states, international organizations, or private parties. The PCA also administers cases under the arbitration rules of the UNCITRAL.

### What are the matters generally includes in the PCA?

- It is not a court and does not have permanent judges. The PCA is a permanent bureaucracy that assists temporary tribunals to resolve disputes among states (and similar entities), intergovernmental organizations, or even private parties arising out of international agreements.
- The cases span a range of legal issues involving territorial and maritime boundaries, sovereignty, human rights, international investment, and international and regional trade.

### What are the methods to solve the case?

- The sessions of the Permanent Court of Arbitration are held in private and are confidential. The Court also provides arbitration in disputes between international organizations and between states and international organizations.
- All decisions, called "awards" are binding on all the parties in the dispute and have to be carried out without delay. There are some post-award proceedings available to parties unhappy with the tribunal's decision, but they are limited, particularly in inter-state disputes.

### Who are members of PCA?

- Parties to the Convention on the Pacific Settlement of disputes of 1899 (71 member states) and 1907 (101 member states) are automatically parties to the PCA. As 51 are parties to both conventions, the PCA has 121 member states: 119 members of the United Nations, as well as Kosovo and Palestine.
- **India is a party of the PCA** according to the Hague Convention on 1899.

## Winter Solstice

(Source: [Indian Express](#) )

**Context:** *December 21 was Winter Solstice, the shortest day of the year in the Northern Hemisphere.*

### Why are the hours of daylight not the same every day?

- The explanation lies in Earth's tilt. And it's not just the Earth — every planet in the Solar System is tilted relative to their orbits, all at different angles.
- The Earth's axis of rotation is tilted at an angle of  $23.5^\circ$  to its orbital plane. This tilt — combined with factors such as Earth's spin and orbit — leads to variations in the duration of sunlight that any location on the planet receives on different days of the year.
- The Northern Hemisphere spends half the year tilted in the direction of the Sun, getting direct sunlight during long summer days. During the other half of the year, it tilts away from the Sun, and the days are shorter. Winter Solstice, December 21, is the day when the North Pole is most tilted away from the Sun.
- The tilt is also responsible for the different seasons that we see on Earth. The side facing the Sun experiences day, which changes to night as Earth continues to spin on its axis.
- On the Equator, day and night are equal. The closer one moves towards the poles, the more extreme the variation. During summer in either hemisphere, that pole is tilted towards the Sun and the polar region receives 24 hours of daylight for months. Likewise, during winter, the region is in total darkness for months.
- The Earth's tilt helps define some familiar imaginary lines, which are also key to determining when a Solstice occurs. These are latitudes, which are a measure of a location's distance from the Equator.
- At latitudes of  $23.5^\circ$  (matching the tilt) are the Tropics of Cancer and Capricorn, north and south of the Equator. At  $66.5^\circ$  (or  $90^\circ$  minus  $23.5^\circ$ ) are the Arctic and Antarctic Circles, to the north and south. It is at latitudes higher than  $66.5^\circ$  (in either direction) that days of constant darkness or light occur.

### Celebrations associated with the Winter Solstice



- For centuries, this day has had a special place in several communities due to its astronomical significance, and is celebrated in many ways across the world.
- Jewish people call the Winter Solstice ‘Tekufat Tevet’, which marks the start of winter. Ancient Egyptians celebrated the birth of Horus, the son of Isis (divine mother goddess) for 12 days during mid-winter. In China, the day is celebrated by families coming together for a special meal.
- In Iran and neighbouring Afghanistan, Uzbekistan, Tajikistan, Turkmenistan, Azerbaijan, and Armenia, the Winter Solstice is celebrated as Yalda or Shab-e-Yalda. The festival marks the last day of the Persian month of Azar, and is seen as the victory of light over darkness.
- It is also the birthday of the sun god Mithra, a pre-Islamic deity. Families celebrate Yalda late into the night with special foods such as ajeel nuts, pomegranates and watermelon, and recite works of the 14th century Sufi poet Hafiz Shirazi.
- In the Southern Hemisphere, where the Winter Solstice is in June, Peru celebrates the day with a festival called Inti Raymi, meaning “sun festival” in the Quechua language.
- Before Peru’s colonisation by Spain, the Inca civilisation honoured the sun god Inti by fasting for three days, and celebrated on the fourth day with feasts and sacrifices. The festival was banned under Spanish rule, but was later revived in the 20th century and continues today, with mock sacrifices.
- In pre-Christian Europe, solstice was celebrated as the start of winter. People slaughtered their farm animals so they would not have to feed them. Wine created during the summer months was also ready for consumption. Hence, the solstice turned into an occasion for a feast, often a community one, before snow covered most of the land and people were forced to spend their time indoors.
- In Vedic tradition, the northern movement of the Earth on the celestial sphere is implicitly acknowledged in the Surya Siddhanta, which outlines the Uttarayana (the period between Makar Sankranti and Karka Sankranti). Hence, Winter Solstice is the first day of Uttarayana.
- The Yule festival, which used to be celebrated in pre-Christian Scandinavian lands for 12 days, later became associated with Christmas as Yule-tide.
- The Winter Solstice also influenced culture to the extent that ancient people built several architectural structures aligned to the phenomenon. Some of these structures include the Stonehenge and Glastonbury (England), Chichen Itza (Mexico), Goseck Circle (Germany), and Temple of Karnak (Egypt).

### **Israel’s controversial nation state law**

(Source: [Indian Express](#) )

**Context:** *Approximately two years after Israel passed its controversial nation state law, the country’s Supreme Court assembled for a special session to hear a petition by Arab-Israeli citizens and rights groups asking for the scrapping of this law.*

#### **What is the nation state law?**

- Informally known as the ‘nation state law’, the ‘Basic Law: Israel as the Nation-State of the Jewish People’ is one of the 14 Basic Laws or constitutional laws of the State of Israel.
- The law allows Israel to identify itself as the nation-state of the Jewish people, and promotes Jewish people’s right to self-determination. When enacted in 2018, it downgraded Arabic from the status of an official language to one that had special status.
- Among other clauses, it also allows the development of Jewish settlements. One of the first clauses in this law says, “the State of Israel is the national home of the Jewish people, in which it fulfills its natural, cultural, religious, and historical right to self-determination” and that the “right to exercise national self-determination in the State of Israel is unique to the Jewish people.”

#### **Which groups are impacted by this law?**



- The law is symbolic and declarative, but critics argue that it particularly discriminates against the Arab minority in the country and excludes other communities that call the country home.
- As of 2019, Israel's Central Bureau of Statistics reported that 74.2 per cent of the population declared itself Jewish, while 17.8 per cent declared itself Muslim, 2 per cent Christian and 1.6 per cent Druze. The remaining 4.4 per cent include faiths such as Bahá'í etc. and those who do not belong to any of Israel's recognised faiths.
- One of the main petitioners regarding this bill, Akram Hasson, an Israeli Druze politician who served as a member of Israel's Knesset from 2012-2019, has been a vocal critic of this law. In 2018, when the law had first been enacted, Hasson had said that the law was "extreme" and discriminated against minorities in Israel.
- The Druze can be found in Israel, Syria, Lebanon and Jordan and are an Arabic-speaking community. They do not identify as Muslims and have their own distinct religious practises.







# Mains

GSI

## Srinivasa Ramanujan

(Source: [The Hindu](#) )

**Context:** *In the mathematical community, it was no surprise that Ramanujan's work was being expanded actively eight decades after his demise: many of Ramanujan's findings anticipated research areas by many years.*

### Research at a feverish pitch

- Ramanujan, born on December 22, 1887 was an autodidact who specialised in pure mathematics. While he excelled in mathematics, he neglected other subjects and could not complete his pre-university course.
- By 1908 he gave up studies, but not his research in mathematics. He struggled in poverty until in 1910, a benefactor, Ramachandra Rao, district collector of Nellore, provided him monthly allowance from his own pocket so that Ramanujan could pursue research.
- This would continue for a couple of years until Ramanujan managed to become a clerk at Madras Port Trust. He initiated contact with the British mathematician G.H. Hardy under whose insistence Ramanujan travelled to England in early 1914. His partnering with Hardy was productive: Ramanujan published more than 20 research papers between 1914 and 1919.
- During his stay, he was awarded a doctorate and made Fellow of Royal Society. When he returned to India in 1919, he was "...with a scientific standing and reputation such as no Indian has enjoyed before".
- Unfortunately he lived only a year after his return succumbing to illness which was diagnosed then as tuberculosis but now revised as hepatic amoebiasis. However, in that one year, he continued his research at a feverish pitch.
- Until he left for England in 1914, Ramanujan recorded his mathematical results, mostly equations, in his notebooks. There were three such notebooks (preserved now). One more was added when Ramanujan returned to India.
- Together there were about 4,000 results. The results were the culmination of research backed by deep intuition and insights. However, Ramanujan did not record proofs of his results: that work would be taken up by future generations of mathematicians.
- Ramanujan's work was in number theory, infinite series, analysis (theoretical underpinnings of calculus) and a few other areas in pure mathematics. Specifically, as G.H. Hardy wrote, these subjects were "...the applications of elliptic functions to the theory of numbers, the theory of continued fractions and... the theory of partitions".
- A few significant contributions were multiple formulae to calculate pi with great accuracy to billions of digits (22/7 is only an approximation to pi), partition functions (a partition is a way to represent a positive integer — for example, 1+1+1+1 is a partition of 4, 1+3 is another partition of 4, and so on), modular forms and hypergeometric series (the terms in every consecutive pair in the series form rational functions).
- The importance of many of his works became apparent much later. One such was 'Ramanujan conjecture' which he published in 1916 and was proved in 1973 by Pierre Deligne. The conjecture inspired the development of theory of Galois representation that was employed in Andrew Wiles' proof of Fermat's last theorem published in 1995.



- In recent years, Ramanujan's works and their extensions have found applications in signal processing to identify periodic information, akin to Fourier analysis. Mock theta functions have found applications in the study of black holes in astrophysics.
- But to look for applications of his works is exactly how not to appreciate Ramanujan. As G.N. Watson, a contemporary mathematician of Ramanujan in Cambridge said, "The study of Ramanujan's works gives me a thrill which is indistinguishable from the thrill which I feel... when I see before me the... beauty of the four statues... which Michelangelo has set over the tombs of Guilio de Medici and Lorenzo de Medici". For Ramanujan, mathematics was art.
- Robert Kanigel, the celebrated biographer of Ramanujan, noted: "People will try to explain it in an easy way but I think they are unjustified in doing it. I think some people really are a few steps beyond where the rest of us live. We are forced to view those intellects, those artistic sensibilities, as a little bit mysterious or a little beyond what is the common realm."
- For Ramanujan, his mathematics was an end in itself. In this he thought like G.H. Hardy who claimed in A Mathematician's Apology, "A mathematician, like a painter or a poet, is a maker of patterns... The 'seriousness' of a mathematical theorem lies, not in its practical consequences, which are usually negligible, but in the significance of the mathematical ideas which it connects. We may say, roughly, that a mathematical idea is 'significant' if it can be connected, in a natural and illuminating way, with a large complex of other mathematical ideas."
- How did Ramanujan develop his mathematical abilities? Here again we have to look to G.H. Hardy: "...with his memory, his patience and his power of calculation, he combined a power of generalisation, a feeling for form, a capacity for rapid modification of his hypothesis, that were often really startling, and made him, in his own peculiar field, without a rival in his day".

### **Power of intuition and insight**

- Let's remember that Ramanujan was always precocious in his mathematical talent. And by virtue of working alone on problems and theorems that were advanced for his age during adolescence, day after day, hour after hour, he developed an incredible power of intuition and insight.
- The problems he worked on were from a book by one Carr. This book was "a spark which ignited the flame... [but] as the depth of Ramanujan's discoveries deepened, Carr's influence certainly waned," the mathematician Bruce Berndt said.
- Ramanujan is remembered in many ways. His birthday (today is his 133rd birth anniversary) is celebrated as National Mathematics Day in India. The Ramanujan Journal publishes advancements in the areas that Ramanujan contributed to. His home in Kumbakonam in Tamil Nadu has been converted to a museum by SASTRA University.
- Ramanujan's greatness is not that he was a poor man who travelled to England and did research. It is that he was prolific and that his works were diverse, original and transcended time; and all this while he surmounted many odds coming from indigence. Ramanujan's works, especially to mathematicians, are of enduring elegance. The mathematician and physicist Freeman Dyson said, "Whenever I am angry or depressed, I pull down the Collected papers [of Ramanujan] from the shelf and take a quiet stroll in Ramanujan's garden".

## GS II

### Losing the plot on women's safety

(Source: [The Hindu](#) )

**Context:** *Most governments, when faced with the question of improving women's safety, inevitably turn to enacting new laws rather than ensuring a more effective legal system. The Maha Vikas Aghadi government in Maharashtra seems no different, however well-meaning it may be.*

#### Details:

- The Maharashtra Shakti Criminal Law (Maharashtra Amendment) Bill, 2020, and the accompanying Special Courts and Machinery for Implementation of Maharashtra Shakti Criminal Law follow the same cliché of harsher punishment, more authorities, and wider definitions. The Bills' content reflects the absence of a larger consultative process and lack of understanding of existing criminal laws.
- For any criminal justice system to be effective, fair and just laws, a robust investigative mechanism, a dynamic judiciary and adequate infrastructure are indispensable. The criminal law amendments post the Nirbhaya case and the recommendations of the Verma Committee brought in several progressive amendments to curb violence against women and children.
- What is currently lacking is the infrastructure required for effective implementation. The Maharashtra government should hence focus on improving infrastructure, rather than bringing in harsher and unreasonable provisions in the guise of securing women's safety.
- Contrary to the government's stated intention of curbing violence against women, the Bills are draconian and threaten the lives of sexual assault victims.

#### Patriarchal ideas

- The Bill proposes punishment in cases of false complaints and acts of providing false information regarding sexual and other offences against women with the intention to humiliate, extort and defame. The only other law which has a similar provision is the Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal Act), 2013.
- The provision only points to the patriarchal conception that women are manipulative liars and unworthy of being trusted. Even as most laws are indeed susceptible to misuse by individuals and authorities, no other legislation has such a provision.
- Offences against women often occur behind closed doors or at desolate places, making finding eyewitnesses difficult. Investigation and prosecution are often shabby and negligent. This results in unfair acquittals, and the victims, in turn, may be accused of having filed false complaints.
- A provision for punishing false complaints would result in counter cases being filed against victims, and may thus dissuade many victims of sexual assault and acid attacks from filing complaints, thereby muffling women's voices.
- In a country where courts have directed women to marry their abuser, the possibility of a counter case would only make it more difficult for a woman to say 'No' to such a proposition.
- The other aspect of the Bill is the introduction of the death penalty for rape, acid attacks, and for rape of a minor. The amendment to the relevant sections adds that in cases where "the characteristic of the offence is heinous in nature and where adequate conclusive evidence is there and the circumstances warrant exemplary punishment", the offence shall be punishable with death. However, it does not define what cases would qualify as being "heinous in nature", thus leaving it open to the interpretation of courts.
- To date, courts have held cases of varying standards to be "heinous" and there is no uniform benchmark to identify what circumstances make an offence "heinous". Further, the death penalty has been in the statute books for a long time, but there is no evidence affirming its potency as a deterrent in preventing crimes.



- It is time legislators realise that death penalty is not the absolute answer to the issue of rape — only the certainty that there will be effective investigation, trial, and therefore punishment, can act as an effective deterrent.
- Contrary to the State's understanding, the death penalty will only mean that an accused may not stop at just rape and may murder the victim to get rid of the only witness, as the punishment for both will be the same. Importantly, studies have shown that often, the accused in sexual assault crimes are relatives or persons known to the victims.
- If the punishment for the crime is death, then not only the family of the victim, but the victim herself may choose not to report the crime or may turn hostile during the trial. Research has also indicated that judges are unlikely to convict a person when the punishment is death.
- Another provision stipulating that investigation should be completed within 15 days, the trial in 30 days and the appeal in 45 days, even if well-intentioned, will only result in improper investigation and trial.
- This timeline is glaringly insufficient for gathering all evidence or conducting a just trial and would result in hasty functioning and miscarriage of justice. Similar existing mechanisms for speedy and effective investigation and trial under the Juvenile Justice Act and the POCSO Act are rarely adhered to as neither the police nor the courts have the infrastructure to comply with these timeframes.
- Further, the Bill does not state what happens if the investigation, trial, or appeal is not completed within the prescribed time. In the current system, police officers are saddled with a large number of cases at the same time.
- There are not enough prosecutors at trial courts and in high courts; most of them are assigned three-four courts at a time and they prosecute hundreds of cases simultaneously. Unless these systemic problems are solved, new laws will only be a facade.

### **Redundant proposals**

- Lastly, the proposed amendments seem to have been recommended without considering similar, already-existing provisions in the criminal laws. For instance, the Bill seeks to introduce Section 354E (Harassment of Women by any mode of communication) into the IPC, aiming to punish intimidation of women through social media and electronic platforms.
- Similar provisions exist under the IPC and the Information Technology Act, 2000, which comprehensively cover all the offences mentioned under the new section. Similarly, the provision to punish public servants for failing to assist in investigation or perform their assigned duties is also sufficiently covered under the IPC, in terms of contravention of law or disobedience of orders and duties.
- Hence, in effect, these proposed amendments are of little significance. It would be more pragmatic if the government focused on improving the implementation of existing laws and infrastructure.
- The Bill was opposed by several women's rights organisations and lawyers from Maharashtra, which seems to have led the State government to refer it to a joint select committee.
- This is a welcome move and it would be in the interest of women, and justice itself, if the committee has a larger consultative process, engages with stakeholders and experts to understand the existing criminal laws, and reconsiders passing this regressive legislation.

