

# IAS GOOGLE

OCTOBER 2020

REDEFINING YOUR GOOGLE



A Magazine by

**RAJA SIR'S**  
Cracking IAS Academy  
Since 2005 - Feel The Pulse of UPSC

# TEST BATCH PRELIMS 2021

FROM OCTOBER 18

**RAJA SIR'S**  
Cracking IAS Academy  
*Since 2005 - Feel The Pulse of UPSC*

TOO MANY  
TESTS SPOIL  
YOUR  
PERFECTION.

9884 554 654

70+ QUESTIONS  
DELIVERED SINCE 2007

JUST 25 TESTS  
QUALITY QUESTIONS  
PRODUCTIVE  
PERFORMANCE

## CONTENTS

### Cover Story

#### The Arithmetics of Nagorno-Karabakh conflict – Where does India stand?.

## ECONOMY

- 1.1 Pandemic shocker! India's GDP shrinks by 23.9% in first quarter of FY2020-21
- 1.2 Centre cracks down on foreign funding of Christian evangelical organisations, suspends FCRA licences of four
- 1.3 After years, Govt plans new development bank for big infra funding
- 1.4 Finance Minister declares EASE 2.0 Index Results – Bank of Baroda Tops
- 1.5 Centre writes to states suggesting options of borrowing money to make up for GST shortfall
- 1.6 India's factory output contraction eases to 10.4% in July: IIP data
- 1.7 Rajiv Mehrishi Panel to Assess Impact of Waiving Loan Interest
- 1.8 Banking Regulation Act, 1949
- 1.9 Public Procurement (Amendment) Order, 2017
- 1.10 Infrastructure Investment Trusts – InvITs
- 1.11 RBI publishes "Technology Vision for Cyber Security" for UCBs
- 1.12 Minimum support price for farmers: How is it fixed, and how binding is it?
- 1.13 What are ESG funds, big abroad, and now finding interest in India too?
- 1.14 Retrospective taxation: the Vodafone case, and the Hague court ruling

## INDIA AND WORLD

- 2.1 The Pinaka missile system that will be deployed at India's borders with Pakistan, China
- 2.2 Exercise INDRA
- 2.3 PM Modi at India-US Summit: Current situation demands fresh mindset where approach to development is human-centric

- 2.4 'Committed to inclusive global security': Rajnath Singh reaffirms India's stance at SCO meet
- 2.5 QUAD Should Ensure Freedom of Navigation in Indian Ocean: Gen. Rawat
- 2.6 India test-fires hypersonic technology demonstrator vehicle; joins select group
- 2.7 Eye on China: India, Japan sign mutual military logistics pact
- 2.8 The Singapore Mediation Convention: What Does it Mean?
- 2.9 Rise of the Minilaterals: Examining the India-France-Australia Trilateral
- 2.10 Basic Exchange and Cooperation Agreement
- 2.11 Could Pakistan Move to Make Gilgit-Baltistan a New Province Soon?
- 2.12 G4 Joint Statement
- 2.13 India hits out at Pakistan for raising Kashmir issue at CICA meet
- 2.14 India, Denmark elevate ties to 'green strategic partnership'
- 2.15 Bilateral Maritime Exercise Between Japan and India (JIMEX 20)

## INTERNATIONAL

- 3.1 The new changes in Qatar's labour laws
- 3.2 Global Innovation Index -WIPO
- 3.3 Yanomami Tribe – Why is an Amazon tribe talking to Indians about Blood Gold?
- 3.4 Hurricane Nana makes landfall in Belize, brings floods to Honduras
- 3.5 Why International Literacy Day is observed on September 8?
- 3.6 Typhoon Haishen approaches Japan after Maysak leaves several injured
- 3.7 The Insurrection Act of 1807 – Roger Stone to Donald Trump: bring in martial law if you lose election
- 3.8 What is serial interval, and how can it be managed to control Covid-19?
- 3.9 Long live Barbados as a republic, soon to be free of tarnished 'global Britain'
- 3.10 Nagorno-Karabakh: What's behind the fighting between Armenia and Azerbaijan?

## NATIONAL

- 4.1 India's target to gasify 100 MT coal to entail investment of over Rs 4 lakh cr: Joshi
- 4.2 No takers for famed turmeric in Odisha's Kandhamal
- 4.3 Modi lauds toy hub Channapatna, but more than China this town is upset with rival at



home

4.4 CERC Approves Introduction of Green Term-Ahead Market Contracts on IEX

4.5 What is the Special Frontier Force also known as Establishment 22 and Vikas Battalion?

4.6 Inscription of Renati Chola Era Unearthed in Andhra Pradesh

4.7 PM Modi, Amit Shah pay tribute to social reformer Sree Narayana Guru on birth anniversary

4.8 Why has Uddhav Thackeray decided to create a reserved forest inside Mumbai?

4.9 Dr. Sarvepalli Radhakrishnan – History Of Teachers' Day

4.10 Kesavananda Bharati, whose petition led to landmark verdict on Constitution, dies at 79

4.11 What is Assam Rifles and why do both MoD and Home ministry control it?

4.12 Moplah Rebellion not an agrarian uprising: Evidences come out

4.13 RS considering extension of Tenure of Standing Committees

4.14 19th meeting of Supreme Court-mandated Committee on Content Regulation in Government Advertising held

4.15 Govind Swarup, who pioneered radio astronomy in India, dies at 91

4.16 Protecting mother tongue, culture and nature will be a real tribute to Telugu litterateur, Shri Viswanatha Satyanaraya: Vice President

4.17 Shipping Minister launches 'SAROD-Ports' for disputes of maritime sector

4.18 Living legend of statistics Prof C R Rao felicitated on his 100th birthday

4.19 What constitutes a breach of legislature's privilege?

4.20 Housing Ministry launches Climate Smart Cities Assessment Framework 2.0

4.21 Status of Mahanadi Tribunal

4.22 Why Sir Mokshagundam Visvesvaraya's birthday is celebrated as Engineer's Day: The genius that built India?

4.23 Don't give nod to Mekedatu Reservoir: DMK chief Stalin writes to PM Modi

4.24 Why Bihar's Kosi Rail Mahasetu is historic in many ways?

4.25 Institute of Teaching and Research in Ayurveda Bill, 2020

4.26 Draft Electricity (Rights of Consumers) Rules, 2020

4.27 Aircraft (Amendment) Bill, 2020

- 4.28 Uttar Pradesh's New Special Security Force
- 4.29 Utkrisht Sansthan Vishwakarma Award
- 4.30 Kapila Vatsyayan, Grand matriarch of cultural research dies
- 4.31 Dhruvad Sansthan divided over the composition ICC
- 4.32 Chendamangalam Saree: Kerala
- 4.33 Kakatiya Temple – An ancient temple's transition over years of neglect
- 4.34 Ramdhari Singh Dinkar
- 4.35 National Service Scheme Awards
- 4.36 Centralised Farm Machinery Performance Testing Portal
- 4.37 National Biopharma Mission
- 4.38 Jnanpith Award
- 4.39 Centre unveils the first look of the Regional Rapid Transit System (RRTS) train
- 4.40 What changes with the new medical education regulator in place?
- 4.41 Offset Clause
- 4.42 Rajnath Singh launches Defence India Startup Challenge-4
- 4.43 Defence Acquisition Procedure-2020
- 4.44 First 'Meenakshi' reference on Paavai Vilakku
- 4.45 **Can Punjab declare entire state 'Principal Market Yard'? What are the implications?**
- 4.46 **NPPA caps price of Liquid Medical Oxygen and Medical Oxygen cylinders as COVID-19 cases rise**

## POLITICAL ISSUES, HUMAN RIGHTS AND GOVERNANCE

- 5.1 RO-RO service Bengaluru to Solapur flagged off by Yediyurappa and Angadi
- 5.2 Cabinet approves Mission Karmayogi to re-skill civil servants for New India
- 5.3 Adjusted Gross Revenue [AGR] Judgement Day HIGHLIGHTS: SC allows 10 years for payment of AGR dues
- 5.4 Prashant Bhushan's conviction seems at odds with international free speech law: International Commission of Jurists

- 5.5 'Direct Democracy in Operation': Experts Decry Suspension of Question Hour
- 5.6 Why the Centre's Bill on Official Languages in J&K Is Facing Opposition?
- 5.7 NCRB data on suicides and accidental deaths – Maximum Deaths By Suicide Among Farmers, Daily Wagers, Second Largest Among Housewives
- 5.8 Govt Launches Aatmanirbhar Bharat ARISE Challenge For MSMEs & Startups
- 5.9 India Post launches Five Star Villages Scheme to ensure rural coverage of postal schemes
- 5.10 Police vs judicial custody in the context of Rhea Chakraborty case
- 5.11 Dy Speaker poll up to Lok Sabha, govt; no curb on discussion: OM Birla
- 5.12 Overseas Friends of BJP registers as foreign agent in US – what this law means & how it works?
- 5.13 Farm Bills
- 5.14 Unlawful Activities Prevention Act, 1967
- 5.15 Textiles Ministry partners with states for skilling 4 lakh under 'Samarth' scheme
- 5.16 No Confidence Resolution against Rajya Sabha Deputy Chairman
- 5.17 Tele-Law Service

## SCIENCE AND TECHNOLOGY

- 6.1 CSIR-CMERI develops affordable solar-powered battery based sprayers to tackle water crisis in agriculture
- 6.2 Gravitational wave from merger of two black holes over 7 billion years ago detected
- 6.3 Images sent by Chandrayaan-1 suggest probable rusting of Moon's poles
- 6.4 India test-fires hypersonic technology demonstrator vehicle; joins select group
- 6.5 Is a Bradykinin Storm Brewing in COVID-19?
- 6.6 Phosphine – Life on Venus? Astronomers See a Signal in Its Clouds
- 6.7 Solar Cycle 25: What is it, How will it affect our lives?
- 6.8 India based Neutrino Observatory
- 6.9 ABHYAS
- 6.10 Prototype Fast-Breeder Reactor
- 6.11 Brucella abortus S19Δ per vaccine
- 6.12 Data Sonification

6.13 Indian Government allows use of H-CNG for transportation

6.14 Workshop to celebrate 2m Himalayan Chandra Telescopes 20th birthday to highlight science it produced

## SOCIAL ISSUES AND DEVELOPMENT

7.1 Global Multidimensional Poverty Index: NITI to leverage monitoring mechanism

7.2 What is the 'green-blue' policy proposed by Delhi Master Plan 2041?

7.3 AP tops State ranking on Business Reform Action Plan 2019

7.4 40% of children are not fully vaccinated, says NSO report

7.5 NSO report shows stark digital divide affects education

7.6 PM Modi Launches Rs 20,050 Crore Scheme For Fisheries Sector, App For Farmers

7.7 NGT directs CPCB to lay down guidelines for disposal of cigarette, bidi butts in three months

7.8 Eggs or not: Why is Madhya Pradesh debating anganwadi meals again?

7.9 Pradhan Mantri Jan Vikas Karyakram

7.10 Centre opposes plea seeking recognition of same-sex marriages

7.11 India ranks 116 in World Bank's human capital index

7.12 COVID-19 infection spreads to vulnerable tribal community in Odisha

7.13 Role of women in Indian Navy

7.14 YuWaah

7.15 Shuchi Scheme

7.16 Time-Use Survey – 2nd edition

7.17 Third Rashtriya Poshan Maah being celebrated in the month of September 2020

## ENVIRONMENT

8.1 How PM Modi's Project Dolphin can conserve the friendly water mammals?

8.2 Importance of 'Dead' coral reefs and Coral Bleaching

8.3 Stubble burning: Punjab to manufacture Bio-CNG from paddy straw

8.4 World Ozone Day: Layer Concentration Over Guwahati Low, Reveals Research

8.5 World Ozone Day 2020 – September 16

8.6 Blue-Flag Certification



- 8.7 Increased 145% Increase Reported in Arsenic-affected Habitations in Last Five Years
- 8.8 Death of two sloth bears in Odisha's Nandankanan zoo spreads panic
- 8.9 Komodo dragons could become extinct soon due to climate change
- 8.10 Increase in Frequency of Medicanes
- 8.11 Another Chinese virus? ICMR warns India of 'Cat Que Virus' which could spread disease in the country

**RAJA SIR'S**  
Cracking IAS Academy  
Since 2005 - Feel The Pulse of UPSC

**IAS 2021**  
**NEW BATCH**  
**FROM OCT 30**

9884 554 654  
470 + Officers | 16 years of Ethical IAS Coaching | Only 40 Students per batch

Cover Story

The Arithmetics of Nagorno-Karabakh conflict –  
 Where does India stand?.

For approximately four decades, territorial disputes and ethnic conflict between Armenia and Azerbaijan in Central Asia have impacted the Nagorno-Karabakh region in the South Caucasus. These tensions escalated at the border between the two countries and resulted in the death of at least four Azerbaijani soldiers. Following the killings, Armenia and Azerbaijan were



**Nagorno-Karabakh region**

engaged in a verbal spat, accusing the other for having instigated the most recent conflict.

On July 6, Azerbaijan’s President Ilham Aliyev had said peace talks with Armenia had stalled over the ongoing conflict between the two nations in the Nagorno-Karabakh region.

Conflict in the Nagorno-Karabakh region began following the breakdown of the Soviet Union in the late 1980s and lasted till approximately 1994, with both Armenia and Azerbaijan claiming this strategic territory. At that time, the enclave of Nagorno-Karabakh had held a

referendum boycotted by Azerbaijan where the people chose independence over joining either of the two countries.

The **conflict between ethnic Armenians and ethnic Azerbaijanis in Nagorno-Karabakh** reached a particular low with Armenia and Azerbaijan accusing each other of having instigated ethnic cleansing. The situation worsened when the **Nagorno-Karabakh Autonomous Oblast**, an administrative unit, decided to vote to join Armenia given its large Armenian population. By 1992, the violence had increased and thousands of civilians had been displaced, compelling international bodies to take notice.

In May 1994, Russia mediated a ceasefire between **Armenia and Azerbaijan**, but the conflict has continued for three decades, with instances of ceasefire violations and violence instigated from both sides.

Experts say the **border between Armenia and Azerbaijan** has been **tense since 2018**, particularly **after Azerbaijan moved troops into the area**, close to its border with Georgia. In a break from the violence that the disputed region has witnessed for over 30 years, **this area has been relatively calm for the past two years**.

In April 2016, **the region was particularly tense because of violent fighting** between the two countries in what came to be known as the **Four-Day War**. Since then, while there have been sporadic instances of flare-ups in the region, it came nowhere close to the situation in 2016.

It was not immediately clear what started this round of fighting over the weekend. Azerbaijan's Ministry of Defence said **three Azerbaijani soldiers were killed** in the artillery fire near the **Tavush region**, in northeast Armenia. Five other soldiers were injured. Reports suggested that two Armenian soldiers had also been injured during this incident.

According to a BBC report, Azerbaijan had said **it had destroyed an Armenian fortification and artillery** and had inflicted casualties on "hundreds" of Armenian soldiers, a claim that Armenia had denied. The Azerbaijani president doubled down on his government's claim that Armenia had started the fighting, saying: "**Armenia's political and military leadership will bear** the entire responsibility for the provocation."

Armenia in turn said Azerbaijan had triggered the conflict, with Armenian Prime Minister Nikol Pashinyan announcing during a cabinet meeting that Azerbaijani "**provocations will not be unanswered**". According to a report by Al Jazeera English, Armenia's Defence Minister David Tonoyan implied that in this latest round of conflicts, Azerbaijan may have captured "**advantageous positions**".

The defence minister had added that Armenian forces “**do not shell civilian targets in Azerbaijan** and only target the engineering infrastructure and technical facilities of the **Azerbaijani armed forces**”.

Observers believe an **all-out war between Armenia and Azerbaijan** is unlikely due to a number of factors. In this disputed region, **there are hundreds of civilian settlements**, residents of which would be directly impacted and potentially displaced if any large-scale war were to break out between the two countries.

Although **Turkey released a statement following the developments this past weekend** that it would back Azerbaijan “**in its struggle to protect its territorial integrity**”, observers believe any military escalation would draw regional powers like Turkey and Russia more deeply into the conflict, something that wouldn't be preferred by either Ankara or Moscow.

There is also the question of the **network of oil and gas pipelines** and **strategic roads** to which access might be blocked or interrupted for the region at large should any large-scale fighting ensue. For **both Armenia and Azerbaijan**, these would create immediate challenges, leading observers to believe that a war would not be in the interest of both countries.

### **India's Asymmetry in Relations**

India does not have a publically articulated policy for South Caucasus, unlike 'Neighbourhood First', 'Act East' or 'Central Asia Connect' policies and the region has remained only on the periphery of its radar.

Further, there is a visible asymmetry in India's relations with Armenia, Azerbaijan and Georgia. Armenia is the only country in the region with which it has a Friendship and Cooperation Treaty (signed in 1995), which incidentally would prohibit India from providing military or any other assistance to Azerbaijan in case Azerbaijan's offensive in Nagorno-Karabakh spills over to the territory of Armenia.

In the case of Azerbaijan, ONGC/OVL has made investments in an oilfield project in Azerbaijan and GAIL is exploring the possibilities of cooperation in LNG.

- Azerbaijan also falls on the International North South Transport Corridor (INSTC) route, connecting India with Russia through Central Asia.
- It can also connect India with Turkey and beyond through the Baku-Tbilisi-Kars passenger and freight rail link.

Armenia extends its unequivocal support to India on Kashmir issue whereas Azerbaijan not only

oppose but also promotes Pakistan's narrative on this issue.

India does not have a publicly articulated policy for the South Caucasus – unlike “Neighbourhood First”, “Act East” or “Central Asia Connect”.

- The region has remained on the periphery of its foreign policy radar.

#### **Turkey versus Russia**

NATO member-state Turkey was the first nation to recognise Azerbaijan's independence in 1991 and has long supported it in the Nagorno-Karabakh conflict. However, current Turkish President Erdogan has been accused of ramping up his country's intervention in support of its “fellow Turkic-speaking Azerbaijan”. Armenian officials recently alleged that Turkey has been sending fighters from Syria to the region. Turkey, meanwhile, lacks any official relations with Armenia and had shut its border with the country in the run-up to the 1994 separatist war.

Russia has enjoyed relations with both countries and has sold arms to both sides. However, Moscow has a security treaty with Armenia and has a military base in the country. Also, after the recent clashes in Nagorno-Karabakh broke out, the Kremlin has made conversations between President Putin and Armenian Prime Minister Nikol Pashinyan public, but none with Erdogan or Azerbaijan's President Ilham Aliyev.

Meanwhile, India has expressed its worries about the situation in Nagorno-Karabakh and asked all sides to cease hostilities. Ministry of External Affairs said, “India is concerned over this situation which threatens regional peace and security. We reiterate the need for the sides to cease hostilities immediately, keep restraint and take all possible steps to maintain peace at the border. India believes that any lasting resolution of the conflict can only be achieved peacefully through diplomatic negotiations.”

#### **Balancing Between The Two Extremes**

The conflict is essentially a conflict between two international principles viz. the principle of territorial integrity advocated by Azerbaijan and the principle of the right to self-determination invoked by Nagorno-Karabakh and supported by Armenia.

India has every reason not to support Azerbaijan's territorial integrity as Azerbaijan has shown scant regard for India's territorial integrity violated by Pakistan in Jammu and Kashmir.

At the same time it is difficult for India to publicly endorse Nagorno-Karabakh is right for self-determination in view of the possible repercussions it can have repercussions for India as its adversaries like Pakistan may misuse it not only by making erroneous connections with Kashmir



but also re-ignite secessionist movement in certain parts of India.

Armenia-Azerbaijan conflicts reflect the failure of the Minsk Group of the Organization for Security and Co-operation in Europe (OSCE). In the absence of a peacekeeping force and the political will for peace, low-level frictions have persisted over the years.

Under these circumstances, India has done the right thing to adopt a balanced and neutral stance and pitching for a political solution as outlined in the Madrid Principles.

## ECONOMY

### 1.1 Pandemic shocker! India's GDP shrinks by 23.9% in first quarter of FY2020-21

The National Statistical Office (NSO), Ministry of Statistics and Programme Implementation has released the **estimates of Gross Domestic Product (GDP) for the first quarter (April-June) Q1 of 2020-21**, both at Constant (2011-12) and Current Prices.

#### Observations

- **GDP at Constant (2011-12) Prices** in Q1 of 2020-21 is estimated at Rs 26.90 lakh crore, as against Rs 35.35 lakh crore in Q1 of 2019-20, showing a **contraction of 23.9 percent as compared to 5.2 percent growth in Q1 2019-20**.
- **GDP at Current Prices** in the year Q1 2020-21 is estimated at ₹ 38.08 lakh crore, as against ₹ 49.18 lakh crore in Q1 2019-20, showing a **contraction of 22.6 percent as compared to 8.1 percent growth in Q1 2019-20**.

#### Idea of National Income

- **GDP** – Gross Domestic Product (GDP) is the **value of the all final goods and services** produced within the boundary of a nation during one year period. It is also calculated by adding national private consumption, gross investment, government spending and trade balance (exports-minus- imports).
- **NDP** – Net Domestic Product (NDP) is the GDP calculated after adjusting the weight of the value of 'depreciation'. This is, basically, *net form* of the GDP, i.e., GDP minus the total value of the 'wear and tear' (depreciation).
- **GNP** – Gross National Product (GNP) is the GDP of a country added with its 'income from abroad'. Here, the trans-boundary economic activities of an economy is also taken into account.
- **NNP** – Net National Product (NNP) of an economy is the GNP after deducting the loss due to 'depreciation'.

## Cost and Price of National Income

### Cost

- Income of an economy, i.e., value of its total produced goods and services may be calculated at either the '**factor cost**' or the '**market cost**'.
- '**Factor cost**' is the '**input cost**' the producer has to incur in the process of producing something (such as cost of capital, i.e., interest on loans, raw materials, labour, rent, power, etc.). This is also termed as 'factory price' or 'production cost/price'. This is nothing but 'price' of the commodity from the producer's side.
- The '**market cost**' is derived after adding the indirect taxes and deducting subsidies from the factor cost of the product, it means the cost at which the goods reach the market, i.e., showrooms. This is also known as the 'ex-factory price'. The weight of the state taxes are then added to it, to finally derive the 'market cost'. In general, they are also called 'factor price' and 'market price'.
- Earlier India used to calculate its national income at factor cost but **since 2015, the CSO has switched over to calculating it at market price.**

### Price

- Income can be derived at two prices, **constant and current.**
- The difference in the constant and current prices is only that of the **impact of inflation.**
- Inflation is considered stand still at a year of the past (this year of the past is also known as the 'base year') in the case of the constant price, while in the current price, present day inflation is added.
- Current price is, basically, the maximum retail price (MRP) which we see printed on the goods selling in the market.

## 1.2 Centre cracks down on foreign funding of Christian evangelical organisations, suspends FCRA licences of four

Recently, the Union **Ministry of Home Affairs** has suspended licenses under **the Foreign Contribution Regulation Act (FCRA), 2010** of the six **Non Governmental Organisations (NGOs)**.

- Suspension of FCRA license means that the **NGO can no longer receive fresh foreign funds** from donors pending a probe by the Home Ministry.

- Of the six NGOs, four are Christian associations, **Ecclesiastical North Western Gossner Evangelical** in Jharkhand, the **Evangelical Churches Association (ECA)** in Manipur, **Northern Evangelical Lutheran Church** in Jharkhand and **New Life Fellowship Association (NLFA)** in Mumbai.
- The two other organisations whose licenses were suspended are the **Rajnandgaon Leprosy Hospital and Clinics, Chhattisgarh** and the **Don Bosco Tribal Development Society, Tamil Nadu**.
- The **reasons for the suspension have not been specified** by the government.
- Earlier, in 2017, USA- based Christian donor, **Compassion International**, was forced to stop operations in India after the Home Ministry found that it funded NGOs that encouraged religious conversions.

#### **Foreign Contribution (Regulation) Act (FCRA), 2010**

- Foreign funding of voluntary organizations in India is regulated under FCRA act which is implemented by the **Ministry of Home Affairs**.
- The Act ensures that the **recipients of foreign contributions adhere** to the stated purpose for which such contribution has been obtained.
- Under the Act, organisations are required to register themselves **every five years**.

#### **Non Governmental Organisations**

- Worldwide, the term 'NGO' is used to describe a body that **is neither part of a government nor a conventional for-profit business organisation**.
- NGOs are groups of ordinary citizens that are involved in a wide range of activities that may have **charitable, social, political, religious or other interests**.
- NGOs are helpful in implementing **government schemes at the grassroots**.
- In India, NGOs **can be registered** under a plethora of Acts such as the **Indian Societies Registration Act, 1860, Religious Endowments Act, 1863, Indian Trusts Act, etc**.
- India has possibly **the largest number of active NGOs** in the world, a study commissioned by the government put the number of NGOs in 2009 at 33 lakh.
  - That was one **NGO for less than 400 Indians**, and many times the number of primary schools and primary health centres.
- Ministries such as Health and Family Welfare, Human Resource Department, etc provide funding to a handful of NGOs.

- NGOs also receive funds from abroad, if they are registered with the Home Ministry under the **Foreign Contribution (Regulation) Act (FCRA)**.
  - Without this, no NGO can receive cash or anything of value **higher than Rs 25,000**.

### Controversies Related to FCRA

- The FCRA regulates the receipt of funding from sources outside of India to NGOs working in India. **It prohibits the receipt of foreign contribution “for any activities detrimental to the national interest”**.
- The Act also held that the government can refuse permission if it believes that the donation to the NGO will adversely affect **“public interest”** or the **“economic interest of the state”**.
  - However, there is **no clear guidance** on what constitutes “public interest”.
- The FCRA restrictions have serious consequences on both the **rights to free speech** and **freedom of association** under Articles **19(1)(a)** and **19(1)(c)** of the Constitution.
- The right to free speech is affected in **two ways**:
  - By allowing only some political groups to receive foreign donations and disallowing some others, can induce biases in favour of the government.
    - NGOs need to tread carefully when they criticise the regime, knowing that too much criticism could cost their survival.
    - FCRA norms can reduce critical voices by declaring them to be against the public interest. This chilling effect on free speech can lead to self-censorship.
  - Similar to this on unclear guidelines on public interest, in **Shreya Singhal v. Union of India (2015)**, the Supreme Court (SC) struck down Section 66A of the Information Technology Act. The SC held that the Act could be used in a manner that has a chilling effect on free speech.
- Besides, given that the right to freedom of association is part of the **Universal Declaration of Human Rights** (Article 20), a violation of this right also constitutes a human rights violation.
- In April 2016, the **UN Special Rapporteur on the Rights to Freedom of Peaceful Assembly and of Association** undertook a legal analysis of the FCRA, 2010.

- It stated that restrictions in the name of “public interest” and “economic interest” as invoked under the FCRA failed the test of “legitimate restrictions”.
- The terms were too vague and gave the state excessive discretionary powers to apply the provision in an arbitrary manner.
- In this context, though it is **necessary to regulate corrupt NGOs**, there needs to be **clarity on terms like public interest**.

### 1.3 After years, Govt plans new development bank for big infra funding

The government is planning to set up a new **Development Finance Institution (DFI)** essentially to fill the gap in long-term finance for infrastructure sectors.

- **Proposed DFI:**
  - It will be used to finance both social and economic infrastructure projects identified under the **National Infrastructure Pipeline (NIP)**.
    - In April 2020, the Government released the **final report on NIP for 2019-25**, which had drawn up projects totalling investments of Rs. 111 lakh crore across roads, railways, energy and urban sectors.
    - The task force on NIP was headed by **Atanu Chakraborty** (economic affairs secretary).
    - NIP will enable a forward outlook on infrastructure projects which will create jobs, improve ease of living, and provide equitable access to infrastructure for all, thereby making growth more inclusive.
- **Role of Government in DFI:**
  - The DFI can have two types of character:
    - Either it should be **promoted by the government**.
    - Or it should be given a **private sector character** with the government restricting its holding to 49%.
  - There are clear **advantages if the DFI is fully held by the government**, the most important being **fund-raising**.
    - The securities from the DFI could be made **Statutory Liquidity Ratio (SLR)** eligible. This will encourage banks to subscribe to the securities issued by DFI and fulfil their SLR obligations.



- The **Reserve Bank of India (RBI)** requires banks to set aside 18% of their net demand and time liabilities towards SLR.
- However, the issue involved in this is that the senior management of the DFI may be **hounded by investigative agencies** such as the Central Bureau of Investigation (CBI), and be **subject to the scrutiny** of the Comptroller and Auditor General (CAG) and the Central Vigilance Commission (CVC).
- A **DFI with a private sector character** will require the government to believe and trust the private sector.
  - This will require the government to maintain some distance from the private sector DFI institution and let it implement and execute projects aimed at improving the quality of life of all citizens.
  - The institution can also work without fear of the CBI, CVC or the CAG.
- **Issues in Infrastructure Funding:**
  - **Funding Gap:** Banks are unable to provide long-term finance to infrastructure projects.
    - Infrastructure financing is currently dominated by bank lending, with **outstanding credit to the infrastructure sector touching 15% until FY16.**
    - However, due to rising **non-performing assets** in the banking sector driven by declining asset quality in the infrastructure sector, the share **has declined to 12% in FY19.**
  - **Asset/Liability Management Mismatch:** In India, most lenders borrow funds with maturity under 5 years. The reason is primarily the absence of a deep bond market to borrow from. As a result, they lend to a project with a maturity of, say 20 years, with funds of 2-year maturity. This leads to a mismatch in the maturities of assets and liabilities for the lender.
    - Asset/liability management is one of the **main tools for evaluating financial risk** and for periodic testing and preparation of financial policies.

## Development Finance Institutions

- **DFIs provide long-term credit** for capital-intensive investments spread over a long period and yielding low rates of return, such as urban infrastructure, mining and heavy industry, and irrigation systems.
- DFIs often **lend at low and stable rates of interest** to promote long-term investments with considerable social benefits.
- DFIs are also known as **Development banks**. They are **different from commercial banks** which mobilise short- to medium-term deposits and lend for similar maturities to avoid a maturity mismatch-a potential cause for a bank's liquidity and solvency.

## DFIs in India

- Soon after independence, the institutional framework for development banking began- IFCI (1948), IDBI (1964), IIBI (1972), **NABARD** and EXIM Bank (1982), SIDBI (1990), etc.
- However, in the past few years, DFIs such as ICICI, IDBI and IDFC have transformed into universal banks as they **did not have the advantage of low-cost funding for long term projects**.
- Currently, **DFIs are sector-specific**, such as Rural Electrification Corp. Ltd (REC) for the power sector, National Bank for Agriculture and Rural Development (NABARD) for the agriculture sector, and Indian Railway Finance Corp. to fund rail infrastructure among others.

Road Ahead ————— Since 2005 ———— *Feel the Pulse of UPSC...*

- If India has to grow 8-10% continuously, credit growth for infrastructure must be 12-14%. Since, infrastructure projects require long-term funds, and given the scale of investment required, a large DFI is a good idea.
- Compared with banks, a DFI provides long-term finance for social and economic infrastructure. However, DFIs involve higher risk than what the ordinary financial system may be willing to bear.

### 1.4 Finance Minister declares EASE 2.0 Index Results – Bank of Baroda Tops

Union Minister of Finance & Corporate Affairs Smt. Nirmala Sitharaman has inaugurated **Doorstep Banking Services by PSBs** and participated in the awards ceremony to felicitate best performing banks on **EASE Banking Reforms Index**.

### **'Doorstep Banking Services' by PSBs**

- As part of the EASE Reforms, Doorstep Banking Services is envisaged to **provide convenience of banking services to the customers at their door step** through the universal touch points of Call Centre, Web Portal or Mobile App. Customers can also track their service request through these channels.
- The services shall be rendered by the Doorstep Banking Agents deployed by the selected Service Providers at 100 centres across the country.
- At present only non-financial services are available to customers. Financial services shall be made available from October 2020.
- The services can be availed by customers of Public Sector Banks at nominal charges. The services shall benefit all customers, particularly Senior Citizens and Divyangs who would find it at ease to avail these services.

### **EASE and EASE 2.0 Agenda**

- EASE Agenda is aimed at **institutionalising clean and smart banking**. It was launched in January 2018, and the subsequent edition of the program — EASE 2.0 built on the foundation laid in EASE 1.0 and furthered the progress on reforms.
- Reform Action Points in EASE 2.0 aimed at making the reforms journey irreversible, strengthening processes and systems, and driving outcomes.
- PSBs have shown a healthy trajectory in their performance over four quarters since the launch of EASE 2.0 Reforms Agenda. The overall score of PSBs increased by 37% between March-2019 and March-2020, with the average EASE index score improving from 49.2 to 67.4 out of 100.
- Significant progress is seen across six themes of the Reforms Agenda, with the highest improvement seen in the themes of **'Responsible Banking'**, **'Governance and HR'**, **'PSBs as Udyamimitra for MSMEs'**, and **'Credit off-take'**.
- EASE Reforms Index has **equipped Boards and leadership for effective governance, instituted risk appetite frameworks, created technology** – and data-driven risk assessment and prudential underwriting and pricing systems, introduced Early Warning Signals (EWS) systems and specialised monitoring for time-bound action in respect of stress, put in place focussed recovery arrangements, and established outcome-centric HR systems.

## 1.5 Centre writes to states suggesting options of borrowing money to make up for GST shortfall

The Covid pandemic has played havoc with the economy. Revenue streams of the government, the private sector and individuals have been severely impacted while the expenditure, particularly of the government, is shooting up with a rise in commitments.

### The arguments

- One significant area of loss of revenue to both the Centre and the states is GST. But *“while the states have the comfort of assured 14 per cent growth through the compensation mechanism, the Centre has no such guarantee,”* says Sushil Kumar Modi, the deputy chief minister of Bihar.
- Former Finance Minister, the late Arun Jaitley had said that *“in case the amount in the GST Compensation Fund fell short of the compensation payable, the GST Council shall decide the mode of raising additional resources including borrowing from the market which could be repaid by collection of cess in the sixth year or further subsequent years”*.
- **The Council had agreed to this suggestion.** Quite clearly, the sense of the house and, consequently, the decision of the Council, was that it is the Council (and not the Government of India) that shall decide the mode of raising additional resources in the event of a shortfall.
- Additional resources could be raised by **increasing the tax or the cess** but in the present difficult times it would not be advisable to raise the burden of either the tax or the cess; if anything, it is the time to mitigate the burden on the common man. Hence, the only way out of this difficult situation is **borrowings**.

### Road Ahead

- Modi asserts that it would be *“financially imprudent for the Centre to borrow since large borrowings by the Centre would push up the bond yield rates, which in turn would push up the bond yield of the states setting off a spiral leading to hike in the interest rates for businesses and individuals. The states’ borrowing would become costlier if the Centre were to borrow for this purpose”*.
- He writes that the Centre has already breached the budgeted borrowing limits for the current year in the first four months itself. Thus, he believes, **it makes sense for the states to borrow**.

- “I think the states should come forward and work with the Centre in the true spirit of cooperative federalism that the Council has come to be known for these past few years,” he concludes.

### 1.6 India's factory output contraction eases to 10.4% in July: IIP data

Recently, the **National Statistical Office (NSO)** has released data, highlighting the **decline in the factory output** (also called **Industrial Production**) for the fifth consecutive month, with July 2020 posting a contraction of 10.4% compared to July 2019.

- The data, however, **recorded a sequential improvement from 15.8% contraction seen in June**, reflecting some **resumption in industrial activity** with the **lifting of lockdown** restrictions.
- Cumulatively, the **Index of Industrial Production (IIP)** contracted by 29.2% for April-July against a growth of 3.5% in the same period last year.
  - The IIP had grown by 4.9% in July 2019.
- **Reason:** The decline is **mainly due to degrowth** in manufacturing, mining, capital goods, and consumer durables output.
- **Contraction Data:** Barring consumer non-durables, all other sectors including manufacturing, mining, primary goods, capital goods contracted in July.
  - **Consumer Non-durables:** A proxy for the **Fast Moving Consumer Goods (FMCG)**, it posted a positive growth of 6.7%.
  - **Manufacturing Sector:** Weight of 77.6% in IIP, contracted by 11.1% in July from a contraction of 16.0% in June.
  - **Electricity Output:** It contracted by 2.5% as against a double-digit contraction of 10.0% in June.
    - It recorded the best sequential improvement and may turn out to be the first sector, apart from consumer non-durables, to find its way in positive territory going ahead.
- **Similar Trends:** The decline in industrial growth **mirrors the trend in other high-frequency indicators** for July.
  - India's Manufacturing **Purchasing Managers' Index (PMI)** had stood at 46 in July compared with 47.2 in June. A print below 50 signifies a contraction.



- **Impact:** The negative IIP for July, which is the first month of the second quarter, will reflect in the expected contraction in the **Gross Domestic Product (GDP)** growth numbers for the July-September quarter.
  - India's **GDP growth contracted by 23.9%** in the April-June quarter, the worst among G20 countries.

### Index of Industrial Production

- It is an indicator that **measures the changes in the volume of production of industrial products** during a given period.
- It is **compiled and published monthly by the National Statistical Office (NSO)**, Ministry of Statistics and Programme Implementation.
  - NSO is the **central statistical agency** of the government, set up by an **Act of the Parliament, Statistical Services Act (Chapter 386) 1980**.
- IIP is a **composite indicator** that measures the growth rate of industry groups classified under:
  - **Broad sectors**, namely, Mining, Manufacturing, and Electricity.
  - **Use-based sectors**, namely Basic Goods, Capital Goods, and Intermediate Goods.
- **Core Sector Industries** comprise **40.27%** of the weight of items included in IIP.
  - The **eight core Industries in decreasing order of their weightage:** Refinery Products> Electricity> Steel> Coal> Crude Oil> Natural Gas> Cement> Fertilisers.
- **Base Year for IIP is 2011-2012.**
- **Significance of IIP:**
  - It is used by government agencies including the Ministry of Finance, the **Reserve Bank of India**, etc. for policy-making purposes.
  - IIP remains extremely relevant for the calculation of the quarterly and advance GDP estimates.

### 1.7 Rajiv Mehrishi Panel to Assess Impact of Waiving Loan Interest

Recently, the Union government has constituted an expert committee to measure the economic impact of waiving of interest and interest on interest on the **Covid-19 related loan moratorium**.

- **Chairmanship:** The expert panel will be chaired by **Rajiv Mehrishi**, former **Comptroller and Auditor General (CAG)** of India, and will **submit its report within one week**.
- **Task:** It will measure the impact on the national economy and financial stability of waiving of interest and Covid-19 related moratorium.
  - It will also give suggestions to mitigate financial constraints of various sections of society in this respect and measures to be adopted in this regard.
- **Background:** The move came as **various concerns** have been raised during the ongoing hearing in the **Supreme Court** in the matter regarding relief sought in terms of waiver of interest and waiver of interest on interest and other related issues.
  - The Court has extended its interim order that no account is to be declared **Non Performing Assets (NPA)** till further orders.
  - The Court granted two weeks to the Centre and the **Reserve Bank of India (RBI)** to file the affidavit and place before it the decisions taken in this regard.

#### **Moratorium on Repayments of Loans**

- A **moratorium** provides stressed customers extra time to repay without their accounts being labelled NPA or their credit score being affected.
  - It is **not a loan waiver** and does not offer any discount on interest payout.
- RBI had allowed banks to **defer payment of Equated Monthly Installments (EMIs)** on home, car, personal loans as well as **credit card dues till 31<sup>st</sup> August 2020**.
- The RBI had also allowed lending institutions, banks to **defer interest on working capital repayments**—a move aimed at addressing the distress among firms as production is down.
  - A working capital loan is a loan that is taken to finance a company's everyday operations.
- As the six-month moratorium on loan repayments ended on **31<sup>st</sup> August**, the RBI has released the **final loan restructuring guidelines** suggested by **K.V. Kamath Committee**.
  - Restructuring for corporate loans will be based on financial parameters set out in RBI rules, while for retail borrowers, lenders will put in place board-approved policies for recasting loans.

## 1.8 Banking Regulation Act, 1949

The Lok Sabha has passed an amendment to the Banking Regulation Act, 1949.

### Need

- The government had to go for an ordinance because the financial health of many of the cooperative societies, which are also performing as banks, “was becoming very delicate”.
- The financial state of affairs of 277 urban cooperative banks is weak and they are reporting loss. 105 cooperative banks are unable to meet the minimum regulatory capital requirement. 47 banks have net worth is negative. 328 urban cooperative banks have more than 15 per cent gross NPA ratio.
- The stress in cooperative banks increased due to pandemic and gross ratios of urban cooperative banks increased from 7.7 per cent in March 2019 to over 10 per cent in March 2020.

### Changes

- It will **bring cooperative banks under the direct supervision of the RBI** and bring them under some of the **same governance norms as commercial banks**.
- It will also **allow the RBI to amalgamate or reconstruct a stressed cooperative bank** without first imposing a moratorium, thus protecting the interests of the depositors.
- Few more amendments have been proposed under **Section 45 of the Act** that will help the central bank to develop a scheme to ensure the interest of the public, banking system, account holders in the bank and banking company's proper management, without disrupting any banking functionalities. However, the changes will not affect the existing powers of the state registrars of co-operative societies under state laws.
- Besides, amendments in **Sections 3 and 56** extend the provisions applicable to scheduled commercial banks to cooperative banks and brings them within the central bank's regulation.
- The amendments **do not apply to Primary Agricultural Credit Societies (PACS) or co-operative societies** whose primary object and principal business is long-term finance for agricultural development, and which do not use the words “*bank*”, “*banker*” or “*banking*”.

- The amendments **do not affect existing powers of the State Registrars** of Co-operative Societies under state co-operative laws.

### 1.9 Public Procurement (Amendment) Order, 2017

The Government of India has amended the Public Procurement (Preference to Make in India) Order, 2017, **enabling nodal Ministries/ Departments to notify higher minimum local content requirement** for Class-I & Class-II local suppliers which was earlier fixed at 50% and 20% respectively.

- As per the Order, *entities of countries which do not allow Indian companies* to participate in their Government procurement for any item, **shall not be allowed to participate in Government procurement in India** for all items related to that nodal Ministry/ Department, except for the list of items published by the Ministry/ Department permitting their participation.
- Specifying foreign certifications/ unreasonable technical specifications/ brands/ models in the bid document is restrictive and discriminatory practice against local suppliers.
- **Foreign certification**, if required, shall be stipulated only with the approval of Secretary of the Department concerned.
- All administrative Ministries/Departments whose procurement exceeds Rs. 1000 Crore per annum shall notify their procurement projections for the next 5 years on their respective website.
- An upper threshold value of procurement beyond which foreign companies shall enter into a joint venture with an Indian company to participate in government tenders shall be notified.

### 1.10 Infrastructure Investment Trusts – InvITs

The Union Cabinet had approved the National Highways Authority of India (NHAI) to set up Infrastructure Investment Trust(s) (InvIT) in December 2019. The company has recently started meeting investor groups, as it prepares to come up with its InvIT issue.

The issue will enable NHAI to monetise its completed National Highways that have a toll collection track record of at least one year. The NHAI reserves the right to levy toll on identified highways and it will help the company raise funds for more road development across the country.

- Infrastructure investment trusts are **institutions similar to mutual funds**, which **pool investment from various categories of investors and invest them into completed and revenue-generating infrastructure projects**, thereby creating returns for the investor.
- The capital market regulator notified the SEBI (Infrastructure Investment Trusts) Regulations, 2014 on September 26, 2014, and these trusts are **likely to help facilitate investment in the infrastructure sector**.

### Structure of InvITs

- Structured like mutual funds, they have a **trustee, sponsor(s), investment manager and project manager**. While the trustee (certified by SEBI) has the **responsibility of inspecting the performance of an InvIT**, **sponsor(s) are promoters of the company that set up the InvIT**.
- In case of **Public-private partnership (PPP) projects**, it refers to the infrastructure developer or a special purpose vehicle holding the concession.
- While the **investment manager** is entrusted with the **task of supervising the assets and investments of the InvIT**, the **project manager** is responsible for the **execution of the project**.
- NHAIs InvIT will be a **Trust established by NHAIs under the Indian Trust Act, 1882** and SEBI regulations. The InvIT Trust will be formed the objective of investment primarily in infrastructure projects.