### **NRIs and Postal Voting rights**

(Source: [The Hindu](#) )

**Context:** On November 27, the Election Commission of India (ECI) wrote to the Law Ministry, proposing to extend the facility of postal ballots to (eligible) overseas, non-resident Indians (NRIs) for the Assembly elections in Assam, Kerala, Puducherry, Tamil Nadu and West Bengal in 2021.

### **Details:**





- The ECI proposed amending the Conduct of Election Rules, 1961, in order to allow this facility. The postal ballots will be sent to NRIs electronically and they will send these ballots after choosing their candidate via post.
- This partially electronic facility is now available for service voters (being a member of the armed Forces of the Union; or a member of a force to which provisions of the Army Act, 1950 (46 of 1950), have been made applicable whether with or without modification; a member of an Armed Police Force of a State, and serving outside that State; or a person who is employed under the Government of India, in a post outside India).and is being sought to be extended to overseas NRI voters. The Law Ministry is yet to respond to the proposal.

### **How can overseas voters currently vote in Indian elections?**

- Prior to 2010, an Indian citizen who is an eligible voter and was residing abroad for more than six months owing to employment, education or otherwise, would not have been able to vote in elections. This was because the NRI's name was deleted from electoral rolls if he or she stayed outside the country for more than six months at a stretch.
- After the passing of the Representation of the People (Amendment) Act, 2010, eligible NRIs who had stayed abroad beyond six months have been enabled to vote, but only in person at the polling station where they have been enrolled as an overseas elector.
- Just as any resident Indian citizen above the age of 18 years (having attained it on the first day of January of the year of revision of electoral rolls for the State) is eligible to vote in the constituency where she/he is a resident, overseas Indian citizens are also eligible to do so.
- In the case of overseas voters, their address mentioned in the passport is taken as the place of ordinary residence and chosen as the constituency for the overseas voter to enrol in.

### **How has the existing facility worked so far?**

- From merely 11,846 overseas voters who registered in 2014, the number went up to close to a lakh in 2019. But the bulk of these voters (nearly 90%) belonged to just one State — Kerala. Of the 25,606 such voters who actually turned up, 25,534 were from Kerala (mostly from Kozhikode and Malappuram districts).
- Clearly, a very low proportion of eligible overseas residents actually registered or turned up to vote. The Representation of the People Act, envisaged voters as only the “ordinary residents” in a constituency who will choose representatives to represent their local interests while mediating on larger issues in the legislature.
- Some democracies that already allow absentee voting stipulate that overseas electors are eligible to vote provided they are not abroad for a specified period of time and/or if they mention an “intent to return”.
- Section 20-1A, Part III of the Representation of the People Act addresses this to some extent by qualifying “a person absenting himself temporarily from his place of ordinary residence shall not by reason thereof cease to be ordinarily resident therein” and in essence provides for NRIs who are temporarily staying abroad to be eligible to vote in their local constituencies.
- Yet, the proviso of having to visit the polling booth in person has discouraged eligible voters from exercising their mandate. In the winter session of Parliament in 2017, the government proposed to remove the restriction imposed by Section 20A of the Representation of the People Act, which required them to be physically present to vote in their constituencies.
- The Bill provided for overseas voters to be able to appoint a proxy to cast their votes on their behalf, subject to conditions laid down in the Conduct of Election Rules, 1961. The Bill was later passed in 2018, but lapsed with the dissolution of the 16th Lok Sabha.
- Now the ECI has approached the government to permit NRIs to vote via postal ballots similar to a system that is already used by service voters (the Electronically Transmitted Postal Ballot System, or ETPBS).

### **What is ETPBS and how does it function?**





- The Conduct of Election Rules, 1961 was amended in 2016 to allow service voters to use the ETPBS. Under this system, postal ballots are sent electronically to registered service voters.
- The service voter can then download the ETPB (along with a declaration form and covers), register their mandate on the ballot and send it to the returning officer of the constituency via ordinary mail.
- The post will include an attested declaration form (after being signed by the voter in the presence of an appointed senior officer who will attest it). The postal ballot must reach the returning officer by 8 a.m. on the day of the counting of results.
- The ECI now proposes to extend this facility to overseas voters as well. For this to commence, the Law Ministry has to amend the Conduct of Election Rules, 1961 (just as it was done for service voters). In the case of NRI voters, those seeking to vote through ETPBS will have to inform the returning officer at least five days after notification of the election.
- The returning officer will then send the ballot electronically via the ETPBS. The NRI voter can then register her/his mandate on the ballot printout and send it back with an attested declaration in a process similar to the service voter.
- Except in this case, the senior officer would be appointed by the Indian diplomatic or consular representative in the resident country of the NRI. The ECI has not specified whether the voter should send in the ballot through ordinary post to the returning officer or drop it off at the Indian consular office/embassy, which will then send the consolidated envelopes constituency-wise to the returning officers.

#### **Will this facility be available to all overseas voters across countries?**

- There were news reports that the ECI had indicated to the Ministry of External Affairs that it would want postal voting introduced on a pilot basis in non-Gulf countries.
- But ECI officials told The Hindu that the ECI had asked the Law Ministry to explore the possibility of extending postal ballots to overseas electors and not restrict it to any particular country.

#### **Are postal ballots a viable means of voting?**

- The ETPBS method allowed for greater turnout among service voters in the 2019 Lok Sabha election.
- With increasing mobility of citizens across countries for reasons related to work, the postal ballot method has been recognised by the International Institute for Democracy and Electoral Assistance (an intergovernmental organisation that works to support democratic processes and institutions) as a means to allow overseas voters to exercise their right, subject to certain conditions normally related to the time spent abroad or the work carried out abroad.
- Postal ballots were proven to be a secure and easy ways of registering the mandate in the presidential elections in the United States recently with many voters preferring to use this method due to the COVID-19 social distancing norms.
- A postal ballot mechanism that allows for proper authentication of the ballot at designated consular/embassy offices and an effective postal system should ease this process for NRIs, but the rules must be clearly framed for eligibility on the basis of time spent away from the country.

#### **S-400 at length**

(Source: [The Hindu](https://www.thehindu.com/news/international/s-400-at-length/article17444441.ece) )

**Context:** *The U.S. imposed sanctions on Turkey, a NATO ally, over its procurement of the S-400 Triumph long-range air defence system from Russia.*

#### **Details:**

- S-400 (NATO name SA-21 Growler) is considered one of the world's most advanced air defence systems that can simultaneously track and neutralise a range of incoming objects spanning aircraft, missiles and Unmanned Aerial Vehicles (UAVs) over very long ranges.
- It is especially suited to take down strategic aerial platforms like bombers, mid-air refuellers, reconnaissance aircraft and Advanced Early Warning and Control Systems (AWACS). Given their capabilities, the S-400 has emerged as one of the most controversial arms exports of Russia and a major point of contention between Washington and Moscow.
- According to the Center for Strategic and International Studies (CSIS) missile defence project, development of the S-400 began in 1993 and eventually the testing of the system started in 1999. Designed by Almaz-Antey Central Design Bureau, the S-400 is a successor to the S-300 system and entered operational service in 2007.
- In 2015, it was deployed in Syria by Russia to protect its military assets and has also been deployed in Crimea.

### **Fully mobile**

- The S-400 is fully mobile and each system has a 3D phased array acquisition radar, which can track around 300 targets up to 600 km, a command-and-control centre, automatic tracking and targeting systems, launchers and support vehicles.
- Each system has four different types to missiles for up to 40 km, 120 km, 250 km and a maximum range of 400 km and up to 30km altitude. The different ranges and varying altitudes create a layered air defence net. An S-400 battalion has eight missile launchers, typically with four missiles each.
- India's S-400 deal is well under way and initial issues over payment channels have been resolved. Russian officials have stated that deliveries would begin by 2021-end.
- The system would complement India's indigenous Ballistic Missile Defence system developed by the Defence Research and Development Organisation and create a multi-tier air defence over the country. Indian Air Force (IAF) officials have stated that the S-400 would be seamlessly integrated into the country's existing air defence network.
- Given its long range, the system, if deployed towards the western borders, can track movements of Pakistan Air Force aircraft as soon as they take off from their bases.
- For the IAF, the high-end technology S-400 would give a fillip and make up for its falling fighter aircraft squadrons in the medium term. Former Chief of Air Staff Air Chief Marshal B.S. Dhanoa had on several occasions termed the S-400 air defence systems and Rafale fighter jets "game changers" for the IAF.
- Globally, there has been a growing interest for the S-400 with several countries expressing interest in the system. In addition to Turkey, in July 2018, China became the first export customer to receive the S-400 and got sanctioned by the U.S. under CAATSA. India, in addition to S-400, has signed several other major defence deals with Russia.
- India is also acquiring several high-end military platforms from the U.S., which includes P-81 maritime reconnaissance aircraft, AH-64E Apache attack helicopters and CH-47(I) Chinook heavy lift helicopters, and recently leased two MQ-9B Predator high altitude long endurance drones.
- In addition, negotiations are in an advanced stage for procurement of the National Advanced Surface to Air Missile System. While Trump administration has not invoked CAATSA sanctions so far, it is not clear if the U.S. would continue to do so.
- The issue would come up before the incoming Joe Biden administration most likely when India starts taking the deliveries next year.



## **Access to drinking water, sanitation improve across states, urban-rural divide remains: NFHS-5**

(Source: [Down to Earth](#) )

**Context:** A majority of states were on the way to achieving universal access to clean drinking water, the first phase of NFHS-5, 2019-20 stated. But despite progress on the sanitation front, several states reported every third or fourth person having no access to improved facilities.

### **Access to improved drinking water**

- Access to improved drinking water sources increased across all states and UTs except Sikkim, which registered a five per cent fall in the population living in households with an improved drinking-water source in last half-a-decade.
- Manipur, Meghalaya and Nagaland witnessed significant improvement among the 22 surveyed states in last five years. Bihar topped the list with 99 per cent population having access to improved drinking water sources.
- Except Manipur, Meghalaya, Assam, Tripura and Ladakh, all other 17 states and UTs recorded above 90 per cent population having access to improved sources of drinking water.
- Improved sources of drinking water include piped water into dwelling / yard / plot, piped to neighbour, public tap / standpipe, tube well or borehole, protected dug well, protected spring, rainwater, tanker truck, cart with small tank, bottled water and community reverse osmosis plant.
- It is, however, noteworthy that it is not necessary that water obtained from improved sources would not have a negative impact on the health of those consuming it. In addition to the above, the released factsheet does not give any information on the distance of the improved water sources from the household.
- Across all 22 surveyed states, urban residents had better access to improved drinking water sources in comparison to rural population. Manipur, Meghalaya, Tripura and Maharashtra reported widest rural-urban disparity. Access to water facilities needed work in certain districts in the Northeastern states and Maharashtra.
- Bihar recorded huge improvement in last five years in sanitation, but stood second-lowest among the 22 surveyed states. Every second person in the state had no access to unshared and improved sanitation facilities, the survey found.
- Himachal Pradesh, Meghalaya, Sikkim, Nagaland, Goa and Andaman and Nicobar Islands performed fairly well in terms of access to improved sanitation facilities. Mizoram, Kerala and Lakshadweep had good sanitation facilities.
- Improved sanitation facilities include flush to piped sewer system; flush to septic tank; flush to pit latrine; ventilated improved pit / biogas latrine; pit latrine with slab; twin pit / composting toilet that is not shared with any other household.
- But the rural-urban divide persists widely across several states. People residing in urban areas had a relatively higher access to unshared and quality sanitation facilities in a majority of the states except Manipur, Meghalaya, Sikkim, Nagaland and Kerala, where urban population was more deprived.
- The highest rural-urban gap was observed in Gujarat, Bihar, West Bengal and Karnataka.
- Several reasons could be accorded to the meteoric rise in access to sanitation facilities across India.
- While the factsheet doesn't provide information on prevalence of open defecation, data on access to improved sanitation facilities challenges the government's claim of achieving open-defecation free India: Several districts in Bihar, West Bengal, Northern Karnataka and Western parts of Maharashtra and Gujarat require special attention and decentralised programmes to address the issue.
- The United Nations-mandated sustainable development goal 6.1 aims to achieve universal and equitable access to safe and affordable drinking water for all by 2030. SDG 6.2 targets to achieve access to



adequate and equitable sanitation and hygiene for all and end open defecation, pay special attention to the needs of women and girls and of those in vulnerable situations by 2030.

- The strides made by some states in this regard are particularly encouraging. Several states, however, have been lagging behind the universal targets.
- The NFHS-5 Phase-I data demonstrates substantial improvement in access to clean water and improved sanitation facility. There is, however, a need to bridge the rural-urban divide.

### GS III

#### **Carbon capture technology**

(Source: [Down to Earth](#) )

**Context:** *CCS technology's target to restrict global warming to 2°C aims to capture 400 million tonnes of carbon dioxide (CO<sub>2</sub>) emissions a year by 2025, but it is unlikely to be met, according to a report by International Energy Agency (IEA).*

#### **What is carbon capture utilisation and storage (CCUS)?**

- CCUS technology is designed to capture CO<sub>2</sub> emissions from combustion of fossil fuels. It can absorb 85-95 per cent of CO<sub>2</sub> emissions in the atmosphere.
- The process starts with the capture of generated CO<sub>2</sub>, which undergoes a compression process to form a dense fluid. This eases the transport and storage of the captured CO<sub>2</sub>.
- The dense fluid is transported via pipelines and then injected into an underground storage facility. Captured CO<sub>2</sub> can also be used as a raw material in other industrial processes such as bicarbonates.

#### **Why is CCS crucial**

- The United Nations Intergovernmental Panel on Climate Change's (IPCC) Special Report on Global Warming presents four scenarios for limiting global temperature rise to 1.5 degrees Celsius: All require CO<sub>2</sub> removal and three involve major use of CCS.
- The cement, iron and steel and chemical sectors emit carbon due to the nature of their industrial processes and high-temperature requirements. They are among the hardest to decarbonise. CCS can facilitate a just transition by allowing industries to make sustained contributions to local economies while moving toward net-zero.
- Enabling the production of low-carbon hydrogen at scale coal or natural gas with CCS is the cheapest way to produce low-carbon hydrogen.

#### **Global progress on CCS**

- CCS is absent from intended nationally determined contributions of most countries. Thus, it is clear that national policies have not accepted CCS as a promising technology.
- As of 2020, there were only 26 operational CCS facilities capturing around 36-40 million tonnes of carbon per year, according to the latest report by Global CCS Institute, an international think tank. Out of the 26 facilities having CCS worldwide, 24 were in the industries and two were coal-based power plants
- The cost on storage and transportation is one of the major bottlenecks for implementation of CCS. Looking at the importance of CCS in tackling climate change, experts are quite hopeful for the rapid development of the technology in the coming years. Policy support, however, will be crucial to bring the investment.



## CCS in India

- Commercial availability of CCS in India depends largely on successful implementation of the technology in industrialised countries, which is currently shoddy.
- The most crucial requirement of a long-term CCS strategy for coal-based power in India is a reliable CO<sub>2</sub> storage capacity assessment for the country. At the moment, CCS technologies are not economically feasible.
- Industries, especially steel and cement, have been proactively pursuing CCS as part of their emissions reduction ambitions. In September 2020, an 'Industry Charter' for near zero emissions by 2050 was agreed to by six Indian companies that will explore different decarbonisation measures including carbon sequestration.

## Industries need to bring global experience to India

- Industries need to collaborate to bring down the cost and push such projects in India.
- Tata Steel in IJmuiden, Netherlands, has launched plans for a project to capture CO<sub>2</sub> from its blast furnaces and transport it for storage in empty gas fields under the North Sea.
- The project is expected to lead to a 30 per cent reduction of CO<sub>2</sub> from the steelmaking site. It aims to complete the project by 2027. It could lead to the reduction of three million tonnes of CO<sub>2</sub> a year in the first phase, equivalent to 1.5 million tonnes of CO<sub>2</sub>-free steel every year or 1.3 million cars per year made from climate-neutral steel.

## Indigenous innovation need support

- A small-scale CCS plant is already operational in India. A plant at the industrial port of Thoothukudi is capturing CO<sub>2</sub> from its own coal-powered boiler and using it to make baking soda. It will lock up 60,000 tonnes of CO<sub>2</sub> a year.
- The technology runs without subsidy or any other government policy support in India. Such projects bring hope for CCS for small industries.

## Government initiative

- India's Department of Science and Technology has established a national programme on CO<sub>2</sub> storage research and, in August 2020, made a call for proposals to support CCS research, development, pilot and demonstration projects.
- This is part of the accelerating CCS technologies (ACT) initiative, for which India has committed one million euros to support Indian participants. At least 16 countries, regions and provinces are working together in ACT to fund research and development that can lead to a safe and cost-effective CCUS technology.

## GS IV

### **Ethical challenges of vaccinating people with comorbidities**

(Source: [The Hindu](#) )

**Context:** *The operational guidelines for COVID-19 vaccination issued recently by the union health ministry has once again identified the four high-risk groups — healthcare workers, frontline workers, persons over 50 years of age, and persons younger than 50 years with comorbidities — that would receive COVID vaccine on priority.*

## Details:





- Unlike in other groups, national databases of people with comorbidities are not available. However, though not comprehensive, since 2010, State governments have been conducting population-based district level screening to detect non-communicable diseases under the National Program for the Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases and Stroke (NPCDCS) guidelines.
- Also, as part of the Ayushman Bharat initiative, States have been carrying out universal screening of people aged over 30 years. State governments have been asked to refer to the screening data for non-communicable diseases to identify individuals with comorbidities for COVID vaccination.
- As per the National Centre for Disease Control, New Delhi, hypertension, diabetes, liver disease, heart disease, asthma, chronic renal failure, chronic obstructive pulmonary disease (COPD), cancer and bronchitis have been associated with hospitalisation and disease severity.
- While only 14% of 522 patients from a Jaipur hospital had comorbidities, it was 85% in the case of patients in Tamil Nadu. Diabetes (62%), hypertension (49%) and coronary artery disease (17.5%) were the most prevalent comorbidities in Tamil Nadu, whereas hypertension (42.5%), diabetes (39.7%), past history of tuberculosis (20.5%), COPD/Asthma (16.4%), coronary heart disease and chronic kidney disease (13.7%) were common in Jaipur patients.