### How does it work?

- While the fund will be raised by **monetising the completed NHs**, the regulations say that **the project SPV would distribute not less than 90 per cent of net distributable cash flow to the trust** in proportion of its holding in each of the project SPV and further **not less than 90 per cent of the net distributable cash flow of the trust will get distributed to the unitholders**. The unitholders will get the distributions at least once every six month.
- The fund raised can be **invested in the project SPVs** by way of an **issue of debt**. The trust can utilise it to repay their loans or even for prepayment of certain unsecured loans and advances availed by such project SPVs from the sponsor, the project manager and certain members of the sponsor group.



- The Indian InvIT market is not yet mature and has supported formation of 10 InvITs till date – **in roads, power transmission, gas transmission and telecom towers sectors** – of which only two are listed, according to a report of the task force on National Infrastructure Pipeline. The InvITs listed on the stock exchange are **IRB InvIT Fund and India Grid Trust**.
- The listed are **required to maintain a maximum-leverage ratio of 49 per cent**, which can be increased to 70 per cent subject to certain conditions, such as six continuous distributions to unit-holders and AAA-rating.

### Benefit to investors

Given that such trusts comprise largely of completed and operational projects with positive cash flow, the risks are somewhat contained. The investors can **benefit from the cash flow that gets distributed as well as in capital appreciate** of the units. Unitholders also benefit from **favourable tax norms**, including exemption on dividend income and **no capital gains tax** if units are held for more than three years.

### 1.11 RBI publishes “Technology Vision for Cyber Security’ for UCBs

The Reserve Bank of India (RBI) has come out with a document **to enhance cybersecurity of urban co-operative banks (UCBs)**.

- The ‘**Technology Vision for Cyber Security for Urban Cooperative Banks (UCBs) 2020-2023**’ has been formalised based on inputs from various stakeholders.
- It plans to achieve its objective through a five-pillared strategic approach GUARD, viz –
  - Governance Oversight,
  - Utile Technology Investment,
  - Appropriate Regulation and Supervision,
  - Robust Collaboration and Developing necessary IT,
  - cybersecurity skill sets.
- With concerted efforts and involvement of all stake holders, the vision document, with its 12 specific action points –
  - aspires to involve more board oversight over cybersecurity;
  - enable UCBs to better manage and secure IT assets;
  - implement an offsite supervisory mechanism framework for UCBs on cybersecurity-related controls;

- develop a forum for UCBs so that they can share best practices and discuss practical issues and challenges; and
- implement a framework for providing awareness/training for all UCBs.
- The document also says that cybersecurity landscape will continue to evolve with wider adoption of digital banking channels, thus necessitating the UCBs to manage the associated risks effectively.
- Active collaboration within UCBs and stakeholders would be necessary for sharing and coordinating various measures taken on cyber security aspects.

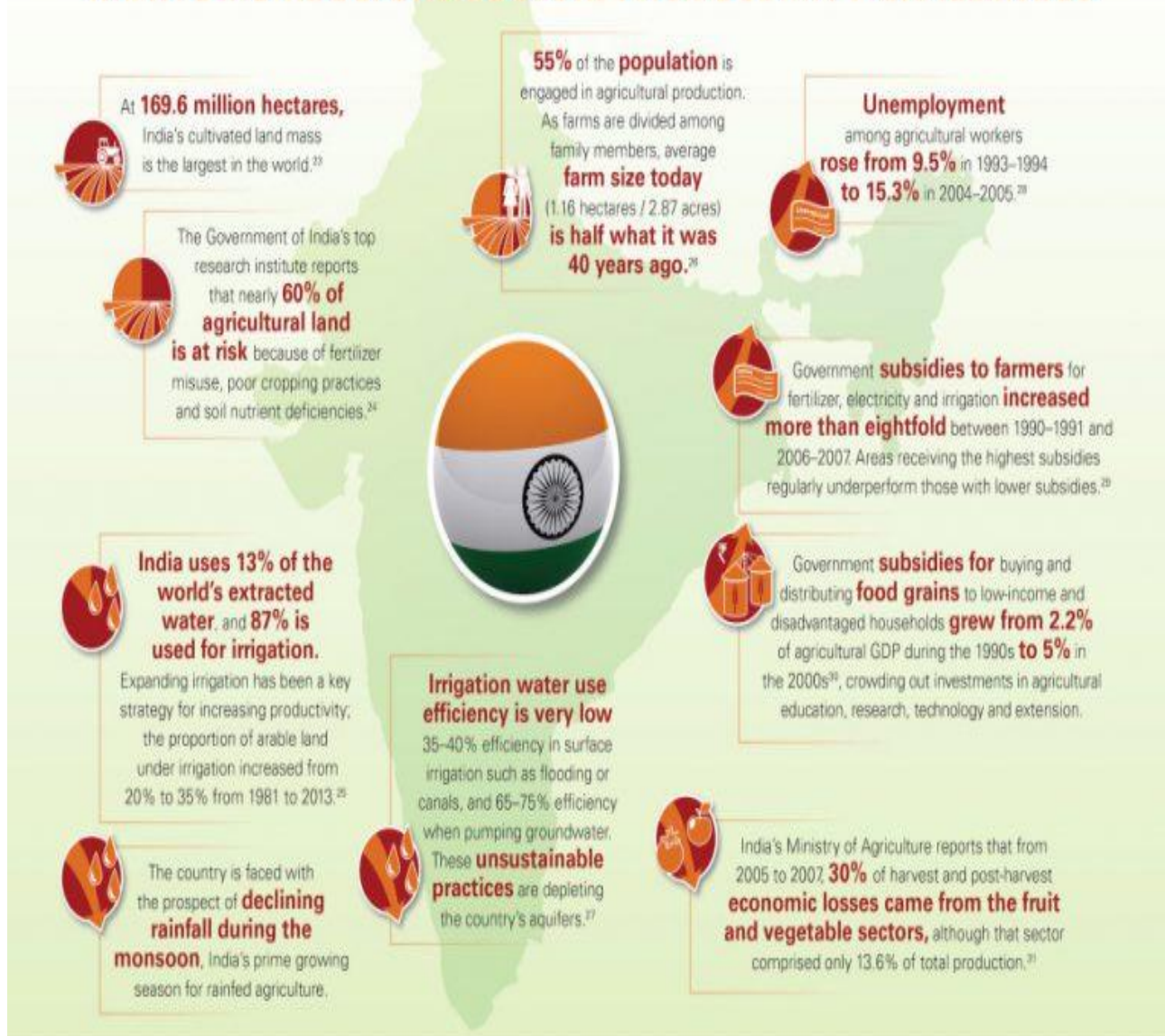
### 1.12 Minimum support price for farmers: How is it fixed, and how binding is it?

One of the major criticisms of the recently enacted Farmers' Produce Trade and Commerce (Promotion and Facilitation) Bill is that it does not give any statutory backing to MSP. Forget making it a legal right, there isn't even a mention of either "MSP" or "procurement" in the Bill.

- Minimum Support Price (MSP) is a form of market intervention by the Government of India to insure agricultural producers against any sharp fall in farm prices.
- The minimum support prices are **announced by the Government of India at the beginning of the sowing season** for certain crops on the basis of the **recommendations of the Commission for Agricultural Costs and Prices (CACP)**.
- MSP is price fixed by Government of India to protect the producer – farmers – against excessive fall in price during bumper production years. The minimum support prices are a guarantee price for their produce from the Government.
- The major objectives are to **support the farmers from distress sales** and to procure food grains for public distribution. In case the market price for the commodity falls below the announced minimum price due to bumper production and glut in the market, government agencies purchase the entire quantity offered by the farmers at the announced minimum price.

[https://www.youtube.com/watch?v=4XeTInELAk&feature=emb\\_logo](https://www.youtube.com/watch?v=4XeTInELAk&feature=emb_logo)

## INDIA'S AGRICULTURE SECTOR: PRODUCTIVITY CHALLENGES



### MSP

- The **Minimum Support Price** is not a legal right till now. Unlike subsidised grains through the PDS, **MSP isn't an entitlement for farmers.** They cannot demand it as a matter of right.
- It is **only a government policy** that is part of administrative decision-making. The government declares MSPs for crops, but **there's no law mandating their implementation.**
- The Centre currently fixes **MSPs for 23 farm commodities** – 7 cereals (paddy, wheat,

maize, bajra, jowar, ragi and barley), 5 pulses (chana, arhar/tur, urad, moong and masur), 7 oilseeds (rapeseed-mustard, groundnut, soyabean, sunflower, sesamum, safflower and nigerseed) and **4 commercial crops** (cotton, sugarcane, copra and raw jute) – based on the CACP's recommendations.

- But the **CACP itself is not any statutory body** set up through an Act of Parliament. This, despite its coming to existence in 1965 and MSPs being announced since the time of the Green Revolution, starting with wheat in 1966-67.
- The CACP is just “**an attached office of the Ministry of Agriculture and Farmers Welfare, Government of India**”. It can recommend MSPs, but the decision on fixing (or even not fixing) and enforcement rests finally with the government.
- The government can procure at the MSPs if it wants to. There is no legal compulsion. Nor can it force others (private traders, organised retailers, processors or exporters) to pay.
- The only crop where MSP payment has some statutory element is sugarcane. This is due to its pricing being governed by the **Sugarcane (Control) Order, 1966** issued under the **Essential Commodities Act**.

### 1.13 What are ESG funds, big abroad, and now finding interest in India too?

Although big in global investments, ESG funds – that imbibe environment, social responsibility and corporate governance in their investing process – are witnessing growing interest in the Indian mutual fund industry too.

#### ESG

- ESG investing is used synonymously with **sustainable investing or socially responsible investing**. It looks at three core areas: **environment, social responsibility and corporate governance**.
- So, while picking up a stock for investment, the ESG fund first shortlists companies that score high on these three parameters and then look into the fundamentals and financial factors in its investment decision-making process.
- So, the schemes will focus on companies that adopt environment-friendly practices, follow ethical business practices and are employee-friendly among others.

**Why is there so much focus on ESG now?**

Fund houses say that modern investors are re-evaluating traditional investment approaches and when they invest, they look at the impact it is having on the planet as a whole. This paradigm change is forcing corporations, investment companies and asset managers to realise that investors are no longer only worried about returns. As a result, asset managers have swiftly started incorporating ESG factors into the investment practices.

### How big is ESG?

- There are over 3,300 ESG funds globally and the number has tripled over the last decade. The value of global assets applying ESG for investment decisions today stands at \$40.5 trillion.
- In India, as of now there are three schemes – SBI Magnum Equity ESG (Rs 2,772 crore), Axis ESG (Rs 1,755 crore) and Quantum India ESG Equity (Rs 18 cr) – following the ESG investment strategy in India. While ICICI Prudential's scheme launched its NFO recently, Kotak Mahindra AMC is expected to launch its NFO soon and more are expected to follow.

### Significance

- As ESG funds gain momentum in India, fund managers say **companies will be forced to follow better governance, ethical practices, environment friendly and social responsibility.**
- Globally there has been a big shift on this front as many of the pension funds, sovereign wealth funds etc don't invest in companies that are seen as polluting, don't follow social responsibility or tobacco companies and so experts feel this will force companies to do business more responsibly.
- Industry insiders say while tobacco and coal sector companies, those that generate hazardous waste from their chemical plant and do not manage them properly as well as sectors that use a lot of water and do not follow best practices on reuse of water along with companies that discharge untreated waste in soil, water or air will find it tough to get funds parked in them.

### 1.14 Retrospective taxation: the Vodafone case, and the Hague court ruling

Vodafone Group has claimed that it won an international arbitration case against the Indian government, ending one of the most high-profile disputes in the country involving a \$2 billion tax



claim.

### The ruling

- An international arbitration tribunal in The Hague ruled that India's imposition of a tax liability on Vodafone, as well as interest and penalties, were **in a breach of an investment treaty agreement between India and the Netherlands**.
- India had claimed a **total of ₹27,900 crore (\$3.79 billion), including about \$2 billion in tax**, as well as interest and penalties.
- The tribunal, in its ruling, said the government's demand is in breach of "**fair and equitable treatment**" and it must cease seeking the dues from Vodafone. It also directed India to pay £4.3 million (\$5.47 million) to the company as compensation for its legal costs.
- One of the major factors for the Court of Arbitration to rule in favour of Vodafone was the **violation of the BIT and the United Nations Commission on International Trade Law (UNCITRAL)**.
- In 2014, when the Vodafone Group had initiated arbitration against India at the Court of Arbitration, it had done so under **Article 9 of the BIT between India and the Netherlands**.
- **Article 9 of the BIT** says that any dispute between "*an investor of one contracting party and the other contracting party in connection with an investment in the territory of the other contracting party*" shall as far as possible be settled amicably through negotiations.
- The other was **Article 3 of the arbitration rules of UNCITRAL**, which, among other things, says that "*constitution of the arbitral tribunal shall not be hindered by any controversy with respect to the sufficiency of the notice of arbitration, which shall be finally resolved by the arbitral tribunal*".
- Vodafone's tax dispute stems from its \$11 billion deal to buy the Indian mobile assets from Hutchison Whampoa in 2007. The government said Vodafone was liable to pay taxes on the acquisition, which the company contested.
- In 2012, India's top court ruled in favour of the telecom provider but the government changed the rules to enable it to tax deals that had already been concluded (retrospective taxation).
- In 2014, Vodafone initiated arbitration proceedings against India.

### 'Retrospective taxation'

- As the name suggests, retrospective taxation **allows a country to pass a rule on taxing certain products, items or services and deals and charge companies from a time behind the date on which the law is passed.**
- Countries use this route to correct any anomalies in their taxation policies that have, in the past, allowed companies to take advantage of such loopholes. While governments often use a retrospective amendment to taxation laws to "clarify" existing laws, it ends up hurting companies that had knowingly or unknowingly interpreted the tax rules differently.
- Apart from India, many countries including **the US, the UK, the Netherlands, Canada, Belgium, Australia and Italy have retrospectively taxed companies,** which had taken the benefit of loopholes in the previous law.

Raja Sir's

### INDIA AND WORLD

#### 2.1 The Pinaka missile system that will be deployed at India's borders with Pakistan, China

Recently, The Ministry of Defence (MoD) has announced that its acquisition wing had signed contracts with three Indian companies for supply of six regiments of the Pinaka Rocket System to be deployed along borders with Pakistan and China.

- In the battlefield, **long range artillery systems** like Pinaka are used for **attacking the adversary targets prior to the close quarter battles** which involve smaller range artillery, armoured elements and the infantry.
- The development of the Pinaka was **started by the Defence Research and Development Organisation (DRDO) in the late 1980s**, as an alternative to the multi-barrel rocket launching systems of Russian make, called like the '**Grad**', which are still in use.
- After successful tests of Pinaka Mark-1 in the late 1990, it was **first used in the battlefield during the Kargil War of 1999**, quite successfully. Subsequently multiple regiments of the system came up over the 2000s.

#### Pinaka Missile System

- The Pinaka, which is primarily a **multi-barrel rocket system (MBRL) system, can**

**fire a salvo of 12 rockets over a period of 44 seconds.**

- One battery of Pinaka system **consists of six launch vehicles**, accompanied by the loader systems, radar and links with network based systems and a command post. **One battery can neutralise an area one kilometre by one kilometre.**
- As a key tactic of long range artillery battle, the launchers have to '**shoot and scoot**' to ensure they themselves do not become the targets, especially due to its back blast. Thus the launcher vehicles are required to have a high degree of manoeuvrability.
- The **Mark-I version of Pinaka** has a range of around **40 kilometres** and the **Mark-II version can fire up to 75 kilometres.**
- The **Mark-II** version of the rocket has been **modified as a guided missile system** by integrating it with the navigation, control and guidance system to improve the end accuracy and increase the range.
- The **navigation system** of the missile is **linked with the Indian Regional Navigation Satellite System.** In comparison to artillery guns, rockets are less accurate, but with addition of guidance and navigation systems, this aspect is taken care of.

## 2.2 Exercise INDRA

India and Russia are scheduled to hold the bilateral naval exercise (INDRA 2020), **in the Andaman Sea**, close to the strategic Strait of Malacca.

**Exercise INDRA** — Since 2005 — *Feel the Pulse of UPSC...*

- **INDRA** is a joint, **bi-annual naval exercise** conducted by **India and Russia** which **started in 2003**. The exercise is tasked with **boosting cooperation and interoperability** between the Russian and Indian navies. The word **INDRA** is a portmanteau of the participants' respective countries.
- The end of the Cold War which brought greatly reduced defence budgets saw a collapse in ship building and naval activity in Russia throughout the 1990s. During this time, the Russian navy had no presence in the Indian Ocean. **This changed in 2001, when a contingent of naval ships, including anti-submarine warfare vessels and a tanker docked at Mumbai.**
- In April 2003, nine warships of the Russian navy departed from their bases at Sevastopol in the Black Sea and Vladivostok for the Indian Ocean. These units engaged in a number

of exercises with the Indian navy. Russian Defence Minister Sergei Ivanov proposed joint naval exercises to be held later that year.

### 2.3 PM Modi at India-US Summit: Current situation demands fresh mindset where approach to development is human-centric

Prime Minister Shri Narendra Modi today delivered the Special Key Note Address at the US-India 2020 Summit organised by the USISPF.

#### USISPF

- The **US-India Strategic Partnership Forum (USISPF)** is a **non-profit organisation** that works for the bilateral and strategic partnership between India and the US.
- The Theme of the 5 day Summit that began on the 31st of August (2020) is “**US-India Navigating New Challenges**”.
- The theme covers various subjects such as India’s potential in becoming a **Global Manufacturing Hub, Opportunities in India’s Gas Market, Ease of Doing Business to attract FDI in India, Common Opportunities & Challenges in Tech Space, Indo-Pacific Economic issues, Innovation in Public Health and others.**
- The **Executive Board came together in 2017 to establish USISPF** with the purpose of enabling business and governments to collaborate and create meaningful opportunities that can positively change the lives of citizens.
- Dedicated to **strengthening economic and commercial ties**, USISPF plays a significant role in fostering a robust and dynamic relationship between the two countries through policy advocacy that will lead to driving **economic growth, entrepreneurship, employment-creation, and innovation** to create a more inclusive society.

### 2.4 ‘Committed to inclusive global security’: Rajnath Singh reaffirms India’s stance at SCO meet

Raksha Mantri Rajnath Singh has emphasised that, “*Peaceful, stable and secure region of SCO member states – which is home to over 40 per cent of global population, demands a climate of trust and cooperation, non-aggression, respect for international rules and norms, sensitivity to each other’s*

*interest and peaceful resolution of differences.”*

He was addressing the **Combined Meeting of Defence Ministers of Shanghai Cooperation Organisation (SCO), Collective Security Treaty Organisation (CSTO) and Commonwealth of Independent States (CIS) Member States** in Moscow.

#### SCO

- SCO is a **permanent intergovernmental international organisation**.
- It is a Eurasian political, economic and military organisation aiming **to maintain peace, security and stability in the region**.
- It was created in **2001**. The HQ is located in Beijing, China.
- Prior to the creation of SCO in 2001, Kazakhstan, China, Kyrgyzstan, Russia and Tajikistan were members of the **Shanghai Five (1996)**.
- **Following the accession of Uzbekistan** to the organisation in 2001, the Shanghai Five was renamed the SCO.
- The SCO Charter was **signed in 2002**, and entered into force in 2003.
- The SCO's official languages are **Russian and Chinese**.
- India and Pakistan became members in 2017.

#### CSTO

- The Collective Security Treaty Organization is **an intergovernmental military alliance** that was signed in 1992. The treaty **came into force in 1994**.
- It was signed by six countries: **Armenia, Kazakhstan, Kyrgyzstan, Russia, Tajikistan and Uzbekistan**. Subsequently, **Azerbaijan, Georgia and Belarus** joined it.
- The CST was **set to last for a 5-year period unless extended**. In 1999, only six members of the CST signed a protocol renewing the treaty for another five-year period: Azerbaijan, Georgia and Uzbekistan refused to sign and withdrew from the treaty.
- It was decided to transform the CST into **a full international organisation**, the Collective Security Treaty Organization (CSTO) **at the Moscow session** of the Collective Security Treaty in 2002.
- The **Serbia and Afghanistan** have been accorded observer status in the CSTO.
- Armenia, Kazakhstan, Kyrgyzstan, Russia, Tajikistan and Belarus are the current full member countries of CSTO.



## CIS

- Commonwealth of Independent States (CIS) was created in December 1991. In the adopted Declaration the participants of the Commonwealth declared their interaction on the basis of sovereign equality.
- At present the CIS unites: **Azerbaijan, Armenia, Belarus, Georgia, Kazakhstan, Kyrgyzstan, Moldova, Russia, Tajikistan, Turkmenistan, Uzbekistan and Ukraine.**
- In September 1993 the Heads of the CIS States signed an Agreement on the **creation of Economic Union** to form **common economic space** grounded on free movement of goods, services, labour force, capital; to elaborate coordinated monetary, tax, price, customs, external economic policy; to bring together methods of regulating economic activity and create favourable conditions for the development of direct production relations.
- In order to facilitate further integration the **Agreement on deepening of integration in economic and humanitarian field** of four countries (Belarus, Kazakhstan, Kyrgyzstan, Russia) and Agreement on creation of Commonwealth of Sovereign Republics (Belarus and Russia) with creation of corresponding coordinating bodies were signed in 1995.
- In February 1999 by the decision of the Interstate Council of four countries (Belarus, Kazakhstan, Kyrgyzstan, Russia) the **Republic of Tajikistan was recognised as participant of the customs union** enjoying full rights.
- In October 2000 the Heads of five countries (Belarus, Kazakhstan, Kyrgyzstan, Russia, Tajikistan) signed an Agreement on creation of **Eurasian Economic Community**. At present Armenia, Moldova and Ukraine have the status of the observer under EAEC. In October 2005 Uzbekistan made the statement to join this organisation.
- In September 2003 four countries – **Belarus, Kazakhstan, Russia and Ukraine** signed an Agreement on Formation of **CES (Common Economic Space)**.
- Integration of the countries in the framework of the Commonwealth of Independent States is executed through its coordinating institutions (charter bodies, executive bodies and the bodies of branch cooperation of the CIS).
- The Baltic states of Lithuania, Latvia and Estonia have never been a part of CIS, even if

they were a part of Former Soviet Union.

## 2.5 QUAD Should Ensure Freedom of Navigation in Indian Ocean: Gen. Rawat

India wants the Quad to become a system to “ensure freedom of navigation (FoN) and freedom of navigation operations (FONOPS)” in the Indian Ocean and around, Chief of Defence Staff (CDS) General Bipin Rawat has said while highlighting the threat of a combined challenge from Pakistan and China on two fronts, and cautioning Pakistan against taking any advantage of the tensions with China.

### QUAD

- **Australia, Japan, India and the United States** collectively launched ad hoc operations to provide relief following the devastating Indian Ocean tsunami in 2004.
- **In Manila in 2007**, the PMs of India, Japan, and Australia met with the then U.S. Vice President Dick Cheney on the sidelines of the ASEAN Regional Forum, marking the first Quadrilateral summit.
- Later in 2007, **the four countries along with Singapore held a large multilateral naval exercise, the Exercise Malabar**, in the Bay of Bengal. China, which saw the exercises as part of a containment strategy, registered diplomatic protests with all four capitals.
- Late in 2012, in an influential article outlining his vision for ‘**Asia’s Democratic Security Diamond**’, PM Shinzo Abe argued that peace, stability and freedom of navigation in the Pacific are inseparable from peace, stability and freedom of navigation in the Indian Ocean, and called for the four powers to work together.

### ‘Indo-Pacific’

- In a speech delivered in August 2007 by **Japanese Prime Minister Shinzo Abe** to the Indian Parliament, he alluded to a book by the Mughal prince Dara Shikoh in describing the “*dynamic coupling*” of the Indian and Pacific oceans as the “**confluence of the two seas.**”
- The term ‘**Indo-Pacific**’ implies that the Indian and Pacific Oceans are a **single, shared strategic space**. What happens in one, has implications in the other. Thus the militarisation of the South China Sea directly affects India, just as developments in the Indian Ocean have immediate consequences for Japan or the US.

## Road ahead

To be more effective in the vast littoral, **India needs to intensify the exchange of maritime intelligence, negotiate agreements to share naval infrastructure facilities** in the littoral and put in place logistical support arrangements with its European partners. Japan's plans to bring France and Britain on board the QUAD can only reinforce India's maritime partnerships with Europe.

## 2.6 Why India Is Worried About the Implications of Sri Lanka's 20th Amendment?

Since the Rajapaksas have attained the two-thirds parliamentary majority. Their first priority is to get rid of the 19th Amendment, and replace it with the 20th Amendment. There are concerns, including in India, that the 13th Amendment may also be repealed.

### 19th and 20th amendments

- The 19th Amendment was **brought in by the previous Yahapalanya (Good Governance) government of the United National Front** of President Maithripala **Sirisena** and Prime Minister Ranil **Wickremesinghe**. It rolled back the 18th amendment that had been brought in by the preceding President Mahinda Rajapaksa.
- The **18th amendment had removed the two-term bar** on running for office, and centralised more powers in the hands of the President.
- One of the first acts of United National Front was to bring in the **19th amendment**, which **restored the two-term bar** on running for the presidency that was contained in the 1978 constitution; laid down the **minimum age of 35 years for a presidential candidate**; and also **barred dual citizens from the office**.
- It **reduced the term of the presidency to five years** from the six years laid down in the 1978 constitution.
- The **President also lost his power to sack the Prime Minister**. It also placed a ceiling on the number of ministers and deputy ministers.
- The 20th amendment Bill, which was gazetted recently, **reverses almost everything in the 19th Amendment**. It only retains from it the two-term bar on the presidency, and the five-year term.

### Concerns

The Colombo-based **Centre for Policy Alternatives** has flagged the following concerns in the

### 20th Amendment Bill –

- It seeks to **remove the checks and balances** on the executive presidency. In particular, it **abolishes** the binding **limitations on presidential powers** in relation to key appointments to independent institutions through the pluralistic and deliberative process of the Constitutional Council.
- Its replacement, the **Parliamentary Council**, is a mere rubber stamp of the executive, with no genuine deliberative role envisaged for its members. It is a regression to what was in place under the Eighteenth Amendment, effectively providing sweeping powers to the President to appoint individuals to key institutions, and with it, politicising institutions that are meant to function independently of the political executive and for the benefit of citizens.
- It has also **removed** “*the opportunity for citizens to challenge the executive actions of the President through fundamental rights*” applications has been removed, suggesting that the **President is above the law**.
- The **checks on presidential power within the executive are abolished** by the removal of the requirement of the Prime Minister’s advice for the appointment and dismissal of Cabinet and other Ministers. The appointment and particularly **the dismissal of the Prime Minister** are no longer dependent on the confidence of Parliament but **at the discretion of the President**.
- Parliament is **disempowered** against the executive by the **restoration of the President’s power to dissolve Parliament at will at any time** after the first year of its term.

### What is the 13th Amendment?

- The 13th Amendment was a consequence of the **Indian intervention in Sri Lanka between 1987-1990**. It flowed from the **India-Sri Lanka Accord of July 29, 1987**. Sri Lanka is a unitary country, and the **1978 Constitution had concentrated all powers in the centre**.
- The agreement was aimed at finding a way forward on **devolution of political powers to the then North-Eastern province**, comprising the **Tamil dominated areas** of the island country.
- Under the terms of the Accord (also known as the **Jayawardene-Rajiv Gandhi**

agreement), the Sri Lankan parliament brought in the 13th Amendment, which provided for a **system of elected provincial councils across Sri Lanka**. Thus it was not just the Northern-Eastern province that would get a provincial council but provinces in the rest of Sri Lanka too.

- The irony was that while the **North-Eastern provincial council could barely survive the violent and bloody circumstances of its birth and died** after a short-lived futile struggle against both the LTTE and the Sri Lankan government, each of the remaining provinces in the Sinhala dominated areas have had elected provincial councils.

## 2.7 Eye on China: India, Japan sign mutual military logistics pact

India and Japan signed a logistics agreement that will allow the Armed Forces of both sides to coordinate closely in services and supplies.

### India-Japan logistics agreement

- A statement from the government informed that the agreement on '**Reciprocal Provision Supplies and Services**' will "*increase interoperability between the Armed Forces of India and Japan*" and assist in maintaining regional security.
- The agreement establishes the enabling framework for closer cooperation between the Armed Forces of India and Japan in reciprocal provision of supplies and services while engaged in bilateral training activities, United Nations Peacekeeping Operations, Humanitarian International Relief and other mutually agreed activities.
- It will help both sides coordinate on medical requirements, supplies, maintenance, airlifting and communication.
- Significantly, the agreement signed on Wednesday is mainly aimed at greater maritime cooperation and can dramatically upgrade India-Japan naval exercises as the participants are expected to share maritime facilities for mutual benefit.
- With the signing of a logistics agreement with Japan, India now has a logistics support agreement with all the QUAD member countries i.e. Australia, Japan and the USA.

### What is mutual logistics agreement?

- The MLSA is a bilateral agreement between the countries that allows reciprocal access to military facilities in terms of logistics support which generally include food, water, petroleum (fuel), spare parts and other components.



- The agreement will be useful during joint military exercises, peacekeeping operations, Humanitarian Assistance and Disaster Relief operations, scheduled deployments of military platforms, and any other exigent situations that may arise.
- It will help in improving interoperability between the involved parties.

## 2.8 The Singapore Mediation Convention: What Does it Mean?

Recently, the **United Nations Convention on International Settlement Agreements Resulting from Mediation** has come into force.

- The convention will provide a more effective way of **enforcing mediated settlements of corporate disputes** involving businesses in India and other signatories.
  - The **United Nations General Assembly** adopted the Convention on **20<sup>th</sup> December 2018** and it was **opened for signature on 7<sup>th</sup> August 2019** in Singapore.
  - It is also known as the **Singapore Convention on Mediation** and also the **first UN treaty to be named after Singapore**.
  - Singapore had worked with the **UN Commission on International Trade Law**, other UN member states and non-governmental organisations for the Convention.
  - **India approved the signing of the Convention in July 2019.**
  - As on **1<sup>st</sup> September 2020**, the Convention has **53 signatories**, including China and the USA as well.
- **Significance:**
  - The Convention has been designed to become an essential instrument in the **facilitation of international trade** and in the **promotion of mediation** as an alternative and effective method of resolving trade disputes.
  - It will ensure that a settlement reached by parties becomes **binding and enforceable in accordance with a simplified and streamlined procedure**.
  - **Businesses seeking enforcement of a mediated settlement agreement** across borders can do so by **applying directly** to the courts of countries that have signed and ratified the treaty, **instead of having to enforce the settlement agreement as a contract** in accordance with each

country's domestic process.

- The harmonised and simplified enforcement framework will **save time and legal costs**, which are of crucial importance in uncertain times posed by **pandemics** like **Covid-19**.
- Businesses in India and around the world will now have **greater certainty in resolving cross-border disputes** through mediation, as it provides a **more effective means for mediated outcomes to be enforced**.
- **Importance for India:**
  - It will **boost India's 'ease of doing business' credentials** by enabling swift mediated settlements of corporate disputes.
  - It will also increase **the confidence of the investors** and shall provide a **positive signal to foreign investors** about India's commitment to adhere to international practice on **Alternative Dispute Resolution (ADR)**.

### 2.9 Rise of the Minilaterals: Examining the India-France-Australia Trilateral

Recently, **India, Australia and France** held a dialogue for the first time under a **trilateral framework**. The three sides have **agreed to hold the dialogue on an annual basis**.

- **Focus: Enhancing cooperation in the Indo-Pacific Region.** Australia, along with **France**, has emerged as a **major strategic partner for India** in the Indo-Pacific and Indian Ocean Region (IOR), especially in the maritime domain. For instance:
  - India has **logistics agreements** with both countries. The logistics agreement provides for easier access to supplies of goods and services.
  - There is significant cooperation in information exchange for **Maritime Domain Awareness**.
    - France was the first country to deploy a Liaison Officer at the **Indian Navy's Information Fusion Centre (IFC-IOR)** as part of efforts to improve Maritime Domain Awareness (MDA).
  - India conducted its **first joint patrols** with France in Reunion Island (western Indian ocean) in February 2020.
- **Chinese Factor:**
  - The trilateral cooperation will help to take on China's aggressive behaviour in

the Indo-Pacific region. E.g in South China Sea.

- This trilateral cooperation is an addition to the **Quad** which comprises the USA, Japan, Australia and India.
- It also adds diplomatic muscle to the global coalition that is shaping up to counter China's belligerence.
- **Issues Discussed:**
  - Possibility of **enhancing maritime security cooperation** between the three countries in the Indo-Pacific region.
    - It also includes areas of humanitarian assistance and disaster relief, maritime domain awareness, mutual logistics support and capacity-building of friendly countries.
  - **Development cooperation in the Indo-Pacific region**, initiatives such as the **International Solar Alliance** and **Coalition for Disaster Resilient Infrastructure**, and the need for a **reformed multilateralism**.
  - **Cooperation on marine global commons**. It includes **blue economy, marine biodiversity** and **environmental challenges** such as marine pollution.
  - **Practical cooperation at the trilateral and regional level**, including through regional organisations such as **Association of Southeast Asian Nations (ASEAN), Indian Ocean Rim Association (IORA)** and the **Indian Ocean Commission**.
  - The increased salience of **resilient and reliable supply chains**.
    - India, Australia and Japan recently inked an initiative to build resilient supply chains, which is named as **Supply Chain Resilience Initiative (SCRI)**. France may join this initiative too.
  - **Emerging challenges** in the context of **Covid-19 pandemic**, including the financial impact of the pandemic on the Indian Ocean region countries.

### Significance of the Indo-Pacific Region

- In 2018 **Shangrila Dialogue** India had clearly indicated the geographical reach of **India's idea of the Indo-Pacific**, which starts from **Africa to the America**, which covers both the Indian and Pacific Oceans, in tandem with that of Japan.

- It is a very **rich region in terms of natural resources** (fisheries, oil, gas) as well as mineral resources.
- **Trade of some of the major economies** like China, Japan, Korea or the west coast of the United States goes through this region.
- About 50% of **India's trade** is conducted through the South China Sea. India has been one of the major players in the region. **India conducts many naval exercises** with the United States, countries of ASEAN, Japan, Korea and Vietnam.
- The international community including India wants freedom of navigation, freedom of over flights in the region.

### Road Ahead

- France and Australia are India's key partners in the Indo-Pacific region. The meeting provided a unique opportunity to build upon the progress that the three countries have achieved bilaterally in recent years.

### 2.10 Basic Exchange and Cooperation Agreement

The U.S. is keen that India sign the last foundational agreement, **Basic Exchange and Cooperation Agreement for Geo-Spatial cooperation (BECA)**, at the next India-U.S. 2+2 ministerial dialogue.

- A maritime information agreement is also under active deliberation between India and the US. Once concluded, India will have such arrangements with all Quad countries – Australia, Japan and the U.S.
- Beginning 2016, India has signed three foundational agreements: **the Logistics Exchange Memorandum of Agreement (LEMOA)**, **the Communications Compatibility and Security Agreement (COMCASA)** while the **General Security of Military Information Agreement (GSOMIA)** was signed a long time ago. An extension to the GSOMIA, the Industrial Security Annex (ISA), was signed at the last 2+2 dialogue.
- There has been a sharp increase in India's maritime interactions with the Quad countries on a bilateral basis centred around information sharing for improved Maritime Domain Awareness (MDA) in the Indian Ocean Region and Indo-Pacific.

### GSOMIA

- It was signed in 2002 between India and USA.
- GSOMIA paved the way for **greater technology cooperation** in the military sector.
- It allows the sharing of classified information from the U.S. government and American companies with the Government of India and Defence Public Sector Undertakings (DPSU) but **not with Indian private companies**.

#### LEMOA

- Logistics Exchange Memorandum of Agreement (LEMOA) is a logistics support agreement signed in 2016.
- It gives both the nations access to each other's military facilities. But it does not make it automatic or obligatory.
- It is a tweaked India-specific version of the Logistics Support Agreement (LSA) which the U.S. has with several countries it has close military to military cooperation.
- The agreement will primarily cover four areas – **port calls, joint exercises, training and Humanitarian Assistance and Disaster Relief**. Any other requirement has to be agreed upon by both sides on a case-by-case basis.

#### COMCASA

- COMCASA is an **India-specific version of the Communication and Information on Security Memorandum of Agreement (CISMOA)**. It comes into force immediately and is valid for a period 10 years.
- It would facilitate **access to advanced defence systems** and enable India to optimally utilise its existing U.S.-origin platforms.
- COMCASA allows India to **procure transfer specialised equipment for encrypted communications** for US origin military platforms like the C-17, C-130 and P-8Is.

#### Basic Exchange and Cooperation Agreement

- BECA will allow India to use US expertise on **geospatial intelligence and to enhance military accuracy of automated hardware systems** and weapons like cruise, ballistic missiles and drones.
- It would set a framework through which the US could share sensitive data to aid targeting and navigation with India.

### 2.11 Could Pakistan Move to Make Gilgit-Baltistan a New Province Soon?



Recently, **Pakistan has decided to elevate Gilgit-Baltistan's status** to that of a full-fledged province.

- Gilgit-Baltistan is one of the **disputed territories** of India.
- **Current Status of Gilgit-Baltistan:**
  - It is an **autonomous region** now and with this elevation, it will **become the 5<sup>th</sup> province** of the country.
    - Currently, **Pakistan has four provinces** namely **Balochistan, Khyber Pakhtunkhwa, Punjab, and Sindh.**
  - **Chronology:**
    - **1999:** Pakistan's Supreme Court ruled that the people of Gilgit-Baltistan are Pakistani citizens and directed the federal government to start appropriate administrative and legislative measures.
    - **2009:** The **Gilgit-Baltistan Empowerment and Self-Governance Order** was introduced, whereby the **Northern Areas were renamed as Gilgit-Baltistan** and the region was given **province-like status but without representation in Parliament.**
    - **2015:** A committee constituted by the federal government **proposed** giving Gilgit-Baltistan the status of a province.
    - **2018:** A new order was introduced which **transferred all powers of the Gilgit-Baltistan council to its assembly.**
- This elevation will **lead to adequate representation from the province on all constitutional bodies**, including the National Assembly and the Senate.
- The Government will also start working on the **Moqpondass Special Economic Zone (SEZ)** under the **China Pakistan Economic Corridor (CPEC)**.
  - SEZs work as an engine for economic growth supported by quality infrastructure complemented by an attractive fiscal package, both at the Centre and the State level, with the minimum possible regulations.
- **Other Developments by China in Pakistan-occupied Kashmir under CPEC:**
  - **Diamer-Bhasha Dam.**
  - **Kohala hydropower Project.**
  - **Azad Pattan Hydel Power Project.**

- **India's Stand:**
  - India has held that the **Government of Pakistan or its judiciary has no locus standi on territories illegally and forcibly occupied** by it.
  - India completely **rejects such actions** and continued attempts to bring material changes in Pakistan occupied areas of the Indian territory of Jammu and Kashmir.
  - While protesting Islamabad's efforts to bring material change in Pakistan occupied territories, India held that **Pakistan should immediately vacate all areas under its illegal occupation.**



#### **China Pakistan Economic Corridor**

- It is the flagship project of China's ambitious **Belt and Road Initiative (BRI)**.
- The **bilateral project between Pakistan and China** intends to promote connectivity across Pakistan with a network of highways, railways, and pipelines accompanied by energy, industrial and other infrastructure development projects.
  - Originally valued at USD 46 billion, the projects were **worth over USD 60 billion as of 2017.**

- It links the **Western part of China (Xinjiang) to the Gwadar Port in Balochistan, Pakistan via Khunjerab Pass in Northern Pakistan.**
- **India has protested to China over the CPEC as it is being laid through Pakistan-occupied Kashmir.**

## 2.12 G4 Joint Statement

Foreign Ministers from the Group of 4 – India, Brazil, Japan and Germany – a group that is seeking permanent membership of the UN Security Council (UNSC), met recently to further their objective. The four countries stressed delivering concrete outcomes, in writing and within a time frame.

- The Ministers reaffirmed their common resolve to *“finally take decisive steps towards the early and comprehensive reform of the Security Council that was envisaged by Heads of State and Government in the 2005 World Summit”*.
- The G4 will work with **“other reform-minded countries and groups”** to start **text-based negotiations (TBN)** without delay and seek **“concrete outcomes”** during the 75th session of the UN General Assembly.
- G4 Ministers reiterated **support for each other’s membership to the UNSC** “given the capacity and willingness to take on major responsibilities with regard to the maintenance of international peace and security”.
- Africa needs to be represented in **both the permanent and non-permanent categories** of membership of a reformed and expanded Security Council to correct the historical injustice against this continent with regard to its under-representation in the Security Council,” the G4 countries said.

### G-4

- The G4 was formed in the year 2004. The members of the G4 countries include – India, Brazil, Germany and Japan. All members support each other’s bids for permanent seats on the United Nations Security Council.
- Their economic and political influence has grown significantly in the last decades, reaching a scope comparable to the permanent members (P5)
- G4 campaigns for UN Reforms, including **more representation for developing countries**, both in the permanent and non-permanent categories in the UNSC.
- **France supports inclusion of G4 and an African representative** as permanent

member with no objection to the veto power being extended to new permanent members. **UK supports G4 as new members but without veto power.**

- G4's bids are often opposed by **Uniting for Consensus movement or Coffee Club** (ground 12 countries including Pakistan led by Italy) and particularly their economic competitors or political rivals.

### 2.13 India hits out at Pakistan for raising Kashmir issue at CICA meet

India and Pakistan crossed swords over terrorism and Jammu and Kashmir at the Foreign Minister's meetings of the 8-nation South Asian Association for Regional Cooperation (SAARC) and the 27-nation **Conference on Interaction and Confidence-Building Measures in Asia (CICA)**.

#### CICA

- The Conference on Interaction and Confidence-Building Measures in Asia (CICA) is **an inter-governmental forum** for enhancing cooperation towards promoting **peace, security and stability in Asia**.
- It is a forum based on the recognition that there is close link between peace, security and stability in Asia and in the rest of the world.
- The key idea of the Conference is based on the priority of the indivisibility of security, joint initiative and mutually beneficial interaction of small and large states.
- The idea of convening the CICA was **first proposed by Kazakhstan President Nursultan Nazarbayev on 5 October 1992**, at the 47th Session of the United Nations General Assembly.
- The first meeting of the CICA Ministers of Foreign Affairs was held on 14 September 1999 with participation of 15 Member States (Meeting between Foreign Ministers is held every two years). *The Declaration on Principles Guiding Relations between CICA Member States* was adopted at this meeting.
- The **first CICA summit** was held on 4 June 2002 with participation of 16 Member States and **Almaty Act**, the charter of the CICA, was adopted. The impetus for this meeting came from the 9-11 terrorist attacks of the previous year. Thus, **counter-terrorism became an important issue for CICA**, and this theme has run through the subsequent meetings.

### 2.14 India, Denmark elevate ties to 'green strategic partnership'

India and Denmark have agreed to elevate India-Denmark relations to a Green Strategic Partnership.

#### 'Green Strategic Partnership'

- The Green Strategic Partnership is a mutually beneficial arrangement **to advance political cooperation, expand economic relations and green growth, create jobs** and strengthen cooperation on addressing global challenges and opportunities; with focus on an ambitious implementation of the **Paris Agreement and the UN Sustainable Development Goals**.
- This partnership would build on and consolidate the existing agreement establishing a Joint Commission for Cooperation between India and Denmark which envisaged cooperation within the political field; economic and commercial field; science and technology; environment; energy; education and culture.
- In addition, it builds on and complements the existing Joint Working Groups on Renewable Energy, Urban Development, Environment, Agriculture and Animal Husbandry, Food Processing, Science, Technology and Innovation, Shipping, Labour Mobility and Digitisation.

### 2.15 Bilateral Maritime Exercise Between Japan and India (JIMEX 20)

The 4th edition of **India – Japan Maritime bilateral exercise JIMEX**, which is conducted biennially between the Indian Navy and Japanese Maritime Self-Defense Force (JMSDF) was held recently.

JIMEX series of exercises commenced in January 2012 with special focus on maritime security cooperation. The last edition of JIMEX was conducted in October 2018 off Visakhapatnam, India.

#### Objective

- JIMEX 20 showcases high degree of inter-operability and joint operational skills through conduct of a multitude of advanced exercises, across the spectrum of maritime operations.
- Multi-faceted tactical exercises involving weapon firings, cross deck helicopter operations and complex surface, anti-submarine and air warfare drills will consolidate coordination developed by the two navies.