#### **Which comorbidities?**

- Considering a range of comorbidities that increases the risk of disease severity, people with which comorbidity should be given more priority for vaccination? The evidence available is insufficient to indicate the degree of severity amongst the comorbidities.
- The priority of vaccination [based on comorbidities] depends on various factors. As per the evidence elsewhere, diabetes, hypertension, coronary artery disease and chronic kidney disease increase the risk of COVID-19.

#### **Multiple comorbidities**

- Each comorbidity increases vulnerability. However, in case of shortage of vaccines, multimorbidity should be given first preference.
- People with multiple comorbidities are at greater risk and hence should be prioritised over those with a single comorbidity. Having more than one comorbidity would be more than the sum of parts in terms of risk.
- In general, elderly people with multimorbidity, elderly with any comorbidity, elderly, young with multimorbidity, and young with any comorbidity seems to be a sensible order of priority.

#### **Database problems**

- People below 50 years who have been newly diagnosed with comorbidities should not be counted as high-risk for vaccination on priority. Even the union government's guidance to States is to use the existing database of comorbidities to vaccinate people. Since the database is not comprehensive, relying solely on that can be problematic.
- Duration of chronic disease would certainly have an impact on physiology, and therefore those with longer duration of the conditions would be more at risk.
- There is no evidence to suggest that the duration of underlying disease increases the risk of COVID-19 disease. There should not be any bias in prioritising individuals concerning the duration of underlying disease conditions.

#### **Health inequality**

- Also, poor people and those living in rural areas very often are unaware of their disease status. Any policy that excludes people with newly diagnosed disease will inevitably affect the poor.
- Only a few people qualify for consideration based on documentation of their comorbidities. This will unduly favour the rich and educated who keep documentation and thereby further exacerbate health inequity.

- Comprehensive efforts should be done to test the blood glucose levels and blood pressure to make a new diagnosis and vaccinate them.
- Besides the poor and people in rural areas, millions of middle-class Indians are unaware of their underlying chronic conditions. This poses a challenge, but would hopefully also catalyse fresh efforts to develop the right health databases.
- In addition to using the NCD database, States should allow people with comorbidities to self-report and also conduct a quick survey to screen, enrol and schedule the vulnerable for vaccination in the entire country.

### **Males over females?**

- Another ethical challenge revolves around gender. Males have been found to be at a greater risk of progressing to severe disease and even dying compared with females. Should males with comorbidities then be prioritised over females with comorbidities? Will that further exacerbate the underlying gender-based inequities?
- Risk of severe disease and death is higher in males than in females, particularly in older age groups. However, prioritising males with comorbidities over females will result in inducing and worsening inequities.



## Current Affairs Quiz

1. Roshni Act, sometimes seen in news is related to which state:

- a) Jammu and Kashmir
- b) Himachal Pradesh
- c) Rajasthan
- d) Madhya Pradesh

Answer: a)

- The Roshni Act was originally called the Jammu and Kashmir State Land (Vesting of Ownership Rights to the Occupants) Act, 2001.
- As per the Act, the ownership rights of State land would be transferred to its occupants on the payment of a fee fixed by the government.
- In October 2020, the Jammu and Kashmir High Court held the Roshni Act as 'unconstitutional'.

2. Consider the following statements regarding POSHAN Abhiyaan.

- 1. POSHAN Abhiyaan is Government of India's flagship programme to improve nutritional outcomes for children, pregnant women and lactating mothers.
- 2. NITI Aayog is the monitoring authority for POSHAN Abhiyaan.
- 3. The target of the mission is to eliminate stunting among children in the age group 0-6 years by 2022.

Which of the above statements is/are correct?

- a) 1 and 2 only
- b) 1 and 3 only
- c) 2 and 3 only
- d) All of the above

Answer: a)

It aims to reduce:

- Stunting and wasting by 2% a year (total 6% until 2022) among children.
- Anaemia by 3% a year (total 9%) among children, adolescent girls and pregnant women and lactating mothers.
- The target of the mission is to bring down stunting among children in the age group 0-6 years from 38.4% to 25% by 2022.
- NITI Aayog has played a critical role in shaping the POSHAN Abhiyaan. NITI Aayog has been entrusted with the task of closely monitoring the

POSHAN Abhiyaan and undertaking periodic evaluations.

3. Consider the following statements regarding Bureau of Energy Efficiency (BEE).

- 1. Bureau of Energy Efficiency (BEE) is a statutory body whose primary objective is of reducing energy intensity of the Indian economy.
- 2. BEE give financial assistance to institutions for promoting efficient use of energy and its conservation.
- 3. The items covered under the Star Labeling Programme includes Deep Freezers, Light Commercial Air Conditioners, Domestic Gas Stove, Ballast and Microwave Oven.

Which of the above statements is/are correct?

- a) 1 and 3 only
- b) 1 and 2 only
- c) 2 and 3 only
- d) All of the above

Answer: d)

4. Consider the following statements with respect to Himalayan trillium

- 1. It is found in tropical and Sub tropical climate zones at an altitude from 2,400-4,000 metres above sea level.
- 2. In India, it is found only in four states.
- 3. It can be used as an anti-cancer and anti-aging agent.

Which of the statements given above are correct?

- a. 1 and 2 only
- b. 1 and 3 only
- c. 2 and 3 only
- d. 1, 2 and 3

Answer : c

- It is found in temperate and sub-alpine zones of the Himalayas at an altitude from 2,400-4,000 metres above sea level.
- In India, it is found in four states only - Himachal Pradesh, Jammu and Kashmir, Sikkim, and Uttarakhand.

5. Consider the following statements



1. Santiniketan was originally an ashram built by Debendranath Tagore.
2. Rabindranath Tagore was awarded the Nobel Prize for Literature for his book of poems Gitanjali in 1913.

Which of the statement(s) given above is/are correct?

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

Answer : c

6. Consider the following statements with respect to Khudiram Bose

1. He was a member of Anushilan Samiti that propounded revolutionary activities in Bengal.
2. In 1908 he attempted to murder Edward Norman Baker, the then governor of Bengal presidency.

Which of the statement(s) given above is/are correct?

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

Answer : a

- On April 30, 1908, Bose threw a bomb on a carriage which he suspected was carrying district magistrate of Muzaffarpur, Douglas Kingsford.

7. Consider the following statements with respect to ASTRA Mk-I

1. It is the indigenously developed first Beyond Visual Range (BVR) Missile which has capability to carry a nuclear warhead.
2. The missile is designed to engage and destroy highly manoeuvring supersonic aircraft.

Which of the statement(s) given above is/are correct?

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

Answer : b

- It is the indigenously developed first Beyond Visual Range (BVR) Missile.
- It can be launched from Sukhoi-30, Light Combat Aircraft (LCA), Mig-29 and Mig-29K.

- The missile is designed to engage and destroy highly manoeuvring supersonic aircraft.
- Agni-V is an Indian nuclear-capable ballistic missile developed by DRDO.

8. World's Largest Private Zoo will be setup at which of the following Indian City

- a. Mumbai, Maharashtra
- b. Nainital, Uttarakhand
- c. Jamnagar, Gujarat
- d. Alipore, West Bengal

Answer : c

9. Human Freedom Index 2020 was released recently by?

- a. Cato Institute USA
- b. UN Human Rights Council
- c. Fraser Institute Canada
- d. Both a and c

Answer : d

10. Consider the following statements with respect to Legion of Merit Award

1. It was instituted by former US president Barack Obama.
2. It is the first US medal to be awarded to citizens of other nations.

Which of the statement(s) given above is/are incorrect?

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

Answer : a

- The Legion of Merit was instituted in 1942 by former US president Franklin D Roosevelt.

11. Which of the following statements are correct with respect to Winter Solstice

1. During this event the Southern Hemisphere experiences the year's longest day.
2. According to Vedic tradition this event refers to the first day of Uttarayana.

Select the correct answer using the codes given below:

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

Answer : c



12. Which of the following statements are correct with respect to Electricity (Rights of Consumers) Rules, 2020.

1. According to the rule new connection has to be given within a maximum time period of three working days in metro cities
2. It has provisions for automatic compensation mechanism that will include no supply to a consumer beyond a particular duration.

Select the correct answer using the codes given below:

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

Answer : b

- The new connection has to be given within a maximum time period of seven days in metro cities, 15 days in other municipal areas, and 30 days in rural areas.

13. Consider the following statements with respect to *Dhokra Style Metal Work*

1. Dhokra is a non-ferrous metal casting style which uses the lost-wax technique.
2. This style of metal casting has been out of date in India for centuries.

Which of the statement(s) given above is/are correct?

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

Answer : a

***Dhokra Style Metal Work***

- Dhokra is a non-ferrous metal casting style which uses the lost-wax technique.
- This style of metal casting has been in vogue in all parts of India for centuries.
- The dhokra products reflect the simplicity and motifs of tribal and folk life and make for excellent gifting options.
- Hence they are popular both in India and abroad.

14. Consider the following statements regarding Conjunction related to Solar System.

1. Conjunction is the name given to any event where planets or asteroids appear to be very close together in the sky when viewed from the Earth.

2. Conjunction always coincides with the winter solstice or the summer solstice.

Which of the above statements is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Answer: a)

- The event coincided with the winter solstice (shortest day of the year in terms of hours of sunlight received) in the Northern Hemisphere and summer solstice in the Southern Hemisphere.

15. Which of the following statements are correct with respect to Food Fortification

1. Packed foods like pastas, noodles must be fortified mandatorily.
2. Products that are high in fat, salt and sugar will be “excluded” from the fortified processed foods category.

Which of the statement(s) given above is/are correct?

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

Answer : b

- Food Safety and Standards Authority of India (FSSAI) has notified norms for permissible levels of micronutrients for fortifying processed food products such as breakfast cereals, biscuits, breads, rusks, pasta, noodles, buns and fruit juices.
- Companies that make such products can fortify them with micronutrients voluntarily.
- Also, products that are high in fat, salt and sugar will be “excluded” from the fortified processed foods category.
- The Fortified Processed Food shall provide 15-30% of the Indian adult RDA (Recommended dietary Allowance) of micronutrient, based on an average calorie intake of 600 kcal from processed foods (approximately a third of daily energy requirement for an adult).

16. Consider the following statements with respect to Medium Range Surface to Air Missile (MRSAM)

1. It is a surface to Air Missile developed indigenously by the Defence Research and Development Organization (DRDO).





2. It is a vertically launched supersonic missile powered by a dual-pulse solid propulsion system.

Which of the statement(s) given above is/are correct?

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

Answer : c

17. Consider the following statements with respect to National Backward Classes Finance and Development Corporation (NBCFDC)

- 1. It is a Government of India Undertaking under the aegis of Ministry of Social Justice and Empowerment.
- 2. NBCFDC provides Micro Financing through State Channelizing Agencies (SCAs) / Self Help Groups (SHGs).
- 3. It also facilitates skill development of poor persons belonging to De-notified Nomadic Tribe, Senior Citizen, Beggars and Transgender.

Which of the statements given above are correct?

- a. 1 and 2 only
- b. 1 and 3 only
- c. 2 and 3 only
- d. 1, 2 and 3

Answer : d

18. Swachhata Abhiyan is a mobile application launched by-

- a. Ministry of Jal Sakthi
- b. Ministry of Rural Development
- c. Ministry of Housing and Urban Affairs
- d. Ministry of Social Justice and Empowerment

Answer : d

19. Which of the following statement(s) is/are correct with respect to Antimatter

- 1. Antimatter was created along with matter after the Big Bang and found widely in the universe.
- 2. The sub-atomic particles of antimatter have properties opposite those of normal matter.

Select the correct answer using the codes given below:

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

Answer : b

- Antimatter was created along with matter after the Big Bang, but antimatter is rare in today's universe.

20. Which of the following statements are correct with respect to Industrial Ammonia

- 1. It is stored for industrial use in liquid form under high pressure or in gaseous form at low temperature.
- 2. In moderate concentration it can cause irritation to eyes, skin, nose and throat.

Which of the statement(s) given above is/are correct?

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

Answer : c

# Special Issue

## December (Week 4)

### Contents

Why elephants and tigers did not go extinct in India.....	2
History of Kisan Diwas or National Farmers' Day .....	3
Brexit deal.....	4





## **Why elephants and tigers did not go extinct in India**

(Source: [The Hindu](#) )

**Context:** *Over the last 100,000 years, several land-dwelling mammals including big carnivores have gone extinct across the globe. North America lost its saber-toothed cat, North American lion, scimitar-tooth cat, American cheetah, and the only big cats left now are the Puma and the Jaguar. But most of the megafauna of South Asia and Africa were resilient to the arrival of modern humans and the region still has large land mammals such as elephants, tigers, and rhinos. A team led by Advait Jukar from Yale University set out to investigate why these big mammals are still seen in India when they disappeared from the Americas.*

### **Co-evolution**

- A paper published last month notes that co-evolution - the fact that native animals learn to adapt to a new predator played an important role.
- If humans were hunting, these animals evolved techniques to avoid people. For example, if we like to hunt on the plains, maybe these animals lived in the forests.
- It's basically an evolutionary rat race where one species has to keep up with the other in order to survive

### **Environmental factors**

- However, there were mammalian extinctions in the country: two massive elephant relatives (Palaeoloxodon namadicus and Stegodon namadicus), a hippo (Hexaprotodon sp), and a horse relative (Equus namadicus) were lost.
- So what's actually common to all of these animals? And, what was going on in the environment at this time? All the extinct species were large, slow reproducing species, and they go extinct when the climate is fluctuating.
- We know that environmental change can stress populations out, especially populations of animals that don't reproduce quickly. Elephants have a two-year pregnancy and it takes about six years between calving events. Hippos, when they're stressed out, don't breed well.
- But based on the fossil record, we know that these animals have survived multiple periods of similar environmental change in the past. They only go extinct when people show up. So people probably were the last nail in the coffin for these animals. Had we not shown up, they would have probably been fine.

### **Local extinction**

- India was also home to ostriches (Struthio camelus) and Dr. Jukar notes that humans may have been the reason for their local extinction. We have ostriches in cave art and we have a lot of evidence of people using ostrich eggshells for ornamentation by making beads. Humans probably used eggs for food. And obviously, if you start eating up their offspring, the populations are going to crash.
- Humans may be driving the extinction of the mammals that fought and survived. So most of the animals which survived, had a fairly large geographic range. But today, these animals are being restricted to small pockets and in fragmented populations, a lot of interbreeding happens making the populations weaker.
- And with increased human pressure, it's just a matter of time before they start going extinct. So we need active conservation to make sure that these animals don't go the way of Indian hippos or ostriches.



## **History of Kisan Diwas or National Farmers' Day**

(Source: [Indian Express](#) )

**Context:** *National Farmers' Day, or Kisan Diwas, is celebrated across the country on December 23 to honour India's farmers and mark the birth anniversary of the nation's fifth prime minister, Choudhary Charan Singh. This year, Kisan Diwas takes place against the backdrop of intensifying farmers' protests on the borders of the national capital. Lakhs of farmers from across India have joined the movement — now entering its second month — against the BJP-led government's controversial farm laws.*

### **Why is December 23 celebrated as National Farmers' Day?**

- In 2001, the government decided to recognise Choudhary Charan Singh's contribution to the agriculture sector and welfare of farmers by celebrating his birth anniversary as Kisan Diwas.
- Since then, December 23 has been observed as National Farmers' Day. Generally, awareness campaigns and drives are organised across the country to educate people on the role of farmers and their contribution to the economy.

### **Who was Chaudhary Charan Singh and what was his connection with farmers?**

- Chaudhary Charan Singh, who briefly served as prime minister between 1979 and 1980, is widely regarded as one of the country's most famous peasant leaders. He was known for his pioneering work to promote the welfare of farmers and the agricultural sector.\
- Charan Singh was no stranger to the struggles faced by the Indian farmer. He was born in to a middle-class peasant family in Uttar Pradesh on December 23, 1902. Greatly influenced by the teachings of Mahatma Gandhi, he took an active part in the fight for independence. After that, his political career largely focused on socialism in rural India.
- Charan Singh served twice as chief minister of India's biggest agrarian state, Uttar Pradesh, where he played a major role in shaping land reforms. He was behind several major farmer-forward Bills, including the Land Utilisation Bill of 1939 and the Debt Redemption Bill in 1939.
- While serving as agriculture minister in 1952, he led UP in its efforts to abolish the zamindari system. In fact, he went on to draft the UP Zamindari and Land Reforms Bill himself.
- On 23 December, 1978, he founded the Kisan Trust — a non-political, non-profit making body — with the aim of educating India's rural masses against injustice, and fostering solidarity among them.