- JIMEX 20 will further enhance the cooperation and mutual confidence between the two navies and fortify the long standing bond of friendship between the two countries.

## INTERNATIONAL RELATIONS

### 3.1 The new changes in Qatar's labour laws

Recently, Qatar has brought about a change in its labour laws, scrapping rules requiring migrant workers to take their employers' permission before changing jobs, and setting the monthly minimum wage at about \$274, an increase of over 25 percent.

#### New labour laws

- The first reform has **abolished** the unjustified '*kafala system*' or requirement for a "**no objection certificate**" that migrant workers needed to get from their employers before changing jobs. Now, workers will have to serve a one-month notice period if they have worked for less than two years and notice period of two months if they have worked longer.
- The second reform involves **increasing the minimum wage by 25 per cent to \$274 or 1000 Qatari riyals and an additional 300 QAR for food and 500 QAR for accommodation** in case not provided by the company. These reforms are now applicable to **workers of all nationalities** and in all sectors, **including domestic workers** who were previously excluded.

### 3.2 Global Innovation Index -WIPO

India has climbed 4 spots and has been **ranked 48th by the World Intellectual Property Organisation in the Global Innovation Index 2020 rankings.**

- India was at the **52nd position in 2019** and was **ranked 81st in the year 2015**. It is a remarkable achievement to be in a league of highly innovative developed nations all over the globe.
- The WIPO had also **accepted India as one of the leading innovation achievers of 2019** in the **central and southern Asian region**, as it has shown a consistent improvement in its innovation ranking for the last 5 years.
- India is also the **third most innovative lower middle-income economy** in the world, ranking in the top 15 in indicators such as **ICT services exports, government online**



services, graduates in science and engineering, and R&D-intensive global companies.

### Global Innovation Index

- The **Global Innovation Index (GII)** is an **annual ranking of countries** by their capacity for, and success in, innovation. It is published by **Cornell University, INSEAD, and the World Intellectual Property Organization**, in partnership with other organisations and institutions.
- The index was **started in 2007 by INSEAD and World Business**, a British magazine. The **GII** is commonly used by corporate and government officials to compare countries by their level of innovation.
- The theme for this year's **GII** was '**Who Will Finance Innovation?**' It looked to see how the fall out from the **COVID-19** pandemic would affect several sections of funding innovation including, startups, venture capital, and other traditional sources of innovation financing.
- **Switzerland, Sweden, US, UK and Netherlands** topped the annual ranking this year. As per the organisation, **India, China, the Philippines, and Vietnam** have been the economies with the most significant progress in their **GII** innovation ranking over the years. All four are now in the top 50.

### India Innovation Index

- **NITI Aayog and Institute for Competitiveness** prepared the **India Innovation Index** in the year 2019 on the basis of its two dimensions – **Performance and Enablers**.
- The Enablers are the factors that underpin innovative capacities, grouped in five pillars – **Human Capital, Investment, Knowledge Workers, Business Environment, and Safety and Legal Environment**.
- The Performance dimension captures benefits that a nation derives from the inputs, divided in two pillars – **Knowledge Output and Knowledge Diffusion**.
- **Karnataka** emerged **topper in the overall rankings** in the **category of major states**.with Tamil Nadu and Maharashtra in the second and third positions.

### 3.3 Yanomami Tribe – Why is an Amazon tribe talking to Indians about Blood Gold?

From the remote rainforests of Brazil, a little-known tribe has made an emotional appeal to Indians to not buy gold which comes from Yanomami territory.

- The Yanomami live in the **rainforests and mountains of northern Brazil and southern Venezuela**, and are, according to Survival International, the **largest relatively isolated tribe in South America**.
- The Yanomami are believed to have **crossed the Bering Strait from Asia into North America perhaps 15,000 years ago, and travelled southward to their home in the Amazon**. Survival International says the tribe numbers around 38,000 today, and its members live in contiguous forested territory of around 9.6 million hectares in **Brazil** and 8.2 million hectares in **Venezuela**.
- The Yanomami practise an ancient communal way of life. They live in large, **circular houses called yanos or shabonos**, some of which can hold up to 400 people.
- Rituals, feasts and games are held in the main, central area. Each family has its own hearth where food is prepared and cooked during the day. At night, hammocks are slung near the fire which is stoked all night to keep people warm.
- It is a Yanomami custom that a hunter does not eat the meat he has killed. "He shares it out among friends and family. In return, he will be given meat by another hunter," says the website of Survival International.
- The Yanomami consider all people to be equal, and **do not have a chief**. Instead, all decisions are **based on consensus after long discussions and debates**.

#### What is the 'gold rush' in Yanomami territory?

- Since the 1980s, the Yanomami have been facing **an onslaught from illegal gold miners**. According to Survival International, Yanomami land was invaded by up to 40,000 miners who **killed the indigenous people, destroyed their villages, and brought them deadly diseases**. A fifth of the Yanomami population perished in just seven years.
- Following a sustained campaign led by Survival International, the Brazilian government notified a '**Yanomami Park**' in 1992, and the miners were expelled. However, they kept returning, and in 1993, they murdered 16 Yanomami including a baby in Haximú village. A Brazilian court subsequently found five miners guilty of the massacre. However, the illegal entry of gold miners in Yanomami country continued.

### 3.4 Hurricane Nana makes landfall in Belize, brings floods to Honduras

Atlantic Hurricane Nana has made a landfall on the coast of **Belize**.

- The country Belize is located on the **northeast coast of Central America**.
- Few days back, **Hurricane Laura** made landfall in southwestern Louisiana (South Central United States).
- **Tropical Cyclone:**
  - A hurricane is a **type of storm called a tropical cyclone**, which forms over tropical or subtropical waters.
  - A tropical cyclone is a **rotating low-pressure weather system** that has organized **thunderstorms but no fronts** (a boundary separating two air masses of different densities).
- **Speed of Winds:**
  - Tropical cyclones with maximum sustained surface **winds** of less than **39 miles per hour (mph)** are called **tropical depressions**.
  - Those with maximum sustained winds of 39 mph or **higher are called tropical storms**.
  - When a storm's maximum sustained winds reach **74 mph**, it is called a **hurricane**.
- **Measurement of Wind Speed:**
  - The **Saffir-Simpson Hurricane Wind Scale** is a **1 to 5 rating**, or category, based on a hurricane's maximum sustained winds.
  - The higher the category, the **greater the hurricane's** potential for property **damage**.
- **Formation:**
  - There needs to be **warm ocean water** and **moist, humid air** in the region.
  - When humid air is flowing upward at a zone of low pressure over warm ocean water, the water is released from the air as creating the **clouds of the storm**.
- **Features:**
  - It has a **low pressure centre** and clouds spiraling towards the eyewall surrounding the "**eye**", the central part of the system where the weather is normally calm and free of clouds.

- Its **diameter** is typically around **200 to 500 km**, but can reach 1000 km.
- The **winds** blow **counterclockwise** in the **Northern Hemisphere** and clockwise in the Southern Hemisphere.
- A tropical cyclone brings very violent winds, torrential rain, high waves and, in some cases, very destructive storm surges and coastal flooding.
- **Names:**
  - **Hurricane:** Caribbean Sea, Gulf of Mexico, North Atlantic Ocean and the eastern and central North Pacific Ocean
  - **Typhoon:** Western North Pacific
  - **Cyclone:** Bay of Bengal and Arabian Sea
  - **Willy-willies:** Australia

### 3.5 Why International Literacy Day is observed on September 8?

The United Nations marks International Literacy Day – “to remind the international community of the importance of literacy for individuals, communities and societies, and the need for intensified efforts towards more literate societies” – **on September 8.**

#### ‘International Literacy Day’

- The day aims at **raising awareness and reminding people of the importance of literacy** as a matter of dignity and human rights.
- The theme for International Literacy Day 2020 is “**Literacy teaching and learning in the COVID-19 crisis and beyond**”.
- The Literacy Day this year will reflect on the innovative and effective pedagogies that can be used in youth and adult literacy programmes to face the pandemic and beyond.
- **UNESCO** proclaimed September 8 as International Literacy Day at its **General Conference in 1966**, which stated, “The hundreds of millions of illiterate adults still existing in the world, make it essential to change national education policies.”
- It emphasised the **need for the real emancipation of the people** and added that education systems across the world should provide the training required for children and working adults so that they can learn to read and write.
- Following the UNESCO General conference, **the first International Literacy Day was celebrated on September 8, 1967.**

- Literacy goals are a key part of the **UN's Sustainable Development Goals (SDG) and its 2030 Agenda** for Sustainable Development.

### Literacy in India

- In India, as per the last census in 2011, **a total of 74.04 per cent are literate, an increase of 9.2 per cent from the last decade (2001-11)**. The country will take another 50 years to achieve universal literacy, which is 2060, as per UNESCO.
- According to the report 'Household Social Consumption: Education in India as part of 75th round of National Sample Survey – from July 2017 to June 2018, which is based on National Statistical Office (NSO) data, **Kerala is the most literate state** in the country, with 96.2 per cent literacy, while **Andhra Pradesh features at the bottom** with a rate of 66.4 per cent.

### 3.6 Typhoon Haishen approaches Japan after Maysak leaves several injured

Recently, **Korean Peninsula** and **Japan** were hit by two typhoons named **Maysak** and **Haishen**.

#### Typhoons

- Typhoons are a kind of **storm**. The storms, depending on where they occur, may be called **hurricanes, typhoons or cyclones**.
  - **Typhoons:** In the China Sea and Pacific Ocean.
  - **Hurricanes:** In the West Indian islands in the Caribbean Sea and Atlantic Ocean.
  - **Tornados:** In the Guinea lands of West Africa and southern USA.
  - **Willy-willies:** In north-western Australia and
  - **Tropical Cyclones:** In the Indian Ocean Region.
- The scientific name for all these kinds of storms is **tropical cyclones**.
  - **Tropical cyclones** are intense circular storms that originate over the warm tropical oceans with speed more than 119 kilometres per hour and heavy rains.
- **Categorisation:** Both typhoons were categorised as a **Category 4 hurricane storm**.
  - A Category 4 storm has **wind speeds between 130-156 mph** and can uproot trees and bring down power lines.
  - Hurricanes are categorized on the **Saffir-Simpson Hurricane Wind Scale**, which rates them on a scale of 1 to 5 based on wind speed. Hurricanes

that reach category **three or higher** are classified as **major hurricanes**.

- **Naming:** The **Maysak** typhoon takes its name from a **Cambodian word** for a type of **tree**. While, Haishen means **sea god** in **Chinese**.
  - Typhoon Maysak and Haishen are referred to as typhoon number 9 and 10 in Japan.
    - In **Japan** the first typhoon to occur after January 1<sup>st</sup> of the year is called typhoon number 1.
    - In the **USA**, hurricanes are referred to by English names.
    - The intergovernmental organisation called the **Typhoon Committee** which has 14 members including Japan, USA and China uses Asian names for typhoons that are contributed by the member countries.
      - Haishen was a name recommended by China, while Maysak is a Combodian name.

### 3.7 The Insurrection Act of 1807 – Roger Stone to Donald Trump: bring in martial law if you lose election

Republican party supporters are suggesting that Trump should enforce martial law in the US and seize power if he loses the November-3 election. This martial law can be imposed through the **Insurrection Act of 1807**.

- Under the US Constitution, **the governors of states are responsible for maintaining law and order within state boundaries**. A law called the **Posse Comitatus Act**, which reflects this principle, **restricts the federal military's participation in domestic law enforcement**. The **Insurrection Act creates an exception** to the Posse Comitatus Act.
- The Insurrection Act was **framed during the era of Thomas Jefferson, the third US President**, to prevent a suspected rebellion by Aaron Burr, his former vice-president.
- The law has since been amended several times, and now consists of a group of statutes that **empower the US President to use the National Guard or the military to deal with domestic crises**, in certain circumstances.
- **The President does not require the state governor's approval to send troops** under



some scenarios laid down by the law. A successful legal challenge to such use of the law is also “very unlikely”.

- Although the Act has been enforced on numerous occasions in US history, its use in recent decades has been widely seen as unpopular. It has been used **sparingly since the 1960s**, and was **last invoked during the Rodney King unrest of 1992**.

### 3.8 What is serial interval, and how can it be managed to control Covid-19?

A recent research paper published in the journal Science, written by Benjamin Cowling and other researchers at the University of Hong Kong, said China, which has now gone over a month without any locally transmitted Covid-19 cases, was able to contain Covid-19 due to its ability to manage the serial interval.

#### What is ‘serial interval’?

The serial interval is the duration between symptom onset of a primary case and symptom onset of secondary cases (contacts) generated by the primary case. In simple terms, the serial interval is the gap between the onset of Covid-19 symptoms in Person A and Person B, who is infected by Person A.

#### What does changes in serial interval indicate?

- The serial interval **helps to gauge the effectiveness of infection control interventions** besides indicating **rising population immunity and forecast future incidence**. — Since 2005 — *Feel the Pulse of UPSC...*
- Thus, the more quickly persons who contracted Covid-19 are identified and isolated, the shorter the serial interval becomes and cuts down opportunities for transmission of the virus.
- To manage serial interval, a robust system of contact tracing, quarantine, and isolation protocols should be in place.

#### How did China and South Korea manage the serial interval?

- In the paper, the researchers found that the serial interval in Wuhan came down from 7.8 days to 2.6 days between early January and early February. Quarantining contacts within 1 day from symptom onset helped reduce Covid-19 transmission by 60 per cent, the researchers said.
- This, the researchers suggest, was made possible due to aggressive contact tracing,

quarantine, and isolation, thereby ensuring that infected patients, because they were isolated, could not infect any more people later in the infection cycle.

- The report also mentioned that interventions such as suspension of intra- and intercity travel, and different forms of social distancing widely implemented in different Chinese cities kept the serial interval low.
- Similarly, a separate study by researchers in Zurich and Seoul, published in the International Journal of Infectious Diseases, found that the serial interval in South Korea, another country whose Covid-19 response has been touted as a success story, was estimated to be 3.63 days, crediting the effectiveness of the country's intensive contact tracing efforts.

### 3.9 Long live Barbados as a republic, soon to be free of tarnished 'global Britain'

Queen Elizabeth II, who is the head of state in the UK and 15 other Commonwealth realms, including Canada, Australia and New Zealand, will be dropped as monarch by Barbados next year. Before it celebrates its 55th anniversary of independence from British rule in November 2021, the prosperous West Indies nation will make history **by becoming the first country in almost three decades to sever ties with the British royal family and become a republic**; Mauritius being the last to do so in 1992.

#### Why Barbados wants to become a republic?

- After Barbados became independent in 1966 after 341 years of British rule, it chose to retain a formal link with the British royal family, as did other self-governing Commonwealth nations such as Canada and Australia.
- In 1998, a constitutional review commission in the country recommended that Barbados become a republic.
- The recent announcement does not come as a surprise to Britain, and both the British royal family and the UK foreign ministry have reacted by saying that the decision was up to the people of Barbados.
- The Caribbean nation is, however, expected to remain a member of the Commonwealth of Nations, the 54-nation club of mostly former British colonies which is led by the queen, and includes India.

#### Significance of the move

- When Barbados decided to retain the British monarch as head of state even after achieving independence, it was seen as a strategic move to maintain close ties with the United Kingdom.
- However, many thought of the link as a lingering symbol of imperialism and racism– a view that seems to have become overwhelmingly popular today.
- Experts have also said that move could have received an impetus thanks to the Black Lives Matter movement and its worldwide anti-racism protests after the death of George Floyd in the US in May.
- In the Caribbean region, Barbados will now follow the lead of Guyana, who dropped the queen as head of state in 1970, Trinidad and Tobago in 1976 and Dominica in 1978.
- The decision could also have an effect on Jamaica, whose prime minister has pledged to hold a referendum on the topic.

#### 'Queen' rule in India

- When the British ruled India, the Queen's family, known as the **House of Windsor**, held the title of '**Emperor/Empress of India**' from 1876 when Victoria was the ruling monarch.
- The last person in the family styled as '**Emperor**' of India was **George VI**, Queen Elizabeth II's father.
- The Windsors' legal ties with India were severed after the country became a republic in 1950, but continued with Pakistan, which did not adopt its first constitution until 1956, and Elizabeth II officially served as the country's 'Queen' for four years after her coronation in 1952.

#### 3.10 Nagorno-Karabakh: What's behind the fighting between Armenia and Azerbaijan?

The contested Nagorno-Karabakh region, a mountainous and heavily-forested patch of land (in South Caucasus), is at the heart of a decades-long armed standoff between neighbours Armenia and Azerbaijan.

Under international law, **Nagorno-Karabakh is recognised as part of Azerbaijan**. But the **ethnic Armenians** who make up the vast majority of the population reject Azerbaijani rule. They have been running their own affairs, with support from Armenia, since Azerbaijan's forces were pushed out in a war in the 1990s.



### Issue

- The status of the region has been **disputed at least since 1918**, when Armenia and Azerbaijan became independent from the Russian empire.
- In the early 1920s, **Soviet rule was imposed in the south Caucasus and the predominantly Armenian-populated Nagorno-Karabakh became an autonomous region** within the then-Soviet republic of Azerbaijan, with most decisions being made in Moscow.
- But decades later, as the Soviet Union started to crumble, it became apparent that **Nagorno-Karabakh would come under the direct rule of the government in the Azerbaijani capital, Baku**. The ethnic Armenians did not accept that.
- In 1988, **the Nagorno-Karabakh legislature voted to join the Armenian republic**, a demand strongly opposed by both the Azerbaijani Soviet government and Moscow.
- After the collapse of the Soviet Union in 1991, **Yerevan-backed Armenian separatists seized the territory**, home to a significant Azerbaijani minority, as well as seven adjacent Azerbaijani districts. At least 30,000 people were killed and hundreds of thousands were forced from their homes in the fighting.

- Despite an **internationally-brokered ceasefire agreed in 1994**, peace negotiations have stalled and clashes erupt frequently around Nagorno-Karabakh and along the Azerbaijan-Armenia border.
- In April 2016, dozens of people from both sides were killed in the most serious fighting in Nagorno-Karabakh in years.

### OSCE Minsk Group

- The OSCE Minsk Group was **created in 1992** by the **Conference on Security and Cooperation in Europe (CSCE, now Organization for Security and Co-operation in Europe (OSCE))** to encourage a peaceful, negotiated resolution to the conflict between Azerbaijan and Armenia over **Nagorno-Karabakh**.
- The Minsk Group is headed by a co-chairmanship consisting of **France, Russia and the United States**. Furthermore, the Minsk Group also includes the following participating states: **Belarus, Germany, Italy, Portugal, the Netherlands, Sweden, Finland, Turkey** as well as **Armenia and Azerbaijan**.
- The main objectives of the Minsk Process are as follows –
  - Providing an appropriate framework for conflict resolution in the way of assuring the negotiation process supported by the Minsk Group;
  - Obtaining conclusion by the Parties of an agreement on the cessation of the armed conflict in order to permit the convening of the Minsk Conference;
  - Promoting the peace process by deploying OSCE multinational peacekeeping forces.
- Surprisingly, the conference at Minsk that was scheduled to happen after the Helsinki Additional meeting of the CSCE Council in the year 1992 has not happened till this date. The decision to deploy multilateral peacekeeping forces as an essential part of the overall settlement of the conflict was decided in the **Budapest Summit of the co-chairmanship** (i.e. France, Russia and the United States) in the year 1994.
- **Criticism** – Azerbaijanis have long distrusted the OSCE's Minsk group, co-chaired by Russia, France, and the United States. **All three countries have large Armenian diasporas**, while **Russia and Armenia are strategic allies**, something Azerbaijan argues is grounds for them to consider it as favouring the Armenians in the conflict. Many Azerbaijanis accuse the Minsk Group of not being effective and fair in their work.

## Ramifications for India

- India has good ties with both Armenia and Azerbaijan. **The North-South international transport corridor goes from Mumbai to Chabahar via Azerbaijan to Moscow**, something crucial for India's connectivity plans.
- In fact, in 2018, the then Indian External affairs minister Sushma Swaraj had visited **Fire Temple in Baku in Azerbaijan**. The temple was once used by **Hindu and Zoroastrian communities**, probably by visiting merchants from India as a place of worship.
- But when it comes to Armenia, it backs India on some key several fronts. In the year 2019, Armenian PM Nikol Pashinyan said, *"In the Kashmir issue we fully defend the Indian position and it is our firm position."*
- **Pakistan is the only country in the world that does not recognise Armenia**. Islamabad's close ties with Azerbaijan and Turkey have a substantial role in this decision.
- **Like Turkey, Islamabad doesn't recognise the Armenian Genocide during World War 1**. During the world war one, Ottomans or present-day Turkey killed 1.5 million ethnic Armenians. Turkey continues to deny the genocide till this date but a number of countries including the US, Russia recognise it.

## NATIONAL

### 4.1 India's target to gasify 100 MT coal to entail investment of over Rs 4 lakh cr: Joshi

India aims for 100 million tonnes (MT) coal gasification by 2030 with investments worth over Rs 4 lakh crores, the Union Minister of Coal and Mines has confirmed.

For encouraging use of clean sources of fuel, government has provided for a **concession of 20% on revenue share of coal used for gasification**. It will boost production of **synthetic natural gas, energy fuel, urea for fertilisers** and production of other chemicals.

#### 'Coal Gasification'

- The coal gasification is the process of **converting coal into synthetic gas**, which is a mixture of hydrogen, carbon monoxide and carbon dioxide.
- This can be used in a variety of applications such as in the production of electricity and making chemical products, such as fertilisers.

#### Benefits



- The process of **Coal Gasification** chemically transforms coal into **Synthetic Natural Gas (SNG)**, instead of burning the coal. It produces **Syngas** which is a mixture consisting primarily of **methane (CH<sub>4</sub>)**, **carbon monoxide (CO)**, **hydrogen (H<sub>2</sub>)**, **carbon dioxide (CO<sub>2</sub>)** and **water vapour (H<sub>2</sub>O)**.
- India imports 50-100 lakh tonnes of urea every year, hence the revival of energy plants using coal gasification technology will help increase availability of domestically produced fertilisers.
- With coal being the most abundantly available fossil fuel across the world, the potential of coal gasification is huge. Even low grade coal can be used in this process.
- This process is around **17 to 20% more efficient than conventional coal-burning** to produce electricity. Hence, it reduces the dependency on coal mining for energy generating power plants.
- **It can be used in hydrogen fuel cell production** because gasification of coal is one method that can produce power liquid fuel chemical and hydrogen.

#### 4.2 No takers for famed turmeric in Odisha's Kandhamal

With COVID-19 sweeping across the region, the farmers of Kandhamal Haldi have been left high and dry as procurement of the condiment has been badly affected by the pandemic.

Though Kandhamal saw a bumper yield this year, less than 20% of raw turmeric has been sold so far, leaving the rest of the produce with the farmers.

##### 'Kandhamal Haldi'

- With more than 60% of the geographical area covered with hills and forest, **Kandhamal offers ideal conditions for cultivation of various spices including turmeric, ginger, mustard and tamarind.**
- '**Kandhamal Haladi**' for which GI tag has been received is a pure organic product. Tribals grow the tuber without applying fertiliser or pesticide. The aromatic value and golden yellow colour of 'Kandhamal Haladi' make it stand out from the rest.
- The cultivation begins in the summer months of **April and May**.
- The tuber is **harvested during December to February**. The raw turmeric is then boiled and sun-dried.
- It was accorded a 'GI Tag' last year.

### Geographical Indication (GI) Tag

- A geographical indication is a sign used on products that have a specific geographical origin and possess qualities or a reputation that are due to that origin. GI tags are given on the basis of the Geographical Indications of Goods (**Registration and Protection Act, 1999**).
- Geographical Indications are covered as a **component of intellectual property rights (IPRs) under the Paris Convention for the Protection of Industrial Property**. At the International level, **GI is governed by the World Trade Organisation's (WTO's) Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS)**.
- GI tag secures the quality and authenticity of a product to a particular geographical origin.
- It provides legal protection from duplication.
- The **first product** to get GI tag was **Darjeeling Tea**.

### 4.3 Modi lauds toy hub Channapatna, but more than China this town is upset with rival at home

The manufacturers of Channapatna toys are suffering due to the COVID-19 pandemic with more than 25 to 30% out of the nearly 200 plus units, functioning on a nominal basis owing to lack of demand for toys.

**'Channapatna toys'** — Since 2005 — *Feel the Pulse of UPSC...*

- Channapatna toys are a particular form of **wooden toys (and dolls)** that are manufactured in the town of Channapatna in the Ramanagara district of Karnataka state.
- This traditional craft is protected as a **geographical indication(GI)**.
- As a result of the popularity of these toys, Channapatna is known as **Gombegala Ooru (toy-town) of Karnataka**.
- According to most accounts, the manufacturing of toys in Channapatna **goes back to at least 200 years**

### 4.4 CERC Approves Introduction of Green Term-Ahead Market Contracts on IEX

Ministry of New and Renewable Energy has launched pan-India Green Term Ahead Market (GTAM) in electricity as a first step towards Greening the Indian short term power market.

### Significance

- The introduction of GTAM platform would **lessen the burden on RE-rich States** and incentivise them to **develop RE capacity beyond their own renewable purchase obligation (RPO)**. This would promote RE merchant capacity addition and help in achieving RE capacity addition targets of the country.
- GTAM platform will lead to **increase in number of participants in renewable energy sector**. It will **benefit buyers of RE through competitive prices and transparent and flexible procurement**. It will also benefit RE sellers by providing **access to pan-India market**.
- Green Term Ahead Market contracts will allow **additional avenues to the RE generators for sale of renewable energy**; enable Obligated entities to **procure renewable power at competitive prices** to meet their **Renewable Purchase Obligations (RPO)**; and provide a platform to environmentally conscious open access consumers and utilities to **buy green power**.

### Key features

- Transactions through GTAM will be **bilateral in nature** with **clear identification of corresponding buyers and sellers**, there will not be any difficulty in accounting for RPO.
- GTAM contracts will be segregated into **Solar RPO & Non-Solar RPO** as RPO targets are also segregated.
- Further, within the two segments GTAM contracts will have **Green Intraday, Day Ahead Contingency, Daily and Weekly Contracts**.
- Green Intraday Contract & Day Ahead Contingency Contract – **Bidding will take place on a 15-minute time-block wise MW basis**.
- Energy scheduled through GTAM contract shall be considered as **deemed RPO compliance of the buyer**.

### 4.5 What is the Special Frontier Force also known as Establishment 22 and Vikas Battalion?

Recently, there were reports that a Special Frontier Force (SFF) unit, referred to as Vikas Battalion, has been instrumental in occupying some key heights on the Line of Actual Control (LAC) with

China in Ladakh to thwart any occupation by the Chinese troops.

### 'Special Frontier Force'

- SFF was raised in the immediate **aftermath of the 1962 Sino-India war**. It was a **covert outfit** which **recruited Tibetans** (now it has a **mixture of Tibetans and Gorkhas**) and initially went by the name of **Establishment 22**. It was named so because it was raised by Major General Sujjan Singh Uban, an Artillery officer who had commanded 22 Mountain Regiment.
- Subsequently, the group was renamed as **Special Frontier Force** and it now **falls under the purview of the Cabinet Secretariat** where it is **headed by an Inspector General** who is an Army officer of the rank of Major General.
- The units that comprise the SFF are known as **Vikas battalions**.
- The SFF units are **not part of the Army** but they **function under operational control of the Army**. The units have their own rank structures which have equivalent status with Army ranks. The SFF units function virtually as any other Army unit in operational areas despite having a separate charter and history.
- Incidentally, **women soldiers too form a part of SFF units** and perform specialised tasks.

### Role in 1971 Indo-Pak war

- In 1971, the SFF operated in the Chittagong hill tracts in East Pakistan (later Bangladesh) to neutralise Pakistan Army positions and help the Indian Army advance ahead. The operation was code-named '**Operation Eagle**'.
- They were airlifted into operational areas and infiltrated behind enemy lines to destroy lines of communication of Pakistan Army.
- They also played a vital role in preventing the escape of Pakistan Army personnel from Bangladesh into Burma (now Myanmar). By one estimate more than 3,000 SFF personnel were used in the covert operations in the eastern theatre of the 1971 war. A large number of SFF personnel received awards for their bravery.

### 4.6 Inscription of Renati Chola Era Unearthed in Andhra Pradesh

A rare inscription dating back to the **Renati Chola era** has been unearthed in a remote village of Kadapa district.

- Found engraved on a **dolomite slab and shale**, which are part of a fragmentary pillar recently excavated from the fields of Chinnadudyala village in Muddanur manda.
- Going by the language and characters, the inscription was **written in archaic Telugu**, which was readable in 25 lines – the first side with 11 lines and the remaining on the other side. It was assigned to the **8th Century A.D.**, when the region was under the rule of the **Chola Maharaja of Renadu**.
- The inscription seems to throw light on the record of a gift of six **marttus** (a measuring unit) of land gifted to a person Sidyamayyu, one of the Brahmins serving the temple at Pidukula village.
- The last lines are indicative of the priority given to morality in those days. It says the people who safeguard this inscription for future generations will acquire the status of conducting Aswamedha Yaga, and those destroying it will incur sin equivalent to causing a death in Varanasi.

### Renati (Renadu) Cholas

- The **Telugu Cholas of Renadu** (also called as **Renati Cholas**) ruled over Renadu region, the present day **Cuddapah district**. They were **originally independent**, later forced to the **suzerainty of the Eastern Chalukyas**. They had the unique honour of using the **Telugu language** in their inscriptions belonging to the 6th and 8th centuries; the inscriptions at **Gandikota**.
- The earliest Chola family in the Telugu area was that of Renadu. Regarding their origin, they belonged to the **family of Karikala Chola**.
- The earliest of this family was **Nandivarman** (500AD) who claimed **descent from the family of Karikala** and the Kasyapa Gotra. He had three sons **Simhavishnu, Sundarananda and Dhananjaya**, all of whom were ruling different territories simultaneously; the family seems to have had its origin in Erigal in the Tunmukur district, situated in the border between Pallava and Kadamba regions.
- Dhananjaya is described as Erigal-mutturaju and as ruling Renadu. In the first half of the seventh century, we find **Punyakumara**, a descendant of Nandivarman, **ruling over Renadu and Hiranyarashtra**, he too bears the title Eriyal-mutturaju.

### Chola Administration

- Chola Empire was divided into 6 Mandalams or provinces, administered by Governors.

- **Mandalams** were further divided into **Valanadus**.
- **Valanadus** into **Nadus** and **Nadus** into **Taniyars**.
- **Ur** was a type of assembly of common villages. All members of the village could become the member of ur.
- **Local self government** was there (concept of Panchayati Raj has been borrowed from it).
- Agriculture and economy flourished.
- **Silk** weaving at **Kanchi** flourished.
- Commerce and trade were brisk with trunk roads or **peruvazhis** and merchant guilds.
- **Arabian horses** were imported in large numbers to strengthen the cavalry.

#### 4.7 PM Modi, Amit Shah pay tribute to social reformer Sree Narayana Guru on birth anniversary

Union Home Minister Shri Amit Shah has paid tributes to venerable Swami Sree Narayana Guru ji on his Jayanti.

##### 'Sree Narayana Guru'

- Sree Narayana Guru was a great saint, scholar, philosopher, poet and the forerunner of social renaissance in Kerala. He was born in 1856 in a peasant family of then untouchable Ezhava caste, in Thiruvananthapuram.
- He led a reform movement in Kerala, against the injustice in the caste-ridden society in order to promote social equality.
- He gave the universal message, "**One caste, one religion, one God.**"





*"I have never come across one who is spiritually greater than Swami Narayana Guru or a person who is at par with him in spiritual attainment" – Rabindranath Tagore*

Social reformer Narayana Guru died on Sep 20, 1928.

## ANTI-CASTE CRUSADER

Born into an Ezhava family, a community that faced social injustice in caste-ridden Kerala

Led reform movement in Kerala, rejected casteism

Was influenced by Vedanta and ideas of social equality

Taught religion and Sanskrit to local children

Composed **Atmopadesa Satakam** (100 verses of self-instruction), a philosophical & literary masterpiece

**RAJA SIR'S**  
Cracking IAS Academy  
Since 2005 - Feel The Pulse of UPSC

- 'Sahodaran Ayyappan' (Pulaya Ayyappan), a social reformer from Kerala coined a rejoinder 'No Caste, No Religion, No God for Mankind'.
- 'Aravipuram Movement' was launched by Narayana Guru. He defied the religious restrictions traditionally placed on the Ezhava community and consecrated an idol of Shiva at Aravipuram.
- He was a follower of Advaita philosophy.
- He translated Tamil works like "Thirukkural" into Malayalam.
- He had written number of hymns to different gods and some of the notable ones are "Atmopadesa Sathakam" and "Darsanamala".
- He lent his support to the 'Vaikom Satyagraha'. Mahatma Gandhi met him during this time.
- 'Sivagiri pilgrimage' was conceived by three of the disciples, Vallabhasseri Govindan Vaidyar, T. K. Kittan and Muloor S. Padmanabha Panicker.

#### 4.8 Why has Uddhav Thackeray decided to create a reserved forest inside Mumbai?

Maharashtra Chief Minister Uddhav Thackeray has announced that the state government would designate a 600-acre parcel of land in the heart of urban Mumbai as a reserved forest.

- The **Aarey Milk Colony**, spread over 3,162 acres, was **established in 1949** as a centre for processing and marketing milk for Mumbai and adjoining areas.
- Over the last 70 years, this sprawling green area has been steadily eaten away at its

- edges – and 1,282 acres were acquired by the state for projects such as Film City.
- Once located on the edge of the city, it is now part of the sprawling western suburb known as Goregaon. Only 1,800-plus acres of green space, which is home to 290 species wild of flora and fauna, remain in the **last green bastion of rapidly concretising Mumbai**.
  - The land falls under the **eco-sensitive zone of the Sanjay Gandhi National Park**, and is home to around 10,000 individuals who live in 27 tribal hamlets.

#### **How the state government notifies a reserve forest?**

- Under **Section 4 of The Indian Forest Act, 1927**, the state government can “**constitute any land a reserved forest**” by issuing a notification in the Official Gazette, “declaring that it has been decided to constitute such land a reserved forest”, and “specifying, as nearly as possible, the situation and limits of such land”.
- Under the law, the government must also **appoint a Forest Settlement Officer (FSO)** “to inquire into and determine the existence, nature and extent of any rights alleged to exist in favour of any person in or over any land comprised within such limits or in or over any forest-produce, and to deal with the same”.
- The FSO will seek suggestions and objections from residents and others within 45 days of initiating the process. After taking into account the suggestions and objections, the process of turning the land into a reserved forest will be completed. Thereafter, the area will be protected from any construction.

Aarey has been at the centre of a storm since October 2019, after the Mumbai Metro Rail Corporation Limited (MMRCL) decided to construct a car shed for the Rs 32,000 crore underground Colaba-Bandra-Seepz Metro corridor, and cleared the site of over 2,000 trees, leading to a public outcry.

#### **4.9 Dr. Sarvepalli Radhakrishnan – History Of Teachers’ Day**

September 5 is commemorated as the ‘Teacher’s Day’ annually to mark the birth anniversary of Dr Sarvepalli Radhakrishnan.

- He was born on September 5, 1888 in Thiruthani, Tamil Nadu. He was **India’s first Vice President and second President**.
- He received a **knighthood in 1931** and honorary membership of the British Royal

Order of Merit in 1963. He was **the first Indian to hold a chair at the University of Oxford** – the Spalding Professor of Eastern Religion and Ethics (1936-1952), In 1930, he was appointed Haskell lecturer in Comparative Religion at the University of Chicago.

- He was elected **chairman of UNESCO's executive board** in 1948.
- He was awarded **the Bharat Ratna** in 1954.
- He was one of the founders of **Helpage India**, a renowned NGO for elderly underprivileged in India.
- He had also formed **the Krishnarpan Charity Trust** along with Ghanshyam Das Birla and some other social workers in the pre-independence era.
- Works – His book, '**The Philosophy of Rabindranath Tagore**' became famous globally in terms of showcase of Indian philosophy. His philosophy was grounded in **Advaita Vedanta**. He **defended Hinduism against "uninformed Western criticism"** and played a major role in the formation of contemporary Hindu identity.
- **His other works include** Indian Philosophy, (1923-27), The Philosophy of the Upanishads (1924), An Idealist View of Life (1932), Eastern Religions and Western Thought (1939), and East and West: Some Reflections (1955).

#### 4.10 Kesavananda Bharati, whose petition led to landmark verdict on Constitution, dies at 79

Kesavananda Bharati, the head of the Edaneer Mutt in Kasargod passed away recently. He will forever be remembered for the legal challenge that he mounted against the government of Kerala, which is considered by the majority of legal scholars as the greatest constitutional case in India's judicial history.

##### Case

By a 7-6 majority judgment delivered in '**His Holiness Kesavananda Bharati Sripadagalvaru and Ors. Vs. State of Kerala and Anr**', a 13-judge Bench of the Supreme Court ruled on April 24, 1973 that the "**basic structure**" of the Constitution is inviolable, and cannot be amended by Parliament. The basic structure doctrine has since been regarded as a fundamental tenet of Indian constitutional law.

##### What did the judgement say?

- The court held that under **Article 368 of the Constitution**, which provides Parliament

amending powers, *something must remain of the original Constitution that the new amendment would not change.*

- But while the judgment established the **doctrine of basic structure** and ruled that Parliament had no power to alter it, the **court did not define basic structure** itself.
- It only listed a few principles – among them, **federalism, secularism, and democracy**. Since then, the court has been adding new features to this concept.
- ‘**Basic structure**’ is today widely interpreted to include the *supremacy of the Constitution, the rule of law, independence of the judiciary, doctrine of separation of powers, federalism, secularism, sovereign democratic republic, the parliamentary system of government, the principle of free and fair elections, welfare state, etc.*

### Genesis

- In the early years of Independence, the Supreme Court conceded **absolute power to Parliament in amending the Constitution**, as was seen in the verdicts in *Shankari Prasad (1951) and Sajjan Singh (1965)*.
- The reason for this is believed to be that in those initial years, **the apex court had reposed faith in the wisdom of the then political leadership**, when towering luminaries of the Indian freedom movement were serving as Members of Parliament.
- In subsequent years, however, the Constitution was amended by governments at will to suit partisan political interests. The **Supreme Court in Golaknath (1967)** held that Parliament’s amending power **could not touch the Fundamental Rights**, and that this power lay only with a Constituent Assembly.
- In the early 1970s, the government of then Prime Minister Indira Gandhi enacted **major amendments to the Constitution (the 24th, 25th, 26th and 29th)** to get around the judgments of the Supreme Court in *RC Cooper (1970), Madhavrao Scindia (1970) and Golaknath (1967)*.
- In *RC Cooper*, the court had struck down **Indira’s bank nationalisation policy**, and in *Madhavrao Scindia*, it had **annulled the abolition of privy purses** of the rulers of former princely states.
- All the four amendments – **24th (fundamental rights, 1971), 25th (property rights, 1972), 26th (privy purses, 1971), 29th (land reform acts, 1972)** – as well as the judgment in *‘I C Golaknath & Ors vs State of Punjab and Anr’ (1967)*, came under

challenge in Kesavananda Bharati, in which the petitioner sought relief against the Kerala government vis-à-vis **two state land reform laws**.

- Since Golaknath was decided by Bench of 11 judges, a larger Bench was required to test its correctness, and thus 13 judges formed the Kesavananda Bench. Nani Palkhivala, Fali Nariman, and Soli Sorabjee presented the case against the government.

#### 4.11 What is Assam Rifles and why do both MoD and Home ministry control it?

Recently, the case of Assam Rifles regarding the scrapping or retention of the dual control structure for Assam Rifles (which comes under both the Ministry of Home Affairs and the Ministry of Defence) has went to the Delhi High Court.

- Assam Rifles is **one of the six central armed police forces (CAPFs)** under the administrative control of **Ministry of Home Affairs (MHA)**. The other forces being the Central Reserve Police Force (CRPF), the Border Security Force (BSF), the Indo-Tibetan Border Police (ITBP), the Central Industrial Security Force (CISF) and the Sashastra Seema Bal (SSB).
- It is tasked with the **maintenance of law and order in the North East** along with the Indian Army and **also guards the Indo-Myanmar border** in the region.
- It has a sanctioned strength of **over 63,000 personnel and has 46 battalions** apart from administrative and training staff.

#### Unique features

- It is the **only paramilitary force with a dual control structure**. While the **administrative** control of the force is with the **MHA**, its **operational** control is with the **Indian Army**, which is under the MoD.
- This means that **salaries and infrastructure** for the force is provided by the **MHA**, but the **deployment, posting, transfer and deputation** of the personnel is decided by the **Army**. All its senior ranks, from DG to IG and sector headquarters, are manned by officers from the Army. The force is **commanded by Lieutenant General from the Indian Army**.
- The force is the **only central paramilitary force (CPMF) in real sense** as its operational duties and regimentation are on the lines of the Indian Army. However, its recruitment, perks, promotion of its personnel and retirement policies are governed



according to the rules framed by the MHA for CAPFs.

### What is the issue?

- Dual-control has created two sets of demands from both within the Assam rifles and by MoD and MHA for singular control over the force by one ministry.
- A large section within the force wants to be under the administrative control of the MoD, as that would mean better perks and retirement benefits which are far higher compared to CAPFs under MHA. However, Army personnel also retire early, at 35, while the retirement age in CAPF is 60 years.
- Also, CAPF officers have recently been granted non-functional financial upgradation (NFFU) to at least financially address the issue of stagnation in their careers due to lack of avenues for promotion. But Army personnel also get one-rank-one-pension which is not available to CAPFs.
- Assam Rifles is the **oldest paramilitary force** raised way back in 1835 in British India with just 750 men. Since then it has gone on to fight in two World Wars, the Sino-Indian War of 1962 and used as an anti-insurgency force against militant groups in the North East.
- Raised as a **militia to protect British tea estates and its settlements from the raids of the NE tribes**, the force was first known as **Cachar Levy**. It was reorganised later as **Assam Frontier Force** as its role was expanded to conduct punitive operations beyond Assam borders. — Since 2005 — Feel the Pulse of UPSC...

### 4.12 Moplah Rebellion not an agrarian uprising: Evidences come out

Recently, the **Indian Council for Historical research (ICHR)** has constituted a three-member committee to review the entries in the book **Dictionary of Martyrs: India's Freedom Struggle 1857-1947**, which was released by the Prime Minister on 7th March 2019.

- The book contains an account of the **martyrs** from India's **First War of Independence in 1857**, to India's Independence in **1947**. The project for its compilation was commissioned by the Ministry of Culture to ICHR to commemorate the 150<sup>th</sup> anniversary of the **uprising of 1857**.
- A review report submitted to the Indian Council of Historical Research (ICHR) by one of its members in 2016 had recommended the delisting 387 names including victims of



**Wagon Tragedy and Malabar/Moplah Rebellion** leaders **Ali Musliyar** and **Variamkunnath Ahmad Haji** from the **Dictionary of Martyrs**.

- The year 2021 will mark the **100<sup>th</sup> year anniversary of the Malabar rebellion of 1921**.
- There has been recent controversy on a film being released on this issue.
- **Issues involved:** The review report of 2016 noted that “almost all the Moplah outrages were **communal**. They were against the Hindu society and done out of sheer intolerance.”
  - The report also said that none of those who died in the Wagon Tragedy were freedom fighters of India as they hoisted the Khilafat flag and established Khilafat and Khilafat courts for a brief period.
  - Issue of forced conversion of Hindus into Islam by the leaders of the rebellion were also raised by many organizations.
  - However, many historians view this as a one of the **first cases of nationalist uprisings in Southern India**.