### **Why is Kisan Diwas different this year?**

- This year, Kisan Diwas is being observed amidst farmers' protests against the Centre's three contentious agricultural reform laws. Farmers believe the laws will promote private investment in the agriculture sector. Several also fear the deregulation will end up hurting small and poor farmers by weakening the government's Minimum Support Price (MSP) system.
- Addressing a press conference last week, farmer leader Rakesh Tikait urged people to support farmers by not cooking lunch for a day on Kisan Diwas. On Monday, farmers observed a day-long relay hunger strike at protest sites in Delhi, including at the Singhu border.
- Several farmers also reportedly visited 'Kisan Ghat', the memorial Charan Singh, to pay their respects on the occasion.



## **Brexit deal**

(Source: [Indian Express](#) )

**Context:** *Following overnight negotiations between the United Kingdom and the European Union at European Commission's headquarters in Brussels, Britain and the European Union struck a provisional free-trade agreement as part of the **Brexit deal**, four and a half years after Britain decided to leave the bloc. The two sides attempted to strike a deal to define the terms of their future relationship ahead of a December-31 deadline, when the UK's post-Brexit transition period officially ends.*

### **What is the Brexit deal and why is it needed?**

- After it formally exited the European Union on January 31 this year, the United Kingdom entered a 11-month transition period during which it continued to follow EU rules. This was when the country began negotiating a deal with the bloc to determine key aspects of their relationship — including a viable trade agreement, defence, security and immigration once the transition phase ended.
- However, talks stretched on as both sides were unable to agree on major points — fishing rights, governance, and guaranteeing a 'level playing field' on government subsidies and regulations.
- A level playing field essentially means that in order to trade with the EU's single market, the UK will have to follow the same rules and regulations to ensure that it does not have an unfair advantage over other EU businesses. But with or without a Brexit deal, the UK will be exiting the EU's single market and customs union by the end of the year.
- The deal is also likely to lay down rules of governance, which will dictate how any deal is enforced as well as the penalties that will be imposed if one party violates the terms of a mutually-approved agreement.
- The UK will also have to agree on how it will cooperate with the bloc on issues pertaining to security and law enforcement once it officially withdraws from the European Arrest Warrant on January 1, next year. Further, the two parties will have to finalise agreements on issues like airline safety and information sharing.

### **But, why is fishing such a big deal?**

- While fishing is a relatively small part of the economy on both sides of the English Channel (fishing was just 0.02 per cent of the overall economy both in the UK and in the EU), the issue is extremely emotive and its political consequences far outweigh the economic impact on both sides.
- For the EU, access for its boats is an important precondition for a trade agreement, while in Britain, the Brexit cheerleaders peddled it as a symbol of sovereignty that needed to be regained.
- Even though Britain formally left the EU on January 31, 2020, the country still has to adhere to the EU's rules until the end of the year, including the bloc's Common Fisheries Policy. So, till then, the fishing fleets of every country involved have full access to each other's waters, going well beyond the territorial water that covers the first 12 nautical miles (22km) from the coast. But the volume of fish, depending on the species, are to be claimed by each country as per a complex national quota regime that has been formulated using historical data going back to the 1970s.
- The British fishing industry has maintained that it got a raw deal in this quota distribution. That's why the UK government wants to increase the British quota share significantly, even as EU negotiators have been pushing Britain to continue to allow their fishing crews to have access to its waters.
- The EU, meanwhile, wants to divide the amounts of fish that each country's boats are allowed to catch in a way that will not be renegotiated every year. EU's chief negotiator Michel Barnier has said in the past that annual negotiations with the UK would be technically impossible because so many different types of fish would be involved.

### **What is the political trigger for the fight over fish?**





- During the 2016 Brexit referendum campaign, Boris Johnson was among the faction of Conservative leaders who had pledged that if Britain were to leave the EU, they would get back control over their national waters.
- Now, with Johnson at 10 Downing Street, Britain feels obligated to make an unambiguous assertion that any new agreement on fisheries has to be based on the affirmation of “British fishing grounds” being “first and foremost for British boats”.
- According to a Financial Times report, the issue of control over fishing jurisdictions is resonant in France as well, especially given that President Emmanuel Macron faces an election in 2022. French fleets, in particular, depend on fish caught in British waters.



## December (Week 5)

### INDEX

#### Contents

<b>Prelims</b> .....	2
<b>NATIONAL</b> .....	2
Nanomicelles.....	2
Inner-Line Permit.....	2
Zero coupon bonds.....	3
Kisan Fasal Rahat Yojana.....	4
Giant Rock Bee Honey.....	5
INCOIS launches 'Digital Ocean'.....	5
PM SVANidhi scheme.....	6
Dedicated Freight Corridor.....	6
GAVI.....	7
SAHAYAK-NG.....	8
5G in detail.....	8
<b>INTERNATIONAL</b> .....	10
Proxima Centauri.....	10
Turkey's controversial law.....	10
Giant Antarctic iceberg A68a.....	11
<b>Mains</b> .....	12
<b>GS II</b> .....	12
India and its neighbours.....	12
Dealing with India's two-front challenge.....	13
Granting bail is the rule.....	15
New US policy on Tibet.....	16
<b>GS III</b> .....	18
A slump and green shoots of recovery.....	18
Conservation of Western Ghats.....	20
Rethinking waste management.....	21
Public charging points is future of EVs.....	23
Current Affairs Quiz.....	25

# Prelims

## NATIONAL

### Nanomicelles

(Source: [The Hindu](#) )

**Context:** *With the advance in nanotechnology, researchers across the globe have been exploring how to use nanoparticles for efficient drug delivery.*

#### What is it?

- Similar to nanoshells and nanovesicles, nanomicelles are extremely small structures and have been noted as an emerging platform in targeted therapy.
- Nanomicelles are globe-like structures with a hydrophilic outer shell and a hydrophobic interior. This dual property makes them a perfect carrier for delivering drug molecules.
- A multi-disciplinary, multi-institutional team has created a nanomicelle that can be used to deliver a drug named docetaxel, which is commonly used to treat various cancers including breast, colon and lung cancer.
- The ideal goal for cancer therapy is destroying the cancer cells without harming healthy cells of the body, and chemotherapeutics approved for treatment of cancer are highly toxic.
- The currently used docetaxel is a highly hydrophobic drug, and is dissolved in a chemical mixture (polysorbate-80 and alcohol). This aggravates its toxic effects on liver, blood cells, and lungs.
- So, there was an urgent and unmet need to develop effective drug delivery vehicles for docetaxel without these side effects.
- The nanomicelles are less than 100nm in size and are stable at room temperature. Once injected intravenously these nanomicelles can easily escape the circulation and enter the solid tumours where the blood vessels are found to be leaky. These leaky blood vessels are absent in the healthy organs.

### Inner-Line Permit

(Source: [The hindu](#) )

**Context:** *Union Home Minister Amit Shah recently said the Inner-Line Permit (ILP) had been the Centre's biggest gift to Manipur since its statehood.*

#### What is Inner Line Permit?

- The Inner Line Permit is an official travel document that allows Indian citizens to stay in an area under the ILP system. The document is currently required by visitors to Arunachal Pradesh, Manipur, Nagaland and Mizoram.
- The ILP is issued by the concerned state government and can be availed both by applying online or in person. The permits issued are mostly of different kinds, provided separately for tourists, tenants and for other purposes.
- The document states the dates of travel and specifies the particular areas in which the ILP holder can travel. It's illegal for the visitor to overstay the time granted in the permit.



### How did the ILP come into existence?

- In 1873, under the Bengal Eastern Frontier Regulation Act, the British, in a bid to protect the Crown's (commercial) interests, framed regulations restricting the entry and regulating the stay of outsiders in designated areas. The Act was brought in to prevent "British subjects" (Indians) from trading within these regions.
- However, after partition, the Indian government replaced "British subjects" with "Citizen of India" and retained the ILP to protect the interests of the indigenous tribal communities of the Northeast.

### It's connection with the Citizenship Act

- The Citizenship Act enables non-Muslim refugees (Hindus, Jains, Sikhs, Buddhists, Parsis and Christians) from Pakistan, Bangladesh and Afghanistan who arrived in the country before December 31, 2014, to obtain Indian citizenship.
- Although the rest of mainland India is protesting the controversial Act for being anti-Muslim, for the northeast, the worry is entirely different. If the Act is implemented without the ILP, then the beneficiaries under CAB will become Indian citizens and will be allowed to settle anywhere in the country. However, the implementation of ILP bars the refugees from settling in the states under the ILP system.
- Assam and Tripura have been up in arms against the Act because these states share the longest borders with Bangladesh and have been subjected to the highest influx of Bengali-speaking undocumented refugees since the partition.
- Assam has been a hotbed of protests since the 1970s. The state witnessed a mass agitation against undocumented immigrants that began in 1979 and ended with the Assam Accord in 1985.
- The Northeast is home to 238 indigenous tribes that constitute 26 per cent of the region's population and the leaders' state that continued the influx of Bengali-speaking refugees will threaten their identity.
- The North East Students' Organisation, an umbrella group of all students' bodies, in particular, has time and again reiterated its demand for the implementation of the Inner Line Permit (ILP) in all the states of the region to avoid this.

### Zero coupon bonds

(Source: [Indian Express](#) )

**Context:** *The government has used financial innovation to recapitalise Punjab & Sind Bank by issuing the lender Rs 5,500-crore worth of non-interest bearing bonds valued at par, known as Zero coupon bonds.*

### Details:

- The funds raised through issuance of these instruments, which are a variation of the recapitalisation bonds issued earlier to public sector banks, are being deployed to capitalise the state-run bank.
- Though these will earn no interest for the subscriber, market participants term it both a 'financial illusion' and 'great innovation' by the government where it is using Rs 100 to create an impact of Rs 200 in the economy.
- Punjab & Sind Bank MD and CEO S Krishnan said these are special types of zero coupon bonds issued by the government after proper due diligence and these are issued at par.
- Since these bonds are not tradable, the lender has kept them in the HTM bucket, not requiring it to book any mark-to-market gains or losses from these bonds.
- Financial market participants said the government seems to have found an innovative way to capitalise banks, which does not affect the fiscal deficit while at the same time provides much needed equity capital to the banks. But they also caution this may not be a permanent solution for the banking sector's problems.



### What kind of bonds are these?

- Unlike the previous tranches of recapitalisation bonds which carried interest and were sold to different banks, these “non-interest bearing, non-transferable special GOI securities” have a maturity of 10-15 years and issued specifically to Punjab & Sind Bank.
- These recapitalisation bonds are special types of bonds issued by the Central government specifically to a particular institution. Only those banks, whosoever is specified, can invest in them, nobody else. It is not tradable, it is not transferable. It is limited only to a specific bank, and it is for a specified period ... it is held at the held-to-maturity (HTM) category of the bank as per the RBI guidelines. Since it is held to maturity, it is accounted at the face value (and) no mark-to-market will be there. So these are special kind of bonds issued by the government after proper (due diligence).
- Though zero coupon, these bonds are different from traditional zero coupon bonds on one account — as they are being issued at par, there is no interest; in previous cases, since they were issued at discount, they technically were interest bearing.
- Now these are made zero coupon and besides that there is no difference, the said amount will be paid on the maturity as per the government notification ... There is no coupon, it is zero coupon, it is issued at par and will be paid at the end of the specified period.

### Kisan Fasal Rahat Yojana

(Source: [Indian Express](#) )

**Context:** *Jharkhand is set to replace the Prime Minister's insurance scheme for farmers with its own crop relief scheme.*

### What is Jharkhand's Kisan Fasal Rahat Yojana?

- It is a compensation scheme aimed at providing security cover to Jharkhand farmers in case of crop damage due to natural calamity. It will cover both land owning and landless farmers.
- The Department of Agriculture, Animal Husbandry and Co-operative will be the implementing agency and it will work in association with a project management unit, which will be a consultancy firm that will take care of technical requirements.
- “Food safety, crop diversification, rapid development in agriculture and paving the way for competition,” are among the aims of the scheme. It is not an insurance scheme where premiums are paid.

### Why does the government want to replace the PM insurance scheme?

- Every year a large amount is paid as premium to the insurance companies. Jharkhand paid a total of Rs 512.55 crore in the last three years while the compensation claim settlement was only Rs 82.86 crore, which was only 16 per cent of the total premium.
- The number of farmers benefited as compared to the actual cover is also hugely disproportionate. In the last three years, out of a total of 33.79 lakh registered farmers, only 2.25 lakh farmers have benefited from the scheme.
- The Jharkhand government says that since the state pays half the insurance premium, it would rather use that amount for direct compensation.

### How will the state assess crop damage, and what will be the compensation?

- Crop damage will be assessed through a ‘ground truthing’ process, which will be a combination of sample observations. In the case of post-harvest damage, assessment will be done on the basis of sighting. Various coordination committees will be constituted at various levels.
- The role of the gram sabha is important in the initial reporting of crop damage received from the farmers. Floods, hurricanes, tornadoes, volcanic eruptions, earthquakes, tsunamis, hurricanes and other



geological processes fall under the category of natural calamities—risks which will be covered under the scheme.

- Damage due to wild animal attack, preventable risks such as unscientific farming by farmers will not be considered under the scheme.
- A payout matrix has been developed: from 0.1- 5 acre of land ranging from Rs 3000 to Rs 3500 per acre compensation depending upon the loss. More details are awaited on this.

### **Giant Rock Bee Honey**

(Source: [PIB](#) )

**Context:** *Giant Rock Bee Honey added to the Tribes India collection.*

#### **Details:**

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

### **INCOIS launches ‘Digital Ocean’**

(Source: The Hindu)

**Context:** *Union Minister for Science and Technology Harsh Vardhan launched the ‘Digital Ocean’ platform of Indian National Centre for Oceanic Information Services (INCOIS) here as a one stop-solution for all data related needs of a wide range of users, including research institutions, operational agencies, strategic users, academic community, maritime industry, and the public.*

#### **Digital Ocean**

- ‘Digital Ocean’ is a web-based application developed by INCOIS of the Ministry of Earth Sciences.
- It is the first of its kind digital platform for Ocean Data Management.
- The platform will help share knowledge about the ocean with a wide range of users including research institutions, operational agencies, strategic users, academic community, maritime industry and policymakers.
- It is expected to play a central role in the sustainable management of oceans and expanding ‘Blue Economy’ initiatives.
- Further, the Digital Ocean will be promoted as a platform for capacity building on Ocean Data Management for all Indian Ocean Rim countries.
- The platform includes a set of applications developed to organize and present heterogeneous oceanographic data by adopting rapid advancements in geospatial technology.
- It facilitates an online interactive web-based environment for data integration, 3D and 4D (3D in-space with time animation) data visualization, data analysis to assess the evolution of oceanographic features, data fusion and multi-format download of disparate data from multiple sources viz., in-situ, remote sensing and model data, all of which is rendered on a georeferenced 3D Ocean.

#### **INCOIS**

- **Indian National Center for Ocean Information Services (INCOIS)** is an autonomous organization of the Government of India, under the Ministry of Earth Sciences.



- ESSO-INCOIS was established as an autonomous body in 2007 under the Ministry of Earth Sciences (MoES) and is a unit of the Earth System Science Organization (ESSO).
- ESSO- INCOIS is mandated to provide the best possible ocean information and advisory services to society, industry, government agencies and the scientific community through sustained ocean observations and constant improvements through systematic and focussed research.
- INCOIS provides ocean information and advisory services to various stakeholders in the country, including Potential Fishing Zone (PFZ) advisories, Ocean State Forecast (OSF), high wave alerts, tsunami early warnings, storm surge and oil-spill advisories, among others, using state-of-the-art technologies and tools to get real time information on oceanographic and marine meteorological data.
- The institute has been serving as the National Argo Data Centre and Regional Argo Data Centre of the International Argo Programme, he added, in a press release.

### **PM SVANidhi scheme**

(Source: [Indian Express](#) )

**Context:** *The PM Street Vendor's AtmaNirbhar Nidhi (PM SVANidhi) scheme, which was launched in June amid the pandemic, is a micro-credit facility that provides street vendors a collateral-free loan of Rs 10,000 with low rates of interest for a period of one year. So far, the scheme – part of the AtmaNirbhar Bharat package – has received 31,64,367 applications from across the country (except from Sikkim, which is officially not taking part in it). Of the total applications, 16,77,027 have been sanctioned and 12,17,507 have been disbursed.*

#### **Why was this scheme rolled out?**

- The COVID-19 pandemic and the nationwide lockdown left daily wage workers and street vendors out of work. The scheme aims at aiding the vendors at getting back on their feet financially. In the long term, it aims at establishing a credit score for the vendors as well as creating a digital record of their socio-economic status, so that they can avail the Central government schemes later.
- The scheme also attempts to formalise the informal sector of the economy and provide them safety nets and a means of availing loans in the future.
- Many vendors belong to what we call the informal economy, and often borrow from private lenders which charge them exorbitant rates of interest. This loan charges below 12% rate of interest, and creates a credit score of the vendors, so that if they repay the loan on time, they can avail more. Moreover, by creating a digital record of them and their socio-economic profile, it will help them avail various other 8-9 central government schemes which provide a form of a safety net, helping in their poverty alleviation.

### **Dedicated Freight Corridor**

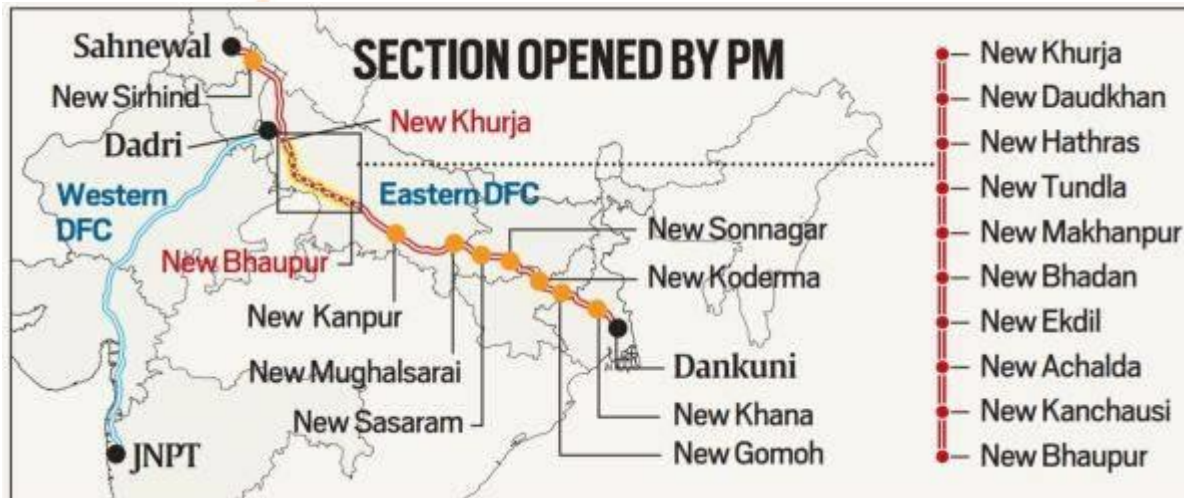
(Source: [Indian Express](#) )

**Context:** *Prime Minister Narendra Modi inaugurated a 351-km section between Khurja and Bhaupur in Uttar Pradesh for commercial operations of the Dedicated Freight Corridor (DFC). He also dedicated to the nation a state-of-the-art Operation Control Centre in Prayagraj. The total 2,843-km project — billed as the largest rail infrastructure being built in independent India — has been in the making since 2006 with little movement on the ground. It is finally ready to take off, albeit in phases.*

#### **What is the DFC?**



- The DFC consists of two arms. The section launched on Tuesday is part of the 1,839-km Eastern DFC that starts at Sohnewal (Ludhiana) in Punjab and ends at Dankuni in West Bengal. The other arm is the around 1,500-km Western DFC from Dadri in Uttar Pradesh to JNPT in Mumbai, touching all major ports along the way.
- The 351-km section stretches between Khurja, the 12th stop after Sohnewal in the North, to New Bhaupur, near Kanpur. Other stretches are Sohnewal to Khurja (365 km), Bhaupur to Pandit Deen Dayal Upadhyay (Mughalsarai) (400 km), then to Sonnagar in West Bengal (137 km), then to Dankuni via Gomoh in Jharkhand (538 km).
- There is also a section under construction between Dadri and Khurja to connect the Eastern and Western arms.



The section opened by PM Modi

### Why is it important?

- Around 70% of the freight trains currently running on the Indian Railway network are slated to shift to the freight corridors, leaving the paths open for more passenger trains.
- Built at a cost of Rs 5,750 crore through a loan from World Bank (which is funding a majority of the EDFC; the WDFC is being funded by the Japan International Cooperation Agency), the new stations in this section are Bhaupur, Kanchausi, Achalda, Ekdil, Bhadan, Makhanpur, Tundla, Hathras, Daudkan and Khurja. This section passes through Kanpur Dehat, Auraiya, Etawah, Firozabad, Hathras, Aligarh and Bulandshahr districts in Uttar Pradesh.
- This is like building an entire railway network from scratch, independent of Indian Railways. All the installations are new. Including the stations, and that's why the names of a majority of its stations are prefixed with 'New', such as New Bhaupur, New Khurja etc.
- Tracks on DFC are designed to carry heavier loads than most of Indian Railways. DFC will get track access charge from the parent Indian Railways, and also generate its own freight business.

### GAVI

(Source: [PIB](http://pib.gov.in) )

**Context:** Union Health Minister Dr. Harsh Vardhan nominated to the Board of GAVI, The Vaccine Alliance.

### Details:

- The Minister has been nominated by the Global Alliance for Vaccines and Immunisation (GAVI) as a member on the GAVI Board.

- He will be representing the South East Area Regional Office(SEARO)/Western Pacific Regional Office (WPRO) constituency on the GAVI Board.
- He will hold the post from 1<sup>st</sup> January 2021 until 31<sup>st</sup> December 2023.

#### About GAVI:

- GAVI, the Vaccine Alliance, as part of its mission to save lives, reduce poverty and protect the world against the threat of epidemics, has helped vaccinate more than 822 million children in the world's poorest countries, preventing more than 14 million future deaths.
- GAVI was formed in 2000 as the 'Global Alliance for Vaccines and Immunisation'.
- It was initiated by the Bill and Melinda Gates Foundation.
- It partners with the Foundation, the WHO, the UNICEF, the World Bank and governments all over the world.
- GAVI chiefly works in the area of improving access to vaccines for the most vulnerable children.

#### SAHAYAK-NG

(Source: [PIB](#) )

**Context:** Maiden test flight of SAHAYAK-NG.

#### About SAHAYAK-NG:

- SAHAYAK-NG is India's first indigenously designed and developed Air Droppable Container.
- It is an advanced version of SAHAYAK Mk I. It is a GPS aided air dropped container with the capacity to carry a payload of up to 50 kg and can be dropped from a heavy aircraft.
- The successful maiden test was conducted by the DRDO along with the Indian Navy.
- The container was dropped from IL 38SD aircraft (of the Indian Navy) off the coast of Goa during the test flight.
- The trial was conducted by the Navy to enhance its operational logistics capabilities and provide critical engineering stores to ships which are deployed more than 2000 km from the coast.
- It reduces the requirement of ships to come close to the coast to collect spares and stores.

#### 5G in detail

(Source: [The Hindu Businessline](#) )

**Context:** India's tryst with 5G is expected to commence in the second half of 2021 with a network roll out by Reliance Jio. RIL Chairman Mukesh Ambani believes this will make India a global leader in the fourth industrial revolution — a world driven by artificial intelligence, automation, robotics, quantum computing and the internet of things (IoT).

#### What is it?

- 5G refers to 5th generation mobile network. When rolled out, it will represent a quantum leap over the current 4G mobile networks. If successfully implemented, it can deliver 10 times faster internet and more than 10 times improvement in latency (the time difference between sending and receiving messages) over 4G.
- Ultimately 5G is expected to reduce latency to 1 millisecond (one thousandth of a second). Human reaction time is around 200-250 milliseconds. Hypothetically devices connected to 5G, can have a

response time that is 200 times faster than humans. 5G also comes with substantially more capacity and hence will enable more connected devices without issues of network congestion.

### **Why is it important?**

- 5G has potential to unleash a whole range of services and capabilities that are not possible today in terms of scale and precision — mass deployment of autonomous cars, using drones for delivery, remote healthcare (even for critical cases and robotic surgery), precision agriculture (real time management of crops and fields), virtual reality and industrial automation.
- This is expected to pave the way for way a whole new world of connected devices communicating with each other.
- The time it will take for 5G to roll out pan-India will depend on the infrastructure readiness of the telecom players, their ability to successfully bid for and win spectrum and the government's willingness to auction the required airwaves at an affordable price.
- Jio appears confident of upgrading its country-wide 4G network to 5G based on its current network infrastructure. Airtel expects 5G will become the norm in the next 2-3 years. Successful and timely launch however will require support and foresight from policy makers in fast tracking the 5G spectrum auction and removing regulatory hurdles. With most telecom players in India making losses, there's also the question of their scrounging up the capital to acquire spectrum and invest in the required infrastructure upgrades.



## INTERNATIONAL

### Proxima Centauri

(Source: [Indian Express](#) )

**Context:** *Astronomers running the world's largest initiative to look for alien life have recently picked up an "intriguing" radio wave emission from the direction of Proxima Centauri, the closest star to our Sun.*

#### Proxima Centauri

- Proxima Centauri is 4.2 light-years away from the Sun – considered a close distance in cosmic terms. Its mass is about an eighth of the Sun's, and it is too dim to be seen with the naked eye from Earth.
- Proxima b, one of the two planets that revolve around the star, is the subject of significant curiosity. Sized 1.2 times larger than Earth, and orbiting its star every 11 days, Proxima b lies in Proxima Centauri's "Goldilocks zone", meaning the area around a star where it is not too hot and not too cold for liquid water to exist on the surface of surrounding planets. To give an example, the Earth is in the Sun's Goldilocks zone.
- However, this does not mean for sure that water is present on Proxima b. It could also be hostile to life, if its atmosphere has been stripped away by solar flares from Proxima Centauri. Proxima b is also tidally locked with its star, just like the Moon is to Earth– meaning one side of the planet has daylight forever, while the other side is always dark. Scientists say that it is difficult to imagine that Proxima b could have a stable climatic system under such conditions.

### Turkey's controversial law

(Source: [Indian Express](#) )

**Context:** *The Turkish parliament passed a bill that would increase the monitoring of civil society groups. The act is called "Preventing Financing of Proliferation of Weapons of Mass Destruction" and was proposed by president Recep Tayyip Erdogan's ruling Justice and Development party in order to comply with UN Security Council's recommendations to keep terror financing and money laundering in check.*

#### What does the Bill say?

- The Bill has come following the 2019 report on Turkey prepared by the intergovernmental body Financial Action Task Force (FATF) meant to fight money laundering and terror financing. The bill consists of 43 articles and has made changes to seven laws on Turkey's Law of Associations and is meant to keep Turkey from being blacklisted by the Paris-based watchdog of terror financing.
- The FATF is an inter-governmental body that is now in its 30th year, working to "set standards and promote effective implementation of legal, regulatory and operational measures for combating money laundering, terrorist financing and other related threats to the integrity of the international financial system".

#### What are the implications of the Bill being passed?

- The Bill gives the Turkish government the power to appoint trustees to non-governmental organisations (NGOs), to suspend their activities, seize their assets and monitor their sources of funding.
- As per various media reports, critics and human rights activists are seeing this move as a way to crack down on dissidents in a country where civil society is already not very free.



- After a failed coup in 2016 that was aimed at protecting democracy in the country, thousands of journalists, bureaucrats, academics and judges have been targeted by the government.
- Earlier this year, Turkish prosecutors ordered the arrest of nearly 700 including military and justice ministry personnel, as part of its moves against those accused of being involved in a 2016 coup attempt to overthrow Erdogan's government.
- Since the coup took place, the Turkish authorities have been carrying out a crackdown on the alleged followers of US-based Muslim cleric Fethullah Gülen, who Erdogan has long accused of plotting the 2016 coup. Gülen has denied these allegations and had condemned the coup. In fact, he has previously suggested that the coup was "staged" by the government itself.
- The bill will deal a further blow to "civil society, whose determined efforts to steer Turkey toward a more democratic path have radiated hope even as Erdogan moves the country in the opposite direction.

### **Giant Antarctic iceberg A68a**

Source: [Indian Express](#) )

**Context:** *The giant iceberg A68, the biggest block of free-floating ice from Antarctica with an area of about 5,800 sq. km, has been drifting in the Atlantic Ocean since 2017. This year, due to an ocean current, the iceberg was propelled into the South Atlantic Ocean and since then it has been drifting towards the remote sub-Antarctic island of South Georgia, prompting fears about the impact the iceberg could have on the island's abundant wildlife.*

#### **What is the giant iceberg A68a?**

- A68a, an iceberg roughly the size of the state of Delaware, split off from Antarctica's Larsen C ice shelf in July 2017. Since then it has been drifting towards the remote island of South Georgia, which is a British Overseas Territory (BOT).
- On its journey, smaller icebergs have calved from the iceberg and right now, the biggest section of the iceberg is called A68a and spans an area of roughly 2,600 sq. km.
- The US National Ice Center (USNIC) (USNIC is responsible for naming icebergs, which are named according to the Antarctic quadrant in which they are spotted) confirmed that two new icebergs calved from A68a and were large enough to be named and tracked. They are called A68E and A68F.
- The fear is that if the iceberg grounds itself near the island, it could cause disruption to the local wildlife that forages in the ocean. As per ecologists from the British Antarctic Survey (BAS), which will launch a research mission to study A68a's impact on the ecosystem next month, if the iceberg gets stuck near the island, it could mean that penguins and seals will have to travel farther in search of food, and for some this might mean that they don't get back in time to prevent their offspring from starving to death.
- On the other hand, there are some positives of an iceberg being stuck in the open ocean, since icebergs carry dust which fertilises ocean plankton, which draws up carbon dioxide from the atmosphere.
- As per BAS, the iceberg's calving is thought to be a natural event and not a result of climate change. However, some models predict that a warming Antarctica in the future could mean more calving events as ice shelves and glaciers retreat.



# Mains

## GS II

### India and its neighbours

(Source: [The Hindu](#) )

**Context:** *This year, India faced a trifecta of challenges in its neighbourhood from China: the COVID-19 pandemic, the growing competition for influence in South Asia, and aggressive actions at the Line of Actual Control (LAC) by China's People's Liberation Army (PLA).*

#### **How has India helped tackle the regional COVID-19 challenge?**

- The COVID-19 pandemic that originated in China has led to one of the biggest health challenges, causing heavy economic damage in South Asia. India ranks second after the United States in terms of number of cases, and the worst-hit economy among G20 nations.
- But India is also one of the best poised nations to aid recovery efforts in the region, given its status as one of the world's leading producers of pharmaceutical drugs and vaccines. In March, Prime Minister Narendra Modi held a special virtual summit of eight SAARC nations and proposed a COVID-19 package, for which India provided about half of the \$20 million funding for relief. India's military ran a series of missions to SAARC countries and the Indian Ocean Region (IOR) with supplies of food and medicines, and India's 'Vande Bharat' mission flew home nationals from neighbouring countries, along with lakhs of Indians who had been stranded during the lockdown.
- India was not the only country in the region providing help. China, too, stepped up efforts to extend its influence in the South Asian region through COVID-19 relief. Chinese Vice-Minister in-charge of the region, Luo Zhaohui, held meetings with different groups of SAARC countries, including one with Pakistan, Afghanistan and Nepal, and another with Pakistan, Nepal, Bangladesh and Sri Lanka to coordinate relief efforts, and promised to provide the Chinese-made Sinovac vaccine to them when it is available. China also shipped relief to South Asia, sending out PPE suits and other medical equipment.
- Given that all SAARC countries except India and Bhutan are part of the Belt and Road Initiative (BRI), and owe different amounts of debts to Chinese banks, Beijing stepped in to provide partial debt waivers to the Maldives and Sri Lanka. It also extended a massive \$1.4-billion Line of Credit to Pakistan.

#### **Did the military standoff impact regional ties?**

- China doubled down on territorial claims and its transgressions along its borders with South Asia: from Ladakh to Arunachal Pradesh, PLA soldiers amassed along various sectors of the LAC, leading to violent clashes.
- The deaths of 20 Indian soldiers at the Galwan valley was the first such casualty in 45 years. China also laid claim to Bhutan's Sakteng natural reserves and pushed along the boundary lines with Nepal, all of which changed India's strategic calculations along its Himalayan frontiers.
- That India and Nepal saw their worst tensions in decades over the construction of a road to Lipulekh, leading to Nepal amending its constitution and map to claim Indian territory, added to the already fraught situation.
- Meanwhile, a new defence pact this year between China and Pakistan vis-à-vis a sharp rise in ceasefire violations along the Line of Control (LoC) with Pakistan to the highest levels since 2003, has made it clear that India must factor in among its military challenges at the LAC the possibility of a two-front war.

#### **How has India dealt with a three-pronged challenge?**



- The government's response to the challenges has been to assert its Neighbourhood First and SAGAR (Security and Growth for All in the Region) strategies as foreign policy priorities.
- Apart from the COVID-19 relief and neighbourhood visits, Mr. Modi and External Affairs Minister S. Jaishankar have been in frequent touch with their counterparts in the region. Mr. Modi and Bangladesh Prime Minister Sheikh Hasina held a virtual summit on December 17.
- India has also upped its game on infrastructure delivery, particularly for regional connectivity in the past year, including completing railway lines to Bangladesh and Nepal, riverine projects, ferry service to the Maldives, identifying other services to Sri Lanka and IOR islands, while also considering debt waiver requests from its neighbours.
- Unlike in the past, India has also become more flexible about the entry of other powers to help counter China's influence in the region — it recently welcomed the U.S.'s new military dialogue with the Maldives. America's Millennium Challenge Corporation's (MCC) projects in Afghanistan, Bhutan, Sri Lanka, Nepal and Bangladesh are also finding more space.
- Furthermore, as part of its Indo-Pacific policy, New Delhi is also encouraging its Quad partners — the U.S., Japan and Australia — to collaborate on security and infrastructure initiatives in the neighbourhood, along with promoting forays by other partners like the U.K., France and Germany in the region.
- It is also significant that despite considerable security challenges from China, India has not sought to elicit support from its neighbours, which might have put them in a difficult position. Thus, the Modi government has made it clear that despite the provocations, it intends to resolve the nearly ten-month-long military standoff diplomatically and bilaterally.