### Malabar Rebellion or Moplah Uprising or Mapillah Revolt (1921)



- **Reasons:**
  - The trigger of the uprising came from the **Non-Cooperation Movement** launched by the Congress in 1920 along with the **Khilafat agitation**.
  - The **anti-British sentiment** fuelled by these agitations affected the **Muslim Mapillahs** (also known as **Moplahs**) of **south Malabar** region of **Kerala**.
  - **New Tenancy Laws:** After the death of Tipu Sultan in 1799 in the **Fourth Anglo-Mysore War**, Malabar had come under British authority as part of the **Madras Presidency**.
    - The British had introduced **new tenancy laws** that tremendously

**favoured the landlords** known as *Janmis* and instituted a **far more exploitative system for peasants** than before.

- The new laws **deprived the peasants of all guaranteed rights to the land**, share in the produce they earlier got and in effect rendered them landless.
- **The Communal Angle:** Most of the **landlords were Namboodiri Brahmins** while most of the tenants were **Mapillah Muslims**.
- **The Revolt:** Fuelled by the fiery speeches by Muslim religious leaders and anti-british sentiments, the Mopillahs launched a **violent rebellion**. Numerous **actions of violence were reported and series of persecutions** were committed both **against the British and the Hindu landlords**.
- **Support:** In the initial stages, the movement had the support of **Mahatma Gandhi** and other Indian nationalist leaders, but as it turned violent they distanced themselves from it.
- **Collapse:** By the end of 1921, the rebellion was crushed by the British who had raised a special battalion, the **Malabar Special Force** for the riot.
- **Wagon Tragedy:** In November 1921, 67 Moplah prisoners were killed when they were being transported in a closed freight wagon from Tirur to the Central Prison in Podanur. They died of suffocation. This event is called the Wagon Tragedy.

#### **Khilafat Movement**

- The Khilafat agitation was launched in India in **1919**.
- It was led by **Muhammad Ali and Shaukat Ali**.
- The demands of the movement were :
  - Control of **Turkish Caliphate** or Khalifa over islamic sacred places in the erstwhile Ottoman Empire.
  - The *Jazirat-ul-Arab* i.e. Arabia, Syria, Palestine, and Iraq remain under Muslim Sovereignty
  - Khalifa is left with sufficient territory to defend the Ismaic faith.
- The movement was supported by the **Indian National Congress**.
- Mahatma Gandhi wanted to align it to the Non-Cooperation Movement to unite Hindus and Muslims against the British rule.

### Indian Council of Historical Research

- ICHR is an **autonomous organization**, established under Societies Registration Act, 1860 in 1972.
- It is under the **Ministry of Education**.
- **Objectives**
  - To bring historians together for exchange of views.
  - To give a national direction to an objective and scientific writing of history.
  - To promote, accelerate and coordinate research in history and ensure its dissemination.
- The council also provides grants, assistance and fellowships for historical research.

#### 4.13 RS considering extension of Tenure of Standing Committees

The Rajya Sabha Secretariat is considering changing the rules governing the **Departmentally-Related Standing Committees' (DRSC)** tenure to make it to two years from the present one year so that the **panels have enough time** to work on the subjects selected by them.

- **Reason for Extension:** The tenure of all the DRSCs of Parliament is **ending** on 11<sup>th</sup> September, 2020 and they can't hold deliberations till new panels are formed.
  - A significant amount of the tenure of the committees was lost due to the **Covid-19** pandemic.
  - Many of the panels have not been able to complete reports on the subjects they were working on. For example, the **Information Technology panel** could not complete deliberations on **"Safeguarding citizens' rights and prevention of misuse of social/online news media platforms including special emphasis on women security in the digital space"**, for which it summoned Facebook recently.
- **Options Being Considered:**
  - To **extend the term of the panels for a year**.
  - To form **new committees with a fixed tenure of two years**.
- **Origin:** On the recommendation of the Rules Committee of the Lok Sabha, **17 DRSCs** were set up in the Parliament in **1993**. In **2004**, seven more such committees were set up, thus increasing their number from **17 to 24**.

- **Departmental Standing Committees:** Out of the 24 standing committees, **8 work under the Rajya Sabha and 16 under the Lok Sabha.**
- **Members:** Each standing committee consists of **31 members (21 from Lok Sabha and 10 from Rajya Sabha).** The members of the Lok Sabha are **nominated by the Speaker**, just as the members of the Rajya Sabha are nominated by the Chairman from amongst its members
  - A **minister is not eligible to be nominated as a member of any of the standing committees.** In case a member, after his nomination to any of the standing committees, is appointed a minister, he then ceases to be a member of the committee
- **Tenure:** The term of office of each standing committee is **one year from the date of its constitution.**
- **Role:**
  - They secure more **accountability of the Executive** (i.e., the Council of Ministers) to the Parliament. Through Committees, Parliament exercises its control and influence over administration and keeps vigilance over the executive.
  - The Committees **aid and assist the Legislature in discharging its duties** and regulating its functions effectively, expeditiously and efficiently. They assist the Parliament in thoroughly and systematically scrutinising the matters which could not be discussed on the floor at length.
  - The Committees also provide the **expertise on a matter** which is referred to them.
- **New Draft Guidelines:** Recently, Rajya Sabha secretariat prepared **new draft guidelines for its standing committees.** The guidelines are still under review by the Lok Sabha Speaker. This may include:
  - A minimum 15 days' notice and confirmation by one-third of the members before holding a panel meeting.
  - Nomination of members based on their qualifications, interests and occupations.
  - At least 50% attendance while collecting evidence and adopting reports.

## Parliamentary Committees

- The Constitution of India makes a mention of these committees at different places, but **without making any specific provisions regarding their composition, tenure, functions, etc.**
- Broadly, parliamentary committees are of two kinds—**Standing Committees and Ad Hoc Committees.**
- **Standing Committees : Permanent** (constituted every year or periodically) and **work on a continuous basis.** They can be categorized into following broad groups
  - **Financial Committees**
  - **Departmental Standing Committees (24)**
  - **Committees to Inquire**
  - **Committees to Scrutinise and Control**
  - **Committees Relating to the Day-to-Day Business of the House**
  - **House-Keeping Committees or Service Committees**
- **Ad Hoc Committees: Temporary** and cease to exist on completion of the task assigned.
  - Ad hoc committees can be divided into two categories, that is, Inquiry Committee and Advisory Committee.
  - Examples of Ad Hoc Committees: **Joint Committee on Bofors Contract, Joint Committee on Fertilizer Pricing etc.**

## Road Ahead

- The sittings of Parliament are **steadily declining over the years.** From 100-150 sittings in the 1950s, the number is down to 60-70 sittings per year in 2019-20. In such a scenario, a **major part of parliamentary work is done by DRSCs.** A longer tenure will help in completion of tasks and deliberations assigned to them.
- However, there is a need for a number of other **parliamentary reforms.** It has been seen that the majority of the bills were passed by the Parliament through a voice vote, without much debating and without referring them to the parliamentary committees. For example, **RTI Amendment Act (2019), UAPA Amendment Act (2019)** – which have huge implications on civil liberties, **were passed without referring them to the Parliamentary committee.**

#### 4.14 19th meeting of Supreme Court-mandated Committee on Content Regulation in Government Advertising held

Recently, the 19th meeting of Supreme Court mandated Committee on Content Regulation in Government Advertising (CCRGA) was held.

##### CCRGA

- As per the directions of the Supreme Court on 13th May, 2015, the Government of India on 6th April, 2016 had set up a **three member body** consisting of “persons with unimpeachable neutrality and impartiality and who have excelled in their respective fields”, **to look into content regulation of government funded advertisements of all media platforms.**
- As per directions of the Supreme Court, **states are mandated to set up their respective three member committees** on Content Regulation of Government Advertisements. **Karnataka, Goa, Mizoram and Nagaland** States have already constituted state-level Three Member Committees. The State Government of **Chhattisgarh** has given its consent to the Central Committee to monitor the content of their government advertisements.

##### Guidelines

- Under the Supreme Court’s guidelines– *“the content of Government Advertisement should be relevant to the government’s constitutional and legal obligations as well as the citizen’s right and entitlements”.*
- The Supreme Court has also observed that –
  - Advertisement materials **should be presented in an objective, fair and accessible manner** and designed to meet the objectives of the campaign,
  - Advertisement materials should be **objective and not directed at promoting political interests** of ruling party,
  - Advertisement Campaigns be **justified and undertaken in an efficient and cost-effective** manner, and
  - Government advertising must **comply with legal requirement and financial regulations** and procedures.



#### 4.15 Govind Swarup, who pioneered radio astronomy in India, dies at 91

Govind Swarup, the man who pioneered radio astronomy in India has died recently in Pune following a brief illness. He was 91. Swarup is credited with conceptualising and leading the team that set up the **Ooty Radio Telescope (ORT)** and **Giant Meterwave Radio Telescope (GMRT)**.

- Regarded as the “*Father of Indian Radio Astronomy*”, Swarup was the **founder-director of TIFR – National Centre for Radio Astrophysics (NCRA)** in Pune.
- Swarup was born in Thakurwada in Uttar Pradesh in 1929. He completed his master’s degree from Allahabad University in 1950 and went on to pursue his doctoral studies at Stanford University in 1961.
- After completing his doctorate, Swarup contemplated going back to India and discussed these ideas with two colleagues, M R Kundu and T K Menon, who were also working in the US at the time. The idea was to return to India with the aim of developing the field of radio astronomy.
- Swarup returned to India in 1965, and soon joined the Tata Institute of Fundamental Research.

#### Works

- Setting up the ORT was no easy task but Swarup was **aware of the geographical advantage India enjoyed owing to its proximity to the equator**. His clear vision helped set up the 500 metre-long, 30 metre-wide set of dishes in a cylindrical parabolic fashion, covering an area of 15,000 square metre in the lowest cost possible, yet the telescope was the largest at that time.
- The ORT, which was completed in 1970, **makes it possible to track celestial objects for 10 hours continuously** and is **one of the most sensitive telescopes in the world**.
- With the experience of ORT, **Swarup decided to set up Pune’s GMRT**, an array of 30 dish antennas spread across a distance of 25 km, arranged in a ‘Y’ shape at Khodad in Junnar taluka. Since 2002, GMRT has facilitated some novel discoveries in the field of astronomy. Swarup had also guided the upgradation process that the GMRT underwent in recent years.

#### ‘Radio Waves’

Radio waves are a **form of electromagnetic radiation**, just like the visible light you are used to seeing with your eyes. The difference in radio waves is that **they have a longer wavelength and are lower in frequency** than visible light. They also **carry less energy**. Radio waves are **far weaker** than light so we need electronic amplifiers to help us boost their signal. Any electromagnetic wave with a **wavelength greater than 1 mm is a radio wave**.

#### 'Radio Astronomy'

- Radio astronomy is the **study of celestial objects that give off radio waves**. With radio astronomy, we study astronomical phenomena that are often **invisible or hidden in other portions of the electromagnetic spectrum**.
- Astronomers around the world use **radio telescopes to observe the naturally occurring radiowaves that come from stars, planets, galaxies, clouds of dust, and molecules of gas**. Most of us are familiar with visible-light astronomy and what it reveals about these objects. Visible "light – also known as optical light – is what we see with our eyes, however, visible light doesn't tell the whole story about an object. To get a complete understanding of a distant quasar or a planet, for example, **astronomers study it in as many wavelengths as possible, including the radio range**.

#### 4.16 Protecting mother tongue, culture and nature will be a real tribute to Telugu litterateur, Shri Viswanatha Satyanarayana: Vice President

Vice President of India Shri M Venkaiah Naidu inaugurated the 125th birth anniversary celebrations of the Kavi Samrat, Shri Viswanatha Satyanarayana, organised by the Viswanatha Sahitya Peetham. He described the literary genius as an embodiment of Indian culture and traditions.

#### Vishwanatha Satyanarayana

- Vishwanatha Satyanarayana was a 20th century Telugu write. His works included **poetry, novels, dramatic play, short stories and speeches**, covering a wide range of subjects such as analysis of **history, philosophy, religion, sociology, political science, linguistics, psychology and consciousness studies, epistemology, aesthetics and spiritualism**.
- Viswanatha's wrote in both a modern and classical style, in complex modes. His popular works include **Ramayana Kalpa Vrukshamu** (Ramayana the wish-granting divine tree), **Kinnersani Patalu** (Mermaid songs) and the novel **Veyipadagalu** (The Thousand Hoods).

- Most of Viswanatha's novels depict evolving social conditions, and involve an in-depth analysis of culture as well as human nature and consciousness.
- Among many awards, he was awarded the **Jnanpith Award in 1970**, the **first for a Telugu writer**, and **Padma Bhushan in 1971**.

#### 4.17 Shipping Minister launches 'SAROD-Ports' for disputes of maritime sector

Union Minister of State for Shipping Shri Mansukh Mandaviya has launched 'SAROD-Ports' (Society for Affordable Redressal of Disputes – Ports).

##### SAROD-Ports:

- It is established under **Societies Registration Act, 1860**.
- 'SAROD-Ports' is similar to provision available in Highway Sector in the form of **SAROD-Roads** constituted by **National Highways Authority of India (NHAI)**.
- It consists of members from **Indian Ports Association (IPA)** and **Indian Private Ports and Terminals Association (IPTTA)**.
- **Functions:**
  - SAROD-Ports will **advise and assist** in settlement of disputes **through arbitrations** in the maritime sector, including ports and shipping sector in Major Port Trusts, Non-major Ports, including private ports, jetties, terminals and harbours...
  - It will also cover disputes between:
    - Granting authority and Licensee/Concessionaire /Contractor.
    - Also, disputes between Licensee/Concessionaire and their contractors arising out of and during the course of execution of various contracts.
- **Benefits:**
  - SAROD-Ports will become the pivotal mechanism of **ummeed (hope), vishwas (trust) and nyaya (justice)** in the Port sector of India. It will lead to **saving huge amounts of legal expenditure and time**.
  - Enforcement of **concession agreements** in the letter and spirit.

- A **concession agreement** is a **contract** that gives a company the right to operate a specific business within a government's jurisdiction or on another firm's property, subject to particular terms.
- It will promote **ease of doing business** in the maritime sector because of the **fast, timely, cost effective and robust dispute resolution mechanism**.
  - It will inspire confidence in the private players.
  - All major Ports will shift towards the '**Landlord Model**'.
- **Model Concession Agreement**
  - Model Concession Agreement is the **core of public private partnership projects** in India. It sets regulatory framework to implement PPP (Public Private Projects) in India. There are MCAs for national highways, urban rail transit systems, state highways and ports.
  - **Amendments to the Model Concession Agreement (MCA):** In January 2018, the government approved amendments in the Model Concession Agreement (MCA) to make the Port Projects more investor-friendly.
  - **Key features:**
    - Constitution of the **Society for Affordable Redressal of Disputes – Ports (SAROD-Ports)** as dispute resolution mechanism...
    - Providing **an exit route to developers** by way of divesting their equity upto 100% after completion of 2 years from the Commercial Operation Date (COD).
    - Under provision of additional land to the Concessionaire, **land rent has been reduced** from 200% to 120% of the applicable scale of rates for the proposed additional land.
    - Introduction of **Complaint Portal** for the use of port users.

### Landlord Port Model

- In the landlord port model, the **publicly governed port authority acts as a regulatory body** and as landlord while **private companies carry out port operations**—mainly cargo-handling activities.

- The port authority maintains ownership of the port while the infrastructure is leased to private firms that provide and maintain their own superstructure and install their own equipment to handle cargo.
- In return, the landlord port gets a share of the revenue from the private entity.
- **Significance:**
  - Currently, most major port trusts in India carry out terminal operations as well, resulting in a hybrid model of port governance. The involvement of the port authorities in terminal operations leads to a **conflict of interest**.
  - The **neutrality** of the landlord port authority is a **basic requirement** for fair competition between port service providers, particularly the terminal operators.
  - The role of the landlord port authority would be to carry out all public sector services and operations such as the award of bids for cargo terminals and dredging.

#### 4.18 Living legend of statistics Prof C R Rao felicitated on his 100th birthday

Padma Vibhushan Professor CR Rao was recently felicitated on the occasion of his 100th birthday. He is remembered for path-breaking contributions **in the field of statistics**, for recognising and facilitating the critical **role of data and computing to handle scientific and social challenges**, for mentoring inspiring and nurturing generations of students and researchers and **for developing world-class statistical infrastructure in India**.

#### CR Rao

- Calyampudi Radhakrishna Rao was born in the small town of Huvina Hadagali (in 1920) in present-day Karnataka (in erstwhile Madras province).
- He was an exceptionally good student, and completed a BA (Hons.) degree in Mathematics from Andhra University with distinction and first rank.
- One of his friends took him to the **nascent Indian Statistical Institute**; the legendary Prasanta Chandra Mahalanobis had established the institute 10 years earlier. The young C.R. Rao joined a training programme offered by the ISI.
- In 1943, Professor Rao completed his MA in Statistics from Calcutta University, again with a first rank. By the age of 22, he had already published seven technical papers in

mathematical statistics.

- Mahalanobis recognised the potential of this young man, and **C.R. Rao was deputed to Cambridge University in 1946** to assist in the analysis of some anthropological data. While he was at Cambridge, he registered for a doctoral degree under the guidance of the celebrated Professor Ronald A. Fisher. He returned to the ISI in 1948 after being awarded his Ph.D. and was appointed professor there the following year.
- The statistical test used extensively in econometrics, widely known as **Lagrange multiplier test, was developed by Professor Rao in 1947.**
- As India started building its institutional infrastructure after Independence, Professor Rao was **instrumental in setting up our national statistical framework.** During the 1960s, he served as **Chairman of the Committee on Statistics** of the Government of India. He also chaired the **Committee on Mathematics of the Atomic Energy Commission** and was a member of the **Committee on Science and Technology.** He was the moving force behind the **International Statistical Educational Centre (ISEC)** at the ISI, where students and government statisticians from developing countries could learn the techniques of statistics and the methods for establishing their national statistical bureaus.
- **Awards** – He has been the recipient of countless awards and accolades. He was honoured with the **Padma Vibhushan in 2001.** The then President of the United States, George W. Bush, conferred the **National Medal of Science** on him in 2002. He received the **Shanti Swarup Bhatnagar Award** from Prime Minister Nehru in 1963. The American Statistical Association awarded him the **Samuel S Wilks Memorial Award** in 1989. In 2011, he became the first non-European and non-American to receive the **Guy Medal in Gold from the Royal Statistical Society of the United Kingdom.** Professor Rao has been bestowed with 38 honorary doctoral degrees from universities located in 19 different countries.

#### 4.19 What constitutes a breach of legislature's privilege?

Recently, a motion for breach of privilege was moved in the Maharashtra Assembly against a journalist.

##### Provisions in the Constitution

- The **powers, privileges and immunities** of either House of the Indian Parliament and



of its Members and committees are laid down in **Article 105 of the Constitution**.

- **Article 194** deals with the powers, privileges and immunities of the **State Legislatures**, their Members and their committees.
- Parliamentary privilege refers to the **right and immunity enjoyed by legislatures**, in which **legislators are granted protection against civil or criminal liability** for actions done or statements made in the course of their legislative duties.

#### **'Breach of privilege'**

- While the Constitution has accorded **special privileges and powers to parliamentarians and legislators** to maintain the dignity and authority of the Houses, these powers and privileges are **not codified**. Thus, there are **no clear, notified rules to decide what constitutes a breach of privilege**, and the punishment it attracts.
- Any act that obstructs or impedes either House of the state legislature in performing its functions, or which obstructs or impedes any Member or officer of such House in the discharge of his duty, or has a tendency, directly or indirectly, to produce such results is treated as breach of privilege.
- It is a breach of privilege and contempt of the House to make speeches or to print or publish libel reflecting on the character or proceedings of the House, or its Committees, or on any member of the House for or relating to his character or conduct as a legislator.

#### **Procedure**

- The Legislative Assembly Speaker or Legislative Council Chairman constitutes a Privileges Committee consisting of 15 members in the Assembly and 11 members in the Council. The members to the committee are nominated based on the party strength in the Houses.
- If the privilege and contempt are found prima facie, then the Speaker or Chairman will forward it to the Privileges Committee by following the due procedure.

#### **4.20 Housing Ministry launches Climate Smart Cities Assessment Framework 2.0**

Union Ministry of Housing and Urban Affairs has launched the **Climate Smart Cities Assessment Framework (CSCAF) 2.0**, along with the '**Streets for People Challenge**'.

#### **CSCAF**

- The objective of CSCAF is to **provide a clear roadmap for cities towards combating**

**Climate Change** while planning and implementing their actions, including investments.

- In the last decade, **an increasing frequency of cyclones, floods, heat waves, water scarcity and drought-like conditions** have had adverse impacts on many of our cities.
- Such extreme events and risks cause loss of life as well as impact the economic growth. In this context, **CSCAF initiative intends to inculcate a climate-sensitive approach to urban planning and development in India.**
- The framework has 28 indicators across five categories namely; (i) Energy and Green Buildings, (ii) Urban Planning, Green Cover & Biodiversity, (iii) Mobility and Air Quality, (iv) Water Management and (v) Waste Management.
- The **Climate Centre for Cities under National Institute of Urban Affairs (NIUA)** is supporting MoHUA in **implementation of CSCAF.**

### **Streets for People Challenge**

- The Streets for People Challenge is the **response to the need for making our cities more walkable and pedestrian friendly.**
- The Challenge will support cities across the country to **develop a unified vision of streets for people in consultation with stakeholders and citizens.**
- Adopting a participatory approach, cities will be guided to launch their own design competitions to gather innovative ideas from professionals for quick, innovative, and low-cost tactical solutions.
- It aims to **inspire cities to create walking-friendly and vibrant streets** through quick, innovative, and low-cost measures. All cities participating in the challenge shall be encouraged to use the '**test-learn-scale**' approach to initiate both, flagship and neighbourhood walking interventions.
- The interventions can include inter alia **creating pedestrian-friendly streets** in high footfall areas, **re-imagining under-flyover spaces, revitalising dead neighbourhood spaces,** and **creating walking links** through parks and institutional areas.

### **4.21 Status of Mahanadi Tribunal**

The Central Government has constituted **Mahanadi Water Disputes Tribunal** on 12.03.2018 under **Section 4 of the Inter-State River Water Disputes Act, 1956** for adjudication of water

dispute regarding the inter-state river Mahanadi.

At present the dispute is under adjudication in the Tribunal under **Section 5 (2) of Inter-State River Water Disputes Act, 1956**.

**What is Section 5(2) of Inter-State River Water Disputes Act, 1956?**

- As per Section 5(2) of Inter-State River Water Disputes Act, 1956 – *“The Tribunal shall investigate the matters referred to it and forward to the Central Government a report setting out the facts as found by it and giving its decision on the matters referred to it **within a period of three years**.”*
- *Provided that if the decision cannot be given for unavoidable reason, within a period of three years, **the Central Government may extend the period for a further period not exceeding two years**”.*
- Thereafter, under **Section 5(3) of the said Act**, the Central Government/State Government(s) may **again refer the matter** to the Tribunal for further consideration, which may then **give its further report within one year**, with the **option to extend for such further period as Central Government considers necessary**.