### **Dealing with India's two-front challenge**

(Source: [The hindu](#) )

**Context:** *Till recently, any mention of a two-front war evoked two contrasting opinions. India's military was firmly of the view that a collusive China-Pakistan military threat was a real possibility, and we must develop capabilities to counter this challenge. On the other hand, the political class in general and the mainstay of the country's strategic community felt that a two-front threat was being over-hyped by the military to press for additional resources and funds. They argued that historically, China has never intervened militarily in any India-Pakistan conflict and that the economic, diplomatic, and political ties between India and China rule out any armed conflict between the two countries. As a result, Indian strategic thinking was overwhelmingly focused on Pakistan and the security considerations emanating from there.*

#### **Intrusions change things**

- In the Indian military's thinking, while China was the more powerful — and therefore strategic — foe, the chance of a conventional conflict breaking out was low. The reverse was true of Pakistan, with a greater likelihood of conflict along the western border possibly triggered by a major terror attack emanating from Pakistan.
- The Chinese intrusions in Ladakh in May this year, the violence that resulted from clashes between the Indian Army and the People's Liberation Army, and the deadlock in negotiations have now made the Chinese military threat more apparent and real. The direct result of this, then, is the arrival of a worrisome two-front situation for New Delhi.
- Even if the current India-China crisis on the border is resolved peacefully, China's military challenge will occupy greater attention of Indian military planners in the months and years to come. This comes at a time when the situation along the Line of Control (LoC) with Pakistan has been steadily deteriorating. Between 2017 and 2019, there has been a four-fold increase in ceasefire violations.
- Some media reports had indicated that Pakistan had moved 20,000 troops into Gilgit-Baltistan, matching the Chinese deployments in Eastern Ladakh.





### **China-Pakistan military links**

- For sure, the Sino-Pakistan relationship is nothing new, but it has far serious implications today than perhaps ever before. China has always looked at Pakistan as a counter to India's influence in South Asia.
- Over the years, the ties between the two countries have strengthened and there is a great deal of alignment in their strategic thinking. Military cooperation is growing, with China accounting for 73% of the total arms imports of Pakistan between 2015-2019.
- In his remarks on the (recently concluded) Shaheen IX Pakistan-China joint exercise between the Pakistan Air Force and People's Liberation Army Air Force, the Pakistan Chief of Army Staff said, "The joint exercise will improve combat capacity of both air forces substantially and also enhance interoperability between them with greater strength and harmony."
- It would, therefore, be prudent for India to be ready for a two-front threat. In preparing for this, the Indian military needs to realistically analyse how this threat could manifest itself and the type of capabilities that should be built up to counter it.
- In a two-front scenario, the larger challenge for India's military would come if the hostilities break out along the northern border with China. In such a contingency, there is a likelihood that Pakistan would attempt to take advantage of India's military preoccupation by limited military actions in Jammu and Kashmir (J&K), and attempt to raise the level of militancy in Kashmir.
- It is unlikely that Pakistan would initiate a large-scale conflict to capture significant chunks of territory as that would lead to a full-blown war between three nuclear armed states. In such a contingency, the damage to Pakistan's economy and military far outweighs the advantages of capturing some pieces of ground. Pakistan would prefer the low-risk option of pursuing a hybrid conflict that remains below the threshold of war.

### **Dilemmas for India**

- A two-front conflict presents the Indian military with two dilemmas — of resources and strategy. Ashley J. Tellis, in his 2016 article, "Troubles, They Come in Battalions: The Manifold Travails of the IAF" estimates that about 60 combat squadrons are needed to deal with a serious two-front threat.
- This is double the number of squadrons currently with the Indian Air Force (IAF). Obviously, it is neither practical nor feasible to build a level of capability that enables independent war fighting on both fronts.
- A major decision will be the quantum of resources to be allocated for the primary front. If a majority of the assets of the Indian Army and the Indian Air Force are sent towards the northern border, it will require the military to rethink its strategy for the western border. This is the second dilemma.
- Even though Pakistan may only be pursuing a hybrid war, should the Indian military remain entirely defensive? If it does so, it may encourage Pakistan to continue with its actions in J&K with a level of impunity and even raise the level of its involvement on the western front. Adopting a more offensive strategy against Pakistan could draw limited resources into a wider conflict.
- It is impossible to define with any certainty the contours of a two-front conflict and how it would actually play out. However, what is certain is that the threat cannot be ignored and therefore we need to develop both the doctrine and the capability to deal with this contingency. Developing a doctrine will require close interaction with the political leadership. Any doctrine that is prepared without a political aim and guidance will not stand the test when it is actually to be executed.
- Capability building also requires a serious debate, particularly in view of the fact that the country's economic situation will not permit any significant increase in the defence Budget for the foreseeable future.
- There is too much focus on major platforms such as aircraft, ships, and tanks, and not enough on future technologies such as robotics, artificial intelligence, cyber, electronic warfare, etc. The right balance will have to be struck based on a detailed assessment of China and Pakistan's war-fighting strategies.

### **Diplomacy is crucial**

- Diplomacy has a crucial role to play in meeting the two-front challenge.





- To begin with, New Delhi would do well to improve relations with its neighbours so as not to be caught in an unfriendly neighbourhood given how Beijing and Islamabad will attempt to contain and constrain India in the region.
- The government's current engagement of the key powers in West Asia, including Iran, should be further strengthened in order to ensure energy security, increase maritime cooperation and enhance goodwill in the extended neighbourhood.
- New Delhi must also ensure that its relationship with Moscow is not sacrificed in favour of India-United States relations given that Russia could play a key role in defusing the severity of a regional gang up against India.
- Even as the Quad, or the quadrilateral security dialogue (India, Australia, Japan and the U.S) and the Indo-Pacific seem to form the mainstay of India's new grand strategy, there is only so much that a maritime strategy can help ease the Sino-Pakistan pressure in the continental sphere.

### **Outreach to Kashmir**

- Politically, the stark military reality of a two-front challenge, one that is likely to grow stronger over the years, must serve as a wake-up call for the political leadership in New Delhi, and encourage it to look for ways to ease the pressure from either front.
- Easing pressure on the western front requires political will more than anything else. From a long-view perspective, therefore, a well-choreographed political outreach to Kashmir aimed at pacifying the aggrieved citizens there would go a long way towards that end.
- This could also lead to a potential rapprochement with Pakistan provided, of course, Rawalpindi can be persuaded to put an end to terrorist infiltration into Kashmir. It is important to remember that China, a rising and aggressive, superpower next door, is the bigger strategic threat for India, with Pakistan being a second-order accessory to Beijing's 'contain India strategy'.
- New Delhi would, therefore, do well to do what it can politically to reduce the effect of a collusive Sino-Pakistan containment strategy aimed at India.

### **Granting bail is the rule**

(Source: [The Hindu](#) )

**Context:** *Discussions on bail reform usually arise when exceptional cases capture public attention. However, bail reform must begin by addressing two key facets of the criminal justice system: judicial discretion and monetary surety bonds.*

### **Judicial discretion**

- The power to grant bail is a discretionary power vested in judges and it is meant to be exercised liberally. The Supreme Court has consistently reiterated that "bail is the rule, jail is an exception". The primary purpose of bail is to ensure the accused person's compliance with investigation, and subsequent presence at the trial if they are released after arrest. The refusal to grant bail deprives individuals of liberty by confining them in jails without trial and conviction.
- At present, the power to grant bail is exercised sparingly. Subordinate courts even routinely reject bail for specific offences like minor excise offences. It is pertinent to note that a majority of those policed under excise laws belong to marginalised communities.
- Without grant of bail by the lower courts, the accused persons are required to approach the High Court or the Supreme Court. Consequently, most accused persons remain incarcerated as undertrials for extended periods of time. Two-thirds of India's prison population comprise undertrials from Dalit, Adivasi and Other Backward Classes communities, often accused of minor offences.



- The pendency of bail applications has particularly increased during the pandemic — both due to the shutting down of courts and the exacerbation of arrests for minor offences by the police. Despite the Supreme Court's orders to decongest prisons, arrests for minor offences continued unabated, according to a study of pandemic policing in Madhya Pradesh by the Criminal Justice and Police Accountability Project (CPAProject).
- The system of bail typically requires sureties to furnish a bond for some property valued at the amount determined by the concerned judge. The bail amount in subordinate courts, even for petty offences punishable by less than three years, is a minimum of ₹10,000. In cases of bail before the High Courts and the Supreme Court, this amount usually exceeds ₹30,000.
- However, even this amount is a rare mercy. For instance, a 14-year-old minor's surety for four cases of theft and house breaking was set at ₹2 lakh by the sessions court in Bhopal. This is a form of injustice when a majority of citizens are landless with meagre incomes. A report by Azim Premji University highlights that even among regular wage workers, 57% Indians earn less than ₹10,000 per month. Official data from the Socio-Economic Caste Census pegs rural landlessness at 57%, and this is higher if you are Dalit or Adivasi.
- Therefore, those without assets, even when granted bail, end up languishing in jails or incur debt by paying others to stand as fake sureties to secure their freedom. A bogey of middlemen has also emerged due to these high bail amounts. This economy of exploitation receives scant attention in discussions of reform. The grant of bail on a personal bond without sureties i.e., release on one's own guarantee without any monetary amounts, although permissible in law, is rare.
- In the 1978 Supreme Court case of Moti Ram v. State of Madhya Pradesh, Justice V. R. Krishna Iyer identified the issue of unreasonably high sureties as a human rights problem. The court then suggested that surety amounts be determined by considering relevant variables such as the socio-economic location of the accused person.

### **Preposterous bail conditions**

- During the lockdown, the Gwalior Bench of the M.P. High Court deemed it fit to impose peculiar conditions while granting bail to certain applicants. These included installing a non-Chinese LED TV at the District Hospital, registration as a "voluntary COVID-19 warrior" and donating money for COVID-19 relief.
- This continued despite the Principal Bench of the High Court stating that bail orders requiring the deposit of cash amounts are "unjust, irregular and improper".
- Bail indiscretions by judges of lower courts and High Courts have passed by with little accountability or oversight by the apex court. Even when not ridiculous, bail conditions can transgress personal liberty and are often paternalistic.
- Courts introspect little about standards of liberty, reasonableness and proportionality when deciding bail matters. A report by the Centre for Law and Policy Research recommends the creation of checklists to address individual discretion while deciding bail applications.
- Yet, the reflection of our society's inherent caste and class biases in judicial decisions is likely to persist even with checklists. The legacy of Moti Ram has been honoured more in breach than in its spirit.

### **New US policy on Tibet**

(Source: [Indian Express](#) )

**Context:** *The Tibet Policy and Support Act, passed by the US Senate earlier this week, bookends a turbulent year in US-China relations. The House of Representatives had passed the legislation in January. It will become law after the US President signs off on it.*



### **The earlier version**

- The TSPA is an amended version of the Tibet Policy Act of 2002, which came into existence during the Bush Administration. But in an indication of just how important he considered relations with China, President George W Bush distanced himself from this Congressional action, and wrote strong words against it in his signing statement, in which asserted the administration's right not to implement parts of the act.
- He also said his approval to the Act did not constitute his adoption of the various statements of policy in the Act as US foreign policy, and said these would be taken as "advisory" statements only, "giving them the due weight that comity between the legislative and executive branches should require, to the extent consistent with US foreign policy".

### **US and China, today**

- US-China relations have become much more difficult over the last two decades, particularly worsening in the Trump Administration, and more so in 2020 over matters ranging from the pandemic to trade tariffs, and its cross-world coalition-building against Chinese superpower ambitions.
- Earlier this month, the Holding Foreign Companies Accounting Act, targeting Chinese investments in the US, was signed into law. Earlier in the year, President Donald Trump signed into law the Hong Kong Autonomy Act.
- President Trump is not expected to take a Bush-like view on the TSPA, which introduces stronger provisions on Tibet, plus teeth in the form of a threat of sanctions, including travel bans on Chinese officials. How the Biden Administration, expected to frame its own China policy, views TSPA remains to be seen.
- Still, most US administrations, the Trump Administration included, have broadly maintained a diplomatic balance between relations with China, and support for Tibet and the Dalai Lama. The State Department has a separate section on Tibet in its annual reports on human rights and religious freedom. But there has been no real push for talks with the Dalai Lama or on the release of political prisoners.

### **The Dalai Lama**

- Among the most significant amendments is that the TSPA makes it US policy to oppose attempts by Beijing to install its own Dalai Lama "in a manner inconsistent with Tibetan Buddhism in which the succession or identification of Tibetan Buddhist lamas, including the Dalai Lama, should occur without interference..."
- The legislation makes reference to the Chinese government's 'Measures on the Management of the Reincarnation of Living Buddhas' in 2007, and a March 2019 statement by the Chinese Foreign Ministry spokesperson that the "reincarnation of living Buddhas including the Dalai Lama must comply with Chinese laws and regulations and follow religious rituals and historical conventions".
- It also refers to China's installation of a 6-year-old boy in 1995 as the 11th Panchen Lama, and to statements by the present Dalai Lama explaining the traditions to be followed in the selection of a Dalai Lama, and that the authority to recognise the reincarnation of a Dalai Lama lies with him and his officials.
- The Act also makes it US policy to hold senior Chinese officials "responsible for, complicit in, or have directly or indirectly engaged in the identification or installation of a candidate chosen by China as the future 15th Dalai Lama of Tibetan Buddhism" to have committed "a gross violation of internationally recognized human rights", attracting sanctions under the Global Magnitsky Human Rights Accountability Act. The Act, named after a Russian tax lawyer who died after being imprisoned while investigating Russian tax officials for fraud, authorises US officials to impose travel bans globally.

### **Other provisions**

- The TSPA has introduced provisions aimed at protecting the environment of the Tibetan plateau, calling for greater international cooperation and greater involvement by Tibetans.



- Alleging that China is diverting water resources from Tibet, the TPSA also calls for “a regional framework on water security, or use existing frameworks... to facilitate cooperative agreements among all riparian nations that would promote... arrangements on impounding and diversion of waters that originate on the Tibetan Plateau”.
- While the 2002 Act said the US should establish a “branch office” in Lhasa, the TSPA ups the ante by changing that to a “consulate”. It recognises the Central Tibetan Administration, whose President Lobsang Sangay takes credit for ensuring that the Senate took up the legislation for vote.
- In a statement, Sangay said, “By passing the TPSA, Congress has sent its message loud and clear that Tibet remains a priority for the United States and that it will continue its steadfast support for His Holiness the Dalai Lama and the CTA. It is a momentous landmark for the Tibetan people.”

### What China says

- China had earlier said the TPSA “severely breached international law and basic norms governing international relations, interfered in China’s internal affairs, and sent a wrong message to ‘Tibet independence’ forces”.
- After the passage of the Bill through the Senate, China said it “resolutely opposes” the “adoption of Bills containing such ill contents on China. Issues related to Tibet, Taiwan and Hong Kong... are China’s internal affairs that allow no foreign interference”. A Foreign Ministry spokesman urged the US “to stop meddling in our domestic affairs under those pretexts, refrain from signing the bills or implementing the negative contents and items in them that target China and undercut China’s interests”.
- If India is pleased at this latest US barb to China, it has not said so openly. India has mostly refrained from playing the Tibet card against China, and like the US, has a one China policy. It was only this year, in the ongoing Ladakh standoff, that it used special forces made up almost entirely of Tibetan exiles to occupy strategic heights in Pangong Tso’s south bank.

## GS III

### A slump and green shoots of recovery

(Source: [The Hindu](https://www.thehindu.com) )

**Context:** *The year 2020 upended India’s economy as much as it disrupted the rest of the world, along with all aspects of normal life, thanks to the novel coronavirus. But unlike most other peers, India’s economy had already been hurtling downhill before the pandemic hit, and a snap national lockdown announced in late March scuppered virtually all activity for a while to come. There were two quarters of negative growth and widespread mayhem across the economy, barring some solace from agriculture. But as the year draws to a close, there is a glimmer of hope that the economy may see some recovery in 2021.*

### Why was India hit hard?

- By the beginning of 2020, India had already gotten off the 8% growth track for several quarters. From 8.18% growth in the gross domestic product (GDP) recorded between January and March of 2018, India decelerated steadily till it was trundling along at half the speed by the end of 2019, growing at just 4.08% this time last year.
- The lingering effects of demonetisation and a flawed implementation of the Goods and Services Tax were seen as some of the reasons for this sustained decline. Just before the pandemic struck, the government had already made multiple attempts to try and revive the economy. Post March, like in all other aspects of life, the pandemic managed to moderate expectations about the economy as well.



- From condemning the slowdown in the economy a year ago, after two quarters of negative growth, even a zero-to-slow growth scenario seemed better.

### **What happened in the quarter between January and March?**

- India's growth slowed to 3.09% between January and March this year, its lowest quarterly growth rate since 2012. This meant the country's growth for financial year 2019-20 was an insipid 4.2%.
- Several vital signs, including private consumption and exports, were at their worst levels in five or more years, suggesting that even if one were to discount the national lockdown announced at four hours' notice and implemented in the last week of March, the economy was not getting any better than before.
- However, COVID-19 and the lockdown accelerated its collapse and unleashed widespread distress for households and wage-earners as almost all movement and economic activity was stopped.

### **How were the States affected?**

- While officials used the Epidemic Diseases Act of 1897, the rules of the lockdown were tweaked, altered and modified multiple times by the Ministry of Home Affairs.
- The rules were interpreted differently by State and local administrations. These differences also made inter-State movement tricky for goods as well as the millions of migrant workers who were stuck in their respective urban bases and trying to go back home, as cities and the opportunities they offered ground to a halt along with all trains, flights and buses.

### **Who benefited from the stimulus package?**

- From an initial clampdown on all manufacturing sectors, barring essential goods like food and medicines, the government gradually realised that even pharma firms cannot make medicines without access to raw material and support services from ancillary industries, from ice factories to transporters, and most importantly, employees who were unable to reach their workplaces in the absence of public transport.
- Thus, many course corrections were made on the way — E-passes were launched for employees to reach their workplaces and for transport of goods across the country, along with special trains for migrant workers to go back home.
- In the middle of May, the government unveiled a ₹20 lakh-crore stimulus and support package for the economy, branding it Atmanirbhar Bharat Abhiyan.
- Even as it granted a lot of forbearance on banking dues to businesses and retail borrowers, the direct stimulus effect of this package was limited. In fact, some of the reforms it promised, like a new strategic disinvestment policy for public sector enterprises, are still awaited.

### **Why did the April-June quarter see a sharp fall?**

- The economy contracted nearly 24% in the April-June quarter — the sharpest fall since quarterly growth began to be recorded in 1996. The only sector to deliver positive growth in the period was agriculture.
- But manufacturing output falling nearly 40%, services 20% and construction 50% from a year ago had a deep impact as these sectors generate the maximum employment. The strict lockdown had taken its toll, with job losses and salary cuts becoming the norm in the formal sector, while the informal sector silently withered.
- The rest of the world had also gone into the lockdown mode, but the damage to the economy in India was the sharpest among major economies. And despite this, the virus was far from contained and inflation crossed the 6% mark led by rising food prices.

### **How did unlocking the economy help?**

- Marked by a progressive unlocking of the economy, by the end of the July-September quarter, the Home Ministry had even permitted the resumption of public transit systems, including metros. As subsequent data suggest, official COVID-19 cases in the country also peaked around September.





- While most rating agencies and economists predicted that the economy would shrink by around 10%, India managed to record just a 7.5% contraction in the July-September quarter. Agricultural growth remained constant, while manufacturing managed to record positive growth.
- However, the rough patch was far from over for services such as retail trade and hotels (particularly impacted by social distancing norms) and sectors such as mining and construction.
- Among other things, rating agency CRISIL attributed the better-than-expected growth to pent-up demand finding expression after months of being locked up at home, cost savings for corporates (read 'retrenchments lowering staff costs') and a 'learning to live' attitude. Government spending — critical for India to get out of this economic rut — collapsed, even as inflation remained high.

### **What is the RBI's view on growth prospects?**

- With the economy in a 'technical' recession after two successive quarters of contraction, the government unveiled a fresh round of support measures over October and November, and has pinned its hopes on breaking out of negative growth in the October to December quarter.
- A 'nowcast' released by the Reserve Bank of India (RBI) on Thursday suggests that it may indeed be possible, with a slender 0.1% growth. Indeed, several high-frequency indicators clocked remarkable improvements over October and November.
- But their coincidence with India's festive season, and a reported flattening in activity after the Deepawali festival, make it difficult to assess if this recovery is real and sustainable. The RBI believes that growth in the first quarter of 2021 will be even healthier as COVID-19 cases continue to dip.
- The six months between April and September 2021 could register 14.2% growth, the central bank estimates (no doubt helped by the negative growth in the comparative period of this year).
- That optimism, and the hopes of an imminent vaccine option for Indians, should ideally help the economy leave 2020 and its worst manifestations behind.

### **Conservation of Western Ghats**

(Source: [The Hindu](#) )

**Context:** *In 2012, 39 areas covering national parks, wildlife sanctuaries, and reserved forests in the Western Ghats were declared a World Heritage Site by UNESCO. These sites are crucial for their biodiversity value. Ten of them are in Karnataka. Since the time the Ministry of Environment and Forests began identifying the potential heritage sites, there has been unrest among the indigenous people. When the exercise began, they feared for their existence in lands that they had inhabited for decades. The restrictions on movement following the declaration of these territories as ecologically sensitive areas aggrieved them further.*

#### **Details:**

- Against the backdrop of the enactment of the Forest Rights Act of 2006 in India and the Declaration on the Rights of Indigenous People in 2007 by the United Nations, the people residing in the Western Ghats did not anticipate that they would have to deal with the uncertainty about their future following the announcement of the World Heritage Site.
- The indigenous people of the Western Ghats, including the Particularly Vulnerable Tribal Groups, constitute 44.2% of the tribal population of 6.95% of Karnataka. The Western Ghats are also home to a sizeable population of communities like Gowlis, Kunbis, Halakki Vakkala, Kare Vakkala, Kunbi, and Kulvadi Marathi.
- In the context of the Forest Rights Act, they are treated as 'other traditional forest dwellers' since they have been living there for at least three generations prior to December 13, 2005 and depend on the forest

or forest land for their livelihood needs. They eke out their living by collecting ‘minor forest produce’ such as cinnamon and kokum from the forest.

### **A dismal record**

- Karnataka has a dismal record in implementing the Forest Rights Act compared to other States. According to the Ministry of Tribal Affairs, as of April 30, 2018, the State had recognised only 5.7% of the total claims made.
- Notably, 70% of the claims were disposed off. There appeared to be clear inconsistency in the government’s approach in settling the claims made by the tribals versus the claims made by other traditional forest dwellers.
- The inconsistency reflected in their argument. According to them, tribal applications constituted 17.5% of the claims and nearly all of them were settled, while other claims were rejected as they were not backed by valid evidence. This means that claims made by other traditional forest dwellers were treated as inconsequential.

### **The wrong approach**

- Assuming that denying tribals or other traditional forest dwellers their rights in the forest would serve the purpose of conservation is far from the truth. The Forest Rights Act is not about the indiscriminate distribution of forest land to anyone applying for it.
- As per the law, only those lands are recognised where people prove their occupation not later than December 13, 2005. Moreover, the combined stretch of land claimed by them is comparatively smaller by any account than what has been taken away for building dams, mining, laying railway lines and roads, power plants, etc.
- The government records also reveal that 43 lakh hectares of forestland were encroached both legally and illegally until 1980 when the Forest Conservation Act came into force. Sadly, there is no significant conservation even after this landmark law.
- Invariably, an approach adopted to isolate the indigenous people from their natural habitats to protect biodiversity is the root cause of conflict between them and conservationists. The latter think that resources have to be controlled and managed. However, this theory is fast proving unproductive.
- The Global Environment Outlook Report 5 mentions that there is decreased biodiversity across the globe even as ‘protected areas’ have been expanding. People living in nature’s surroundings are integral to conservation as they relate with it in a more integrated and spiritual way.

### **The way forward**

- Declaration of the Western Ghats as a World Heritage Site is as important in preserving the rich biodiversity of the region as the recognition of the rights of the people who depend on the forests.
- As confirmed internationally, preserving biodiversity requires the legal empowerment of the people living in those areas.
- The Forest Rights Act is an ideal instrument to push forward the objective. To realise it on the ground, the government must make an effort to build trust between its agencies in the area and the people who depend on these forests by treating them as equal citizens like everyone else in the country.

## **Rethinking waste management**

(Source: [Down to Earth](#) )

**Context:** *The world’s largest, fully habituated river island Majuli is situated in the middle of Brahmaputra, with the Kaziranga National Park touching Jorhat and Nagaon. Yet, none of these places have any waste management system or a waste water treatment plant. The waste accumulates in rivers, lakes, ponds and*

wetlands. The situation is conspicuous in almost in all cities and towns in the North East, except in a few villages such as Mawlynnong and Rangapara.

#### Details:

- This has led to serious public health concerns. At least 85 per cent of the waste in the North East is unceremoniously dumped, without processing and treatment in the Ganga, Yamuna and Brahmaputra.
- The waste is burned in environmentally sensitive areas including river banks, wetlands, forests and water bodies.
- Several dumpsites in India's north-eastern states are located at wetlands or river banks. India's North East is perhaps the greenest region in India, abundant with fresh water. The pristine nature and clean water has often been the talk of the town.
- If the Municipal Solid Waste Management Rules, 2016 are implemented in letter and spirit, more than 12,000 jobs can be created in these towns. If extended to all villages, nearly 40,000 jobs related to door-to-door collection, composting and recycling value chain can be created.
- This will help improve the wellbeing of nearly 50 million people.
- But municipalities in the North East lack the technical know-how. There is also a lack of political commitment from the local elected representatives. Some staff members lack adequate training and exposure.
- Most trainings are organised for commissioners and engineers but seldom for collection staff or sanitary supervisors.

#### Myths that aggravated the conundrum of mismanagement

- **More money, more staff required:** Most municipalities in India as well as other developing nations argue that there is a need for more financial and human resources to cater to growing urban waste problem. Surat, Suryapet, Namakkal, Nagpur, Latur, Indore, Warangal, Saluru, Mysuru, Bobbili, Coimbatore and Alappuzha made their cities cleaner without a lot of additional resources.
- **State of the art technology:** The bigger the state of art technology is, the higher the chances of collection and processing failure for countries. They want compactors, tippers, waste incineration, pyrolysis, plasma arc plants because all of them require big investment that translates into bigger commissions. Any agency that receives a contract from a municipality needs to offer a bribe to get their bills approved. The failure of "bigger is better" technology in India is conspicuous. The solution for India lies in strengthening the existing system and integrating the informal sector in collection and recycling. The informal sector can remove more than 60 per cent of inorganic waste from dumpsites with little investment and save more energy through recycling.
- **Big contractors, local or multi-nationals can help:** In the name of providing integrated solid waste management, there is often an inclination to call tenders that favour large companies, including putting certain harsh conditions that keep the small but good players out. But experience from the last 15 years has not given any such evidence. None of the cities figured in the cleanest city of the country when it employed these large companies in last two decades. The cities mentioned above did not employ any large contractors. They relied on good local players, including self-help groups for women, waste picker cooperatives or even local non-profits and small contractors. A lack of municipal by-laws or enforcement of penalties regarding littering and non-segregation are the two worst forms of waste governance deficits. If you do not enforce it, you can never keep your city clean for long time. Developed countries like Singapore, Switzerland, the United States are not clean because its population is educated or disciplined, it is the fear of laws that makes it work. It is important that people must learn to pay for services. The provision for payment for waste services are there in the laws but are not enforced because of objections by politicians. Surveys suggest that people will pay segregate their waste if there are systems in place. They are reluctant to object to service fee because municipalities have never provided that kind of efficient and quality services, that one can go and ask for service fee for SWM. If citizens want good services and improving their own wellbeing, they must learn to pay.



- **Corruption vs cleaner cities:** Look at the top 10 cleanest cities of the world: Calgary, Honolulu, Helsinki, Kobe, Oslo, Adelaide, Brisbane, Wellington etc. Now look at their corruption index. Is there a link between cleaner cities and corruption-free cities? They figure in the top 20 least corrupt cities of the world. There is a close link between good waste governance and cleaner cities; India in general is no exception to it. Assam needs to reform its municipal governance along with building capacity of the lower staff of the municipal systems. The Swachh Bharat Mission will not succeed as long as we do not see commitment from the administration. Corruption in public services is not only the worst form of disease, but also has a direct impact on the lives of all citizens who deserve better living conditions.

### **Public charging points is future of EVs**

(Source: [The Hindu Businessline](#) )

**Context:** *There would be greater need for public charging in India given its huge population.*

#### **Need for EVs:**

- Every nation bears the responsibility of reducing their greenhouse gas emissions. India, on its part, has committed to reducing its carbon footprint by 33-35 per cent by 2030 from the 2005 levels, as part of its NDCs under the Paris Agreement. Globally, transportation and power generation together account for more than half the world's greenhouse gas emissions.
- To decarbonise power generation, the world is trying to move towards an energy mix with high percentages of renewables-based energy. India has set itself a target of installing 450 GW of renewables-based energy capacity by the year 2030 majority of those would be coming from Solar and wind which are variable in nature and, therefore, need to be balanced with storage capacity.
- Against this background, electric vehicles (EVs) have emerged as an important element of strategies aimed at reducing emissions from the transportation sector and also aid decarbonising the power sector by providing much needed storage capacity through its batteries.
- EVs have no tailpipe emissions as well as least lifecycle Green House Gas (GHG) emission amongst various power train-driven vehicles even with current mix of energy in the grid which is getting greener by the day.
- Furthermore, EVs can balance the grid by drawing power during peak generation hours, storing it in the battery when they remain parked and releasing it back into the grid when needed. The relevance of EVs is thus beyond doubt.

#### **Need for public charging**

- India because of its favourable demographic dividend (work force between age 15 and 64 estimated to be 1 billion by 2035), increasing urbanisation, rising incomes levels and consumption (estimated to account for 23 per cent middle class consumption by 2030) is poised to take leadership position in the automobile sector, in general, and EVs, in particular.
- According to McKinsey's 2016 EV consumer survey of buyers considering battery-powered EV in China, Germany, and the United States, consumers rank not having enough access to efficient charging stations as the third most serious barrier to EV purchase, behind price and driving range. Another report of McKinsey in 2018 indicated that India would be requiring more public charging than private charging owing its larger population density.
- This also gets corroborated when we study the EV adoption and share of public charging in countries that have been early adopters of EV like Norway, US, The Netherlands, China, and Poland. Countries with higher population density have denser public charging network measured in number of vehicles to charge point (VCP).
- The Netherlands (450 person sq per km) has a VCP of 4, China (150 people) has 6, and the US (36 ) has 79. Consumers' intent get positively biased for purchasing BEV if they see availability of chargers.



- That reinforces the necessity of public charging network which can be accessed by any EV user at any time. Additionally, in our country the problem of space can also be addressed by having more number of public chargers.
- EVs are likely to be adopted first in cities. Unfortunately, most Indian cities are heavily congested. Very few city dwellers have the luxury of owning a garage for their car. As many as 70 per cent of cars in Delhi and Mumbai are estimated to be parked on the roads.
- Public space that is used by multiple vehicles on a shared basis is much more efficient than the same amount of owned space dedicated to a single vehicle. Such spaces need to be identified across the city and authorised by the government for use by charge point operators engaged in the business of EV charging.

### **Private participation vital**

- Private participation will almost certainly be required for rapid progress towards an EV-based future of mobility. A McKinsey report in 2018 had estimated that India will need about five million public charging points, which will entail an investment of almost \$6 billion by 2030.
- Most, if not all, of this investment will have to come from the private sector. Currently, however, there are no clear policies or guidelines on allocation of parking-cum-charging space for private players. Government intervention will help in addressing this issue.
- India took some important steps to expand the charging infrastructure network in the past couple of years. The first and very significant step was to treat EV charging as a “service”. This allows anyone to set up and operate EV charging station without requiring a license. The other positive step was to treat ‘EV Charging Station’ as a separate category under Tariff Order by electricity regulators.
- The guidelines by the Ministry of Power, which allow various charger types to be deployed at public charging stations, settled the issue of charging standards as well.
- The Department of Heavy Industries’ scheme of setting up more than 2,600 public charging stations in various cities and more than 1,700 along highways is a step in the right direction. Such policies and guidelines provide a positive boost for EV adoption in the country to take off.





## Current Affairs Quiz

1. Consider the following statements regarding Wetlands International.

1. Wetlands International is the only global not-for-profit organisation dedicated to the conservation and restoration of wetlands.
2. It has been an observer in the UN Environment Programme.
3. It Promotes the protection of wetlands along the flyway routes of migratory waterbirds.

Which of the above statements is/are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) All of the above

Answer: c)

- It is not an observer of UNEP

2. Global Economic Freedom Index 2020, is released by

- a) World Economic Forum
- b) World Bank
- c) United Nations
- d) Fraser Institute

Answer: d)

3. Consider the following statements regarding Green Climate Fund (GCF).

1. The Green Climate Fund (GCF) is the world's largest dedicated fund helping developing countries reduce their greenhouse gas emissions and enhance their ability to respond to climate change.
2. It was set up by the World Bank.
3. The Fund pays particular attention to the needs of societies that are highly vulnerable to the effects of climate change, in particular Least Developed Countries (LDCs), Small Island Developing States (SIDS), and African States.
4. The entire support through GCF mechanism is through grants and the countries are not required to pay back.

Which of the above statements is/are correct?

- a) 1, 3 and 4 only
- b) 1, 2 and 4 only
- c) 1 and 3 only
- d) All of the above

Answer: c)

- The Green Climate Fund (GCF) is the world's largest dedicated fund helping developing countries reduce their greenhouse gas emissions and enhance their ability to respond to climate change.
- It was set up by the United Nations Framework Convention on Climate Change (UNFCCC) in 2010.
- GCF has a crucial role in serving the Paris Agreement, supporting the goal of keeping average global temperature rise well below 2 degrees C.
- The Fund pays particular attention to the needs of societies that are highly vulnerable to the effects of climate change, in particular Least Developed Countries (LDCs), Small Island Developing States (SIDS), and African States.
- It offers a wide range of financial products including grants, concessional loans, subordinated debt, equity, and guarantees.

4. Which of the following statements regarding Goldilocks zone is/are correct.

1. Goldilocks zone, is the area around a star where it is not too hot and not too cold for liquid water to exist on the surface of surrounding planets.
2. Earth is the only planet in the Sun's Goldilocks zone.
3. If a planet is in the Goldilocks Zone of a star, it necessarily means the planet is going to have life or liquid water.

Select the correct answer code:

- a) 1 only
- b) 1 and 2 only
- c) 2 only
- d) 1 and 3 only

Answer: a)

- The Goldilocks Zone refers to the habitable zone around a star where the temperature is just right – not too hot and not too cold – for liquid water to exist on a planet.
- Just because a planet or moon is in the Goldilocks Zone of a star, doesn't mean it's going to have life or even liquid water.



- After all, Earth isn't the only planet in the Sun's Goldilocks Zone – Venus and Mars are also in this habitable zone, but aren't currently habitable.

5. Which of the following statements regarding zero-coupon bond is/are incorrect.

1. A zero-coupon bond is a debt security that not pay interest but instead trades at a deep discount, rendering a profit at maturity, when the bond is redeemed for its full-face value.
2. These are special types of bonds issued only by the Central government specifically to a particular institution.

Which of the above statements is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Answer: b)

- A zero-coupon bond is a debt security that does not pay interest but instead trades at a deep discount, rendering a profit at maturity, when the bond is redeemed for its full-face value.
- It does not make periodic interest payments or have so-called coupons, hence the term zero coupon bond. When the bond reaches maturity, its investor receives its par (or face) value.
- Zero coupon bonds by private companies are normally issued at discount.

6. Consider the following statements regarding Icebergs.

1. An iceberg is a large piece of freshwater ice that has broken off a glacier or an ice shelf and is floating freely in open water.
2. The ocean currents does not influence the movement of icebergs.
3. Icebergs carry dust which fertilises ocean plankton.

Which of the above statements is/are incorrect?

- a) 1 only
- b) 2 only
- c) 3 only
- d) All of the above are correct

Answer: b)

- An iceberg is a large piece of freshwater ice that has broken off a glacier or an ice shelf and is floating freely in open (salt) water.

- The giant iceberg A68, the biggest block of free-floating ice from Antarctica with an area of about 5,800 sq. km, has been drifting in the Atlantic Ocean since 2017.
- This year, due to an ocean current, the iceberg was propelled into the South Atlantic Ocean and since then it has been drifting towards the remote sub-Antarctic island of South Georgia, prompting fears about the impact the iceberg could have on the island's abundant wildlife.
- Icebergs travel with ocean currents and either get caught up in shallow waters or ground themselves.
- On the other hand, there are some positives of an iceberg being stuck in the open ocean, since icebergs carry dust which fertilises ocean plankton, which draws up carbon dioxide from the atmosphere.

7. Which the following statements regarding PM SVANidhi scheme is/are correct.

1. The PM SVANidhi scheme, is a credit facility that provides street vendors a collateral-free loan of Rs 1,00,000 with low rates of interest for a period of one year.
2. The scheme is part of the AtmaNirbhar Bharat package.
3. Small Industries Development Bank of India (SIDBI) is the implementing agency for the scheme.

Select the correct answer code:

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only
- d) 1, 2 and 3

Answer: b)

- Ministry of Housing & Urban Affairs launched a scheme PM Street Vendor's AtmaNirbhar Nidhi (PM SVANidhi) to empower Street Vendors by not only extending loans to them, but also for their holistic development and economic upliftment.
- The scheme intends to facilitate collateral free working capital loans of up to INR10,000/- of one-year tenure, to approximately 50 lakh street vendors, to help resume their businesses in the urban areas, including surrounding peri-urban/rural areas.
- Small Industries Development Bank of India (SIDBI) is the implementing agency.



8. Proxima Centauri, sometimes seen in news is
- Nearest asteroid to the Earth
  - Nearest star to the Sun
  - Farthest asteroid to the earth
  - Farthest star to the Sun

Answer: b)

10. e-Sampada Web Portal was launched recently by which of the following ministries?

- Ministry of Science and Technology
- Ministry of Commerce and Industry
- Ministry of Housing and Urban Affairs
- Ministry of Food Processing Industries

Answer : c

11. Which of the following statements with respect to Blue Flag Certification Programme is/are incorrect?

- It is a globally recognised voluntary eco-label accorded by the UNESCO based on 33 stringent criteria.
- India is the first country in the world to receive the Blue Flag Certification for 8 beaches in a single attempt.

Select the appropriate answer code:

- 1 only
- 2 only
- Both 1 and 2
- Neither 1 nor 2

Answer : a

- Blue Flag certification is a globally recognised voluntary eco-label awarded to beaches, marinas, and sustainable boating tourism operators based on 33 stringent criteria.
- It is run by the Denmark-based international, nongovernmental, non-profit organization Foundation for Environmental Education (FEE).

12. Which of the following statements with respect to Kisan Fasal Rahat Yojana is/are correct?

- It is a compensation scheme aimed at providing security cover to farmers in case of crop damage due to natural calamity.
- It was launched by the Government of Jharkhand.

Select the correct answer code:

- 1 only
- 2 only
- Both 1 and 2
- Neither 1 nor 2

9. Inclusive Wealth Report (IWR), sometimes seen in news is released by

- IMF
- World Bank
- UNEP
- None of the above

Answer: c)

Answer : c

13. Which of the following statements with respect to A68 Ice berg is/are incorrect?

- The term "iceberg" refers to chunks of ice larger than 15 meters (49 feet) across.
- A68a is the world's largest iceberg in the open ocean with an area of about 12,000 sq.km

Select the correct answer code:

- 1 only
- 2 only
- Both 1 and 2
- Neither 1 nor 2

Answer : c

- The term "iceberg" refers to chunks of ice larger than 5 meters (16 feet) across.
- The giant iceberg A68, the biggest block of free-floating ice from Antarctica with an area of about 5,800 sq. km, has been drifting in the Atlantic Ocean since 2017.
- Recently, US National Ice Center (USNIC) confirmed that two new icebergs calved from A68a and were large enough to be named and tracked. They are called A68E and A68F.

14. Consider the following statements with respect to Udham Singh:

- He was a political activist who was associated with Hindustan Socialist Republican Association (HSRA).
- He assassinated Michael O'Dwyer, a colonial official who was responsible for Jallianwala Bagah Massacre.

Which of the statements given above is/are correct?

- 1 only
- 2 only
- Both 1 and 2
- Neither 1 nor 2

Answer : b

- He was a political activist who got associated with the Ghadar Party.



15. Which of the following statements is/are correct with respect to Global Alliance for Vaccines and Immunisation (GAVI)?

1. It is a global health organisation launched in 2000 at the World Economic Forum Annual Meeting in Davos.
2. The Alliance aims to improve access to new and underused vaccines for numerous vaccine-preventable diseases for children who live in the world's poorest countries.
3. India is the chair of the GAVI Alliance Board for the period 2020 – 2022

Select the correct answer code:

- a. 3 only
- b. 1 and 2 only
- c. 1 and 3 only
- d. 1, 2 and 3

Answer : b

- Dr Harsh Vardhan will be representing India from 1st January 2021 until 31st December 2023.

16. Digital Ocean, a digital platform for Ocean Data Management was launched by which of the following?

- a. Ministry of Earth sciences
- b. Ministry of Science and Technology
- c. Indian Space Research Organization
- d. Ministry of Environment, Forest and Climate Change

Answer : a

17. What is SAHAYAK-NG?

- a. DRDO's subsonic cruise missile
- b. Indigenously designed Air droppable Container
- c. Indigenous Bridging System dedicated to Indian Army
- d. Indigenous cryogenic engine designed by ISRO

Answer : b

18. Which of the following statements is/are correct with respect to Dedicated Freight Corridor?

1. Eastern Dedicated Freight Corridor (EDFC) is funded majorly by Japan International Cooperation Agency.

2. Western Dedicated Freight Corridor (WDFC) is funded majorly by World Bank.

Select the correct answer code:

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

Answer : d

- The World Bank is funding a majority of the EDFC.
- Western Dedicated Freight Corridor (WDFC) is being funded by the Japan International Cooperation Agency.

19. Consider the following statements with respect to Anaemia

1. Blood disorders or cancer, heavy periods are some conditions that may lead to anaemia.
2. The condition is mostly prevalent in the cold desert regions.

Which of the above statements is/are correct?

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

Answer : c

20. Consider the following statements with respect to National Family Health Survey (NFHS)

1. International Institute for Population Sciences in Mumbai is the nodal agency for the NFHS.
2. The survey is funded by the United States Agency for International Development (USAID) with supplementary support from UNICEF.

Which of the statement(s) given above is/are correct?

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

Answer : c

# Special Issue

## December (Week 5)

### Contents

Udham Singh .....	2
India and the world in 2021 .....	3







## **Udham Singh**

(Source: [Indian Express](#) )

**Context:** December 26 was the birth anniversary of freedom fighter Udham Singh, known for avenging the Jallianwala Bagh massacre of 1919.

### **Who was Udham Singh?**

- Singh, born in Sunam in Punjab's Sangrur district in 1899, was a political activist who got associated with the Ghadar Party while in the US. The multi-ethnic party was believed to have communist tendencies and was founded by Sohan Singh Bhakna in 1913.
- Headquartered in California, the party was committed to the ouster of the British from India. In 1934, Singh made his way to London with the purpose of assassinating O'Dwyer, who in 1919 had been the Lieutenant Governor of Punjab and, unsurprisingly, Singh considered O'Dwyer to be responsible for the massacre.
- As per the book "A Patient Assassin" written by Anita Anand, when O'Dwyer ordered Brigadier Reginald Dyer to Amritsar before the massacre, he was worried that there might be a second Indian mutiny, given the Hindu-Muslim unity and the demonstrations and strikes. Instead of Dyer, who instructed his men to open fire at the crowd gathered in Jallianwala Bagh, O'Dwyer is considered to be the actual perpetrator, since Dyer could not have executed it without his permission.
- According to legend, Udham Singh, who would have been about 19 years old at the time, was injured during the massacre and surrounded by the dead until he was able to move till the next morning. Then he supposedly picked up some blood-soaked earth and smeared it across his forehead and vowed to take revenge.

### **The assassination of O'Dwyer**

- On March 13, 1940, Udham Singh shot O'Dwyer at a meeting of the East India Association and the Royal Central Asian Society at Caxton Hill. He was immediately arrested and held in Brixton prison.
- At the prison, Singh staged a 36-day hunger strike and in police statements and at the court referred to himself as Mohamed Singh Azad, to symbolise Hindu-Sikh-Muslim unity in the fight for India's freedom.
- He was sentenced to death and was hanged on July 31, 1940 at Pentonville Prison. In 1974, his remains were sent back to India and he was cremated in his village in Sunam.
- For avenging the Jallianwala Bagh massacre, Singh is seen by many as a hero. Gandhi, though, had famously decried Singh's revenge as an "act of insanity".

### **Demand for a statue in Parliament**

- There have been several demands in the past few years for Udham Singh's statue to be installed in Jallianwala Bagh and the Parliament complex.
- In July 2018, Punjab MP Prem Singh Chandumajra demanded that his portrait be put in Parliament. In 2018, one part of this demand was fulfilled when his statue was installed at Jallianwala Bagh during Baisakhi.
- Udham Singh Nagar district in Uttarakhand is named after the freedom fighter.



## **India and the world in 2021**

(Source: [Indian Express](#) )

**Context:** *As India bids adieu to a disruptive year that challenged its diplomatic and military standing, and enters a new one fraught with challenges, it could borrow from Nehru's words.*

*A reflection of events shows India faced seven hard realities in 2020, and has to deal with six challenges and opportunities in 2021.*

### **Hard realities: 2020**

#### **#1: China aims for top**

- According to the Chinese Zodiac, 2020 was the Year of Rat. According to legend, in a competition held by the Jade Emperor to decide the zodiac animals, the quick-witted Rat asked the Ox to carry him across the river and jumped down before the Ox crossed the finish line, so the Rat became the first of the Zodiac animals.
- In 2020, Beijing tried to behave much like the proverbial Rat. A country which, under President Xi Jinping since 2013, had been consolidating its global influence, saw an opportunity in a world distracted with the pandemic.
- While it was targeted initially for being the source of the coronavirus, Xi's regime turned around and started to flex its muscle in the region. The Indo-Pacific was its playground, where Chinese naval or militia forces rammed a Vietnamese fishing boat, "buzzed" a Philippines naval vessel, and harassed a Malaysian oil drilling operation. It even tried to arm-twist Australia through trade curbs.
- And since May, Chinese troops have altered the status quo along the border with India, claimed the lives of 20 Indian soldiers, and violated every agreement to maintain peace.
- So, while it was infected with the virus first, it claimed to be the first to overcome it, and to recover — as did the proverbial Rat.

#### **#2: 'Trump Americans'**

- Over the last four years, the US vacated the leadership space at the world stage under the Donald Trump Administration.
- It walked out of or weakened almost a dozen multilateral bodies or agreements, from the Iran deal to the WHO. While Beijing moved in to claim space, the Trump Administration did one thing right — it targeted China and the Communist Party of China for disrupting the global order.

#### **#3: Acceptance for Taliban**

- Having invaded Afghanistan 19 years ago trying to root out the Taliban, the US finally made peace with them in February as it looks to exit. For India, this meant a beginning of the process of re-engaging with the Taliban, and New Delhi reached out with External Affairs minister S Jaishankar's attendance through virtual mode and a senior Indian diplomat in Doha.
- Signalling long-term commitment to Afghanistan's future — under Taliban or other political forces — India has committed \$80 million, over and above its \$3 billion commitment in the last two decades. This means New Delhi too is finally looking at the Taliban as a political actor, although it is controlled by the Pakistan military.

#### **#4: Middle East equations**

- The US-brokered rapprochement between Israel and four Arab countries — the UAE, Bahrain, Morocco and Sudan — reflected the changing landscape in the region. With Saudi Arabia and Iran competing for leadership, along with Turkey, in the Islamic world, there have been growing calls for ties with Israel.
- New Delhi has been ahead of the curve, cultivating ties with Israel as well as Saudi-UAE and the Iranians with deft diplomacy. But it has to be careful to not let its gains get impacted by polarising politics at home — be it through the CAA-NRC or religious fault-lines.

#### #5: Russia-China bonding

- Brewing for the last three decades, ties between Russia and China got closer in 2020. India has always felt that it was the West, with its approach towards Russia after the annexation of the Crimea in 2014, that has pushed Moscow towards a tighter embrace of Beijing. This has been possible also due to the US's anti-Chinese rhetoric, collapse of oil prices and Russia's dependence on Chinese consumption.
- India has strong ties with Russia, and Moscow was the venue for all the India-China official and ministerial conversations over the border standoff. But, it has taken note of Moscow's position on the Quad and Indo-Pacific, a near-echo of Beijing's stance.

#### #6: Assertive neighbours

- The year began with Bangladesh asserting itself on CAA-NRC, and then Nepal claiming territory and issuing a new map. It brought home the reality that neighbours are no pushovers. By the end of the year, New Delhi had moved to build bridges with both, wary of an active Beijing. Bangladesh pushed back, and India did not notify the CAA rules. Nepal reached out at the highest level.
- India also watched closely the US and Chinese forays with Maldives and Sri Lanka. India appears to have made peace with the involvement of the US in Maldives, and that of Japan in Sri Lanka and Maldives.

#### # 7: Aspirational India

- Through 2020, India's public articulation of "self-reliance" and refusal to sign trade pacts with RCEP countries was widely perceived as "isolationist" and "inward-looking".
- India did step up to supply medicines and protective kits to more than 150 countries, but did not come across as the global leader the world needed at this time. Lack of resources, a contracting economy and its populist politics made it come across as an aspirational power.

### 2021: Challenges, opportunities

#### #1: Countering China

- India's response to the border standoff has been guided by a thinking that one has to stand up to the bully, but that has come at a cost: soldiers braving the harsh winter and military assets deployed on land, in air and at sea.
- The standoff has reinforced Nehru's belief in 1963 that India needs "external aid in adequate measure". India will need continuing support from the US, Japan, Australia, besides Europe leaders such as France, Germany and the UK.

#### #2: High table at UN

- As India enters the UN Security Council as a non-permanent member for the eighth time, stakes are high in the wake of this leadership contest between China and the rest of the world. India will have to take positions on issues it had carefully avoided — from Tibet to Taiwan, from Iran-Saudi rivalry to the refugee crisis between Bangladesh and Myanmar.
- While cross-border terrorism is one of the top concerns and India will work towards isolating Pakistan further, a limited fixation on the western neighbour would distract from India's aspirations of being a global leader.

#### #3: Friendship with US

- Much is expected from the Biden Administration for building on Indo-US ties, but a lot will depend on how the US views China in the larger scheme of things.
- Moves towards a possible US-China trade deal will be watched by South Block closely. One of the key tests will be the future of Quad, and the Indo-Pacific strategy of the new administration.



- New Delhi will build on its deepening strategic and defence ties with the US, and would want to resolve trade and visa issues.

#### **#4: Wooing Europe**

- As the UK and the EU agree on a deal, India will look ahead to negotiating a deal with the UK and a long-pending one with the EU. For a start, it has invited British PM Boris Johnson as Chief Guest for Republic Day.
- In May, there is a possibility of an India-EU summit. Already, France and Germany have come up with their Indo-Pacific strategy, and a potential European strategy is a possibility, but a EU-China trade deal would be dissected by Indian negotiators.

#### **#5: Engaging with neighbours**

- China's growing economic footprint in India's neighbourhood is a concern. While it is being played out in Nepal, India will also watch China's moves in the rest of the subcontinent. Its moves in Iran, too, were closely watched, and as Presidential elections take place in Iran this year, stakes for engagement will be high.
- One of the important aspects of 2021 is that, while there is a churning in Nepal, almost every South Asian country has had elections in the last couple of years. That means the governments in these countries are stable.
- As the world emerges from the pandemic, New Delhi has a lot to gain from what could be "vaccine diplomacy" with neighbours in 2021 — supplying vaccines either free or at affordable costs.

#### **#6: Global, not just aspirational**

- For long, India has played the role of an emerging power — with ambitions to play the role of a global power. In 2021, New Delhi will host the BRICS summit, and start its preparations for the G-20 summit in 2023.
- And the India-Africa Forum summit, which could not be held in 2020, could be held in 2021 or later. New Delhi has opportunities to articulate and be vocal on issues that matter to the world, and be proactive to further its interests.
- As India looks ahead in 2021, External Affairs Minister S Jaishankar may have taken a leaf out of Nehru's playbook. In his book *The India Way: Strategies for an Uncertain World*, he sums up India's foreign policy goals in this age of disruption, "Many friends, few foes, great goodwill, more influence. That must be achieved through the India Way."
- In the Chinese Zodiac, 2021 is the Year of the Ox — considered productive for those who are "hardworking and methodical" and "fully feel the weight of their responsibilities". It is "a year when it is necessary to redouble the efforts to accomplish anything at all".
- That could well be the Indian strategy in the new year, as it navigates a post-Covid-19 future.