**Inter-state water disputes**

**Article 262** states that the **Parliament may provide for the adjudication of any dispute or complaint** with respect to the use, distribution or control of the waters of, or in, any inter-State river or river valley. As per Article 262, the Parliament has enacted the following:

- **River Board Act, 1956** – This empowered the GOI to establish Boards for Interstate Rivers and river valleys in consultation with State Governments. Till date, no river board has been created.
- **Inter-State Water Dispute Act, 1956** – Under this act, if a state government or governments approach the Centre for the constitution of a tribunal, the government may form a tribunal after trying to resolve the dispute through consultations.

**Mahanadi water dispute**

- The dispute **between Odisha and Chhattisgarh** over the Mahanadi began when Odisha alleged that the **upper riparian state Chhattisgarh had “illegally” constructed a number of barrages** across the river and its tributaries, which had **seriously affected inflow into the Hirakud reservoir in Odisha**, more so in the non-monsoon seasons.

- The Odisha government has not only termed the construction of such barrages as “*illegal*“, it has also alleged that such barrages are killing the Mahanadi river.
- As the matter remained unresolved, the Supreme Court directed the Union government to form a river dispute tribunal. The Union government has subsequently notified the formation of the **Mahanadi river dispute tribunal on March 12, 2018**.
- At the heart of the dispute over Mahanadi water lies the **huge Hirakud dam and reservoir**. Odisha’s allegation of reduced flow to the Hirakud reservoir from Chhattisgarh triggered the dispute. The location of the Hirakud dam project makes it the crux of the dispute. **Almost all of the reservoir’s catchment lies in Chhattisgarh**.
- Hirakud Dam is one of the important generators of hydro-power in Odisha, a large supplier of water to industrial and urban demands, and also has the objective to ensure flow in the Mahanadi to meet drinking water, ecological and other needs.

#### 4.22 Why Sir Mokshagundam Visvesvaraya’s birthday is celebrated as Engineer’s Day: The genius that built India?

India celebrates ‘Engineers Day’ on September 15th each year to mark the birth anniversary of Bharat Ratna M. Visvesvaraya.

- Born in 1861, Sir M. Visvesvaraya made contributions to several technical projects in his career in Hyderabad, Mysore, Maharashtra and Orissa.
- He completed his engineering from the Poona College of Science. Soon after this, he accepted an offer to work as an Assistant Engineer in the Public Works Department of the Government of Bombay.
- He was 22 at that time and one of his first projects was to construct a **pipe syphon across one of Panjra river’s** (in Maharashtra) channels.
- In November 1909, he joined the Mysore service as Chief Engineer, ultimately assuming the position of the **19th Dewan of Mysore**. He took voluntary retirement in 1918 because he did not agree with the proposal to set aside state jobs for “non-brahmin” community.
- While outside India, he fully intended to observe how the industrialised countries of America and Europe worked.
- In 1955, he was awarded the **Bharat Ratna**.

- **Institute** – He established the **Sir Jayachamarajendra Occupational Institute in Bangalore** in 1943. It was later renamed to Sir Jayachamarajendra Polytechnic. It was meant to impart **special training to technicians** keeping in mind the impending industrial development of India.
- **Books** – His works, “Reconstructing India” and “Planned Economy of India” were published in 1920 and 1934, respectively.

#### 4.23 Don't give nod to Mokedatu Reservoir: DMK chief Stalin writes to PM Modi

Karnataka Government is likely to take a delegation to bring pressure on the Centre to approve the construction of the Mokedatu balancing reservoir that has been proposed to store water for drinking purposes.

- Being set up by the Karnataka government, the project is near **Mekedatu, in Ramanagaram district**, across the river Cauvery from Tamil Nadu.
- Its primary objective is to **supply drinking water to Bengaluru** and recharge the groundwater table in the region.

#### Conflict

- **Tamil Nadu has moved the Supreme Court.** Its main argument is that the **project violates the final award of the Cauvery River Water Tribunal**, and that the “construction of the two reservoirs would result in impounding of the flows in the intermediate catchment below the Krishnaraja Sagar and Kabini reservoirs, and Billigundulu in the common border of Karnataka and Tamil Nadu”.
- Karnataka says, the project will not come in the way of releasing the stipulated quantum of water to Tamil Nadu, nor will it be used for irrigation purposes.

#### Cauvery Water Management Authority (CWMA)

- In a gazette notification, the Ministry of Water Resources said it has framed a scheme constituting the CMA and the Cauvery Water Regulation Committee to give effect to the decision of the Cauvery Water Disputes Tribunal as modified by the Supreme Court order.
- The authority would comprise a chairman, eight members besides a secretary. Out of eight members, two each will be full-time and part-time members, while the rest four would be part-time members from states.

- The chairman of the authority should either be a “senior and eminent engineer” with an experience of water resource management and handling of inter-state water dispute or an IAS officer with an experience in water resources management and handling the inter-state dispute.
- He will have the tenure of five years or until he reaches the age of 65, whichever is earlier.

### Cauvery river

- The Cauvery river is the **longest river of Peninsular India**. And it is also the **third largest river after Godavari and Krishna in south India** and the largest in Tamil Nadu which on its course, bisects the state into North and South.
- The river has water flow throughout the year because it gets rainwater from south-west monsoons in the upper-catchment area (located in Karnataka) and from the north-east monsoons in the lower-catchment area (located in Tamil Nadu).
- **Source of origin** – The river rises from **Talakaveri in the hills of Brahmagiri in Coorg district** in the state of Karnataka.
- **Confluence or mouth of the river** – The river **drains its waters into the Bay of Bengal** before forming a wide delta called the garden of southern India.

### 4.24 Why Bihar's Kosi Rail Mahasetu is historic in many ways?

The Prime Minister Shri Narendra Modi has dedicated to the nation the historic Kosi Rail Mahasetu (mega bridge) to the nation.

- The dedication of the Kosi Rail Mahasetu is a watershed moment in the history of Bihar and the entire region connecting to the North East.
- In 1887, a meter gauge link was built in between **Nirmali and Bhaptiahi (Saraigarh)**. During the heavy flood and severe Indo Nepal earthquake in 1934, the rail link was washed away and thereafter due to meandering nature of river Kosi no attempt was made to restore this Rail link for long period.
- The Kosi Mega Bridge line project was **sanctioned by Government of India during 2003-04**. The Kosi Rail Mahasetu is **1.9 KM long** and its construction cost is Rs. 516 Crore. This bridge is of **strategic importance along the India-Nepal border**.



- The dedication of this project will fulfil the 86 year old dream and the long wait of the people of the region.

#### 4.25 Institute of Teaching and Research in Ayurveda Bill, 2020

The Institute of Teaching and Research in Ayurveda Bill 2020 has been passed by Rajya Sabha recently. This paves the way to **establish a state-of-the-art Ayurvedic institution called the Institute of Teaching and Research in Ayurveda (ITRA) at Jamnagar, Gujarat**, and to confer the status of **Institution of National Importance (INI)** to it.

##### The bill seeks to achieve

- The ITRA is sought to be established **by conglomerating the presently existing Ayurveda institutes at Gujarat Ayurved University campus Jamnagar.**
- This is a cluster of highly reputed institutions, namely, (a) Institute for Post Graduate Teaching and Research in Ayurveda, (b) Shree GulabKunverba Ayurveda Mahavidyalaya, and (c) Institute of Ayurvedic Pharmaceutical sciences, (d) MaharshiPatanjali Institute for Yoga Naturopathy Education & Research (to be made part of the Department of Swasthvritta of the proposed ITRA). These institutions had come up over the past many decades, and together made a unique family of Ayurveda institutions existing in close proximity.

##### Significance

- It is expected that the enactment of the proposal will further **provide autonomy to the institute to develop patterns of teaching in undergraduate and postgraduate education in Ayurveda and Pharmacy.**
- The synergies among the different constituent institutions will **help ITRA to demonstrate high standards of such education** and to emerge as a lighthouse institution to the entire AYUSH Sector.
- It is expected to **provide the highest level of training of personnel in all important branches of Ayurveda** including Pharmacy, and to take up in-depth study and research in the field of Ayurveda.
- ITRA will be the first institution with INI status in the AYUSH Sector, and this will **enable the institution to be independent and innovative in the matter deciding course content and pedagogy.**

#### 4.26 Draft Electricity (Rights of Consumers) Rules, 2020

Union Power Ministry has drafted Rules providing for **Rights of Electricity Consumers** for the First Time.

##### Features of draft Electricity (Rights of Consumers) Rules, 2020 –

The main features are –

- **Reliability of service** – SERCs to fix average number and duration of outages per consumer per year for DISCOMs.
- **Timely and simplified procedure for connection** – Only two documents for connection up to load of 10 kw and no estimation of demand charges for loads up to 150 kw to expedite giving connection.
- Time period of not more than 7 days in metro cities, 15 days in other municipal areas and 30 days in rural areas, to provide new connection and modify existing connection.
- 2 to 5% rebate on serving bills with delay of sixty days or more.
- Option to pay bills in cash, cheque, debit cards, net banking etc but bills of Rs. 1000 or more to be paid online.
- Provisions related to disconnection, reconnection, meter replacement, billing, payment, etc.
- Recognition to the emerging category of consumers known as “**Prosumers**”. Persons who are consumers and have also set up a rooftop units or solarised their irrigation pumps. They will have **right to produce electricity for self-use and inject excess in the grid** using same point of connection up to limits prescribed by the SERC.
- **Compensation/penalties for delay in service by DISCOMs**; compensation to be automatic as far as possible, to be passed on in the bill.
- 24×7 toll free call centre, web-based and mobile applications for common services like new connection, disconnection, reconnection, shifting of connection, change in name and particulars, load change, replacement of meter, no supply, etc with facilities for sms/email alerts, online status tracking and auto escalation.
- **Consumer Grievance Redressal Forum** with 2-3 representatives of consumers at various levels starting from Sub-division for ease of consumer grievance redressal.

#### 4.27 Aircraft (Amendment) Bill, 2020

The Aircraft (Amendment) Bill, 2020 has been passed by the Parliament recently.

##### Provisions in the amendment bill –

- The Bill gives **statutory powers to the Directorate General of Civil Aviation, the Bureau of Civil Aviation Security and the Aircraft Accident Investigation Bureau.**
- The Bill empowers the **DGCA to levy enhanced penalties** of upto ₹1 crore, from the existing ₹10 lakh, on airlines, airports and other aviation entities.
- The amendments also address several regulatory shortcomings that were highlighted by aviation watchdogs of the United Nations and the U.S. – the International Civil Aviation Organisation and the Federal Aviation Authority – during their audits on safety and security in the Indian aviation ecosystem.
- The changes include **recognising regulatory bodies such as the Bureau of Civil Aviation Security and the Aircraft Accident Investigation Bureau**, which were set up through various government notifications but did not have a defined role under the parent Act, as well as air navigation services.

##### Need for amendments –

- The ICAO, under its **Universal Safety Oversight Audit Programme** and the **Universal Security Audit Programme**, regularly conducts safety and security audits of all countries which are signatory to the **Chicago Convention** to ensure they are carrying out their safety and security oversight functions.
- **The Federal Aviation Administration (FAA)** of the United States also conducts safety audits of countries whose airlines operate to the US under its International Aviation Safety Assessment Programme.
- **India, as a signatory, is also subjected to periodic audits by ICAO and the FAA.** According to government sources, the audits conducted by the ICAO in 2012 and 2015 indicated a need to amend the Aircraft Act to give proper recognition to the regulators under the Act, to enhance the maximum quantum of fines and to empower the departmental officers to impose financial penalties on individuals or organisations involved in violations of the legal provisions and to include certain areas of air

navigation services for rule-making purposes under Section 5 of the Act.

#### Aircraft Act, 1934 –

- The Aircraft Act of 1934 was enacted to make provisions for the **control of the manufacture, possession, use, operation, sale, import and export of aircraft.**
- It makes provisions for **securing the safety of aircraft operations in India**, and for carrying out civil aviation operations as per internationally accepted standards, procedures and practices as laid down by the International Civil Aviation Organisation (ICAO).

#### 4.28 Uttar Pradesh's New Special Security Force

Amid controversy over the provisions of the Uttar Pradesh Special Security Force (UPSSF) that **allow arrests “without warrant” or the “order of the magistrate”**, the state government has claimed that the force, which was notified on August 31, is no different from special forces like the CISF at the Centre, or those in states like Odisha or Maharashtra.

- The force was announced on June 26, 2020, after Chief Minister Yogi Adityanath asked for the setting up of a **CISF-like force to guard important institutions and persons. The proposed force was envisaged as having “high-level professional skills”, which would reduce the burden on the Provincial Armed Constabulary (PAC),** which could then focus on law and order.
- The new **“state vital installation force”** would *protect courts, airports, banks, the Metro, industrial units, places of worship, as well as individuals*, the government said. It claimed that Maharashtra and Odisha had similar forces.
- The UPSSF will be led by an **Additional Director General-level officer**, followed by an Inspector General, Deputy Inspector General, Commandant, and Deputy Commandant.

#### Need

- According to the UPSSF Act, the force has been constituted to provide **“better protection and security of a body or a person, or the residential premises”** notified by the state government, and vital installations including courts, **“administrative offices, shrines, Metro rail, airports, banks, other financial institutions, industrial undertaking,”** etc.

- The Act lays down its purpose as **“to maintain the smooth and strong security arrangements of the vital establishments and of notified persons**, as at the Centre and in other states, there is no special security force established in the state of Uttar Pradesh.
- It has also cited a direction of the High Court while taking suo motu cognisance of **these security situation at all court premises across Uttar Pradesh**.

### Concerns

- **Subsection (1) of Section 10** (“Power to arrest without warrant”) of the UPSSF Act says: “Any member of the force may, without any order from a Magistrate and without a warrant, arrest any person, who voluntarily causes hurt...”, or a person against whom there is a “reasonable suspicion”, or any person, who attempts to “commit a cognizable offence”.
- The force will also have the right to remove trespassers on the premises under its protection.
- Sections 15 and 16 of the UPSSF Act, 2020, offer **“protection of action taken in good faith”** and **“cognisance of offence”**. This is a sweeping protection – no court will be able to take cognisance of the offence against any member of the force without prior sanction from the state government.
- Also, **Section 15 of the Act** says: “No suit or prosecution shall lie against any officer or member of the force or against any person on acting under the order or the direction of any officer or member of the force for anything, which is done or intended to be done in good faith”.
- **Section 16** says: “No court shall take cognisance of an offence against any member of the force” for action taken in the discharge of his duties.

### 4.29 Utkrisht Sansthan Vishwakarma Award

Union Education Minister has conferred the Second Utkrisht Sansthan Vishwakarma Award in 14 categories to the Institutions under AICTE.

- The Utkrisht Sansthan Vishwakarma Award is being **organised by All India Council for Technical Education (AICTE)** since 2019, which aims to motivate, recognise and honour the AICTE approved institutions to raise their performance in the specific

domain leading to significant contribution for the growth and development of the society.

- In order to motivate and honor technical institutions, AICTE under its **Utkrisht Sansthan Vishwakarma Award (USVA) 2020** has proposed the theme of the year as **"INDIA FIGHTS CORONA"**.
- **College of Engineering, Pune** gets first award in overall category.
- In addition to Utkrishtha Sansthan Vishwakarma Awards, AICTE conducts **AICTE Chhatra Vishwakarma Awards** since 2017 for promoting innovative spirit and scientific temperament for holistic development of society through the stake holders of its approved institutes. By means of this competition, the innovations and achievements of individuals are recognized and applauded.

#### 4.30 Kapila Vatsyayan, Grand matriarch of cultural research dies

Kapila Vatsyayan, the grand matriarch of cultural research has passed away recently.

- Born into a Punjabi Arya Samaji family on December 25, 1928, the fiercely independent and multi-faceted personality effortlessly combined theoretical knowledge with rigorous practice and brought a multidisciplinary approach to understanding Indian culture.
- Her holistic approach broke new ground in the study of Indian dance forms and not only positioned them on the cultural map of the world but also led to extensive research work, opening new vistas.
- Having imbibed the rich cultural values of **Oriental dance** during her stay at Shantiniketan, she went on to learn Kathak from Achhan Maharaj, Manipuri from Guru Amobi Singh, and Bharatanatyam from guru Meenakshi Sundaram Pillai. She performed **a Kathak recital at the first Dance Festival held at the Feroz Shah Kotla Grounds** in 1945.
- Over the years, Ms. Vatsyayan, a **Padma Vibhushan awardee**, engaged extensively with western dance forms as well, and maintained that while the Indian tradition is in dialogue with the earth, the West aspires to be free from it. "But never manages to," she would assert.
- **Blending tangible with the intangible** and finding connections between the arts and the sciences, she wrote extensively on the geometrical body stances in Indian dance



forms and complex rhythmic patterns that reflect mathematical flourishes in the Indian cultural firmament.

- She was the former representative of India to UNESCO's executive board. She would often underline that any experiment should be to augment Indian classical forms, not to dilute or distract the new generation from its essence.
- Her canvas was not limited to dance, though. This is evident in her vast corpus of writings, such as *Plural Cultures and Monolithic Structures: Comprehending India*, *Dance in Indian Painting* and *The Indian Arts, Their Ideational Background and Principles of Forms*.

### Contribution

- During the decades of the Nehru-Gandhi rule, Vatsyayan was the go-to person for showcasing Indian culture to the world. She helped legends like Birju Maharaj and Balasaraswati find a global audience.
- From taking troupes of artistes all over the world as part of Jawaharlal Nehru's cultural diplomacy to borrowing Chola bronzes at the National Museum for the Non-Aligned Movement Conference in 1983 from south Indian temples, she did it all, cutting a lot of red tape along the way.
- She was nominated to the Rajya Sabha in 2006 but had to vacate her seat following the office of profit controversy. In April 2007, she was renominated.
- She was married to Hindi writer S.H. Vatsyayan 'Ageya'.

### 4.31 Dhrupad Sansthan divided over the composition ICC

Recently, Students of the Dhrupad Sansthan, an international music school were divided over the composition of the new internal complaints committee (ICC), which has been set up to inquire into allegations of sexual harassment against teacher. As it is in news, let us look at the Dhrupad music for UPSC point of view.

- Dhrupad is the **oldest surviving classical style of Hindustani** (or North Indian) vocal music. Its name is derived from *dhruva-pada*, simply meaning "refrain," and today denotes both a form of poetry and a style of music in which the poetry is sung.
- Dhrupad music traditionally has three major parts – **alap, jor-jhala, and composition**. A dhrupad is introduced by a slow tempo-ed, rather somber and controlled, recurrent set

of syllables (non-words) known as an alap.

- The singer attempts to **emphasise the purity and clarity** of each note, with perfect pitch. It can last up to an hour before the melody begins.
- Like all classical Indian vocal music, **Dhrupad is monophonic and modal, with a single melodic line and no harmonic parts.** The modes are called *raga*, and each raga is a complicated framework of melodic rules.
- Dhrupad are **performed by a solo singer, or a small number of singers in unison**, to the beat of a barrel drum, the *mridangam* or *pakhawaj*, and can be accompanied by a *sitar*. The songs are highly **devotional**, and are mostly **in praise of Hindu deities**.
- The origins of Indian classical music can be found from the oldest of scriptures, the Vedas. **Samaveda**, one of the four Vedas, describes the role and importance of music at some length.
- Dhrupad and other Indian classical music styles have been **used a meditative tool for attaining self realisation**. All the different forms of these melodies, the ragas, are believed to affect the various “*chakras*” (energy centres or “moods”) of a person.

#### 4.32 Chendamangalam Saree: Kerala

The **Care 4 Chendamangalam (C4C)** initiative is supporting the **2018 Kerala flood-affected weavers**.

- **Kerala Kasavu Sarees:** The term kasavu **refers to the zari (gold thread) used in the border of the Kerala saree.** The identity of the saree comes from the geographical cluster they are associated with.
- **Geographical Clusters:** The Indian government has identified three clusters in Kerala – **Balaramapuram, Chendamangalam and Kuthampully** – that have been given a Geographical Indication (GI) tag.
- **Chendamangalam Saree:**
  - **Features:**
    - It is **recognisable by its puliyilakara border**, a thin black line that runs side by side with the sari’s selvedge.
    - It has **extra-weft chuttikara and stripes and checks of varying width.**
    - It is widely believed that **weaving in Chendamangalam was**

introduced by the Paliyam family.

- Called the **Paliyam Achans**, the family was hereditary to the prime minister post to the Maharaja of Cochin, having been associated with Chendamangalam from the **16<sup>th</sup> century onwards**.
- **Other GI Tagged Products from Kerala:** Kasaragod Sarees, **Pokkali Rice**, Nilambur Teak, Wayanad Robusta Coffee, Tirur Betel Leaf, etc.

### Geographical Indication

- GI is an indication used to identify **goods having special characteristics originating from a definite geographical territory**.
- The **Geographical Indications of Goods (Registration and Protection) Act, 1999** seeks to provide for the registration and better protection of geographical indications relating to goods in India.
  - The Act is **administered by the Controller General of Patents, Designs and TradeMarks**- who is the Registrar of Geographical Indications.
  - The **Geographical Indications Registry** is located at Chennai.
- The registration of a geographical indication is **valid for a period of 10 years**. It can be renewed from time to time for a further period of 10 years each.
- It is also a **part of the World Trade Organisation's Trade-Related Aspects of Intellectual Property Rights (TRIPS)**.

————— Since 2005 ——— Feel the Pulse of UPSC...

### 4.33 Kakatiya Temple – An ancient temple's transition over years of neglect

A **temple constructed by emperor Ganapati Deva**, a mighty ruler of **Kakatiya dynasty**, in **Dharanikota** (Andhra Pradesh) has been **converted into an abode of local goddess Balusulamma** (Goddess Durga).

- The **presiding deity at this 13<sup>th</sup>-century temple was Kakati Devi**, the tutelary deity of Kakatiya rulers.
- Due to **ravages of time and for no upkeep**, the presiding deity got damaged. The villagers of Dharanikota, who had no knowledge about the past of the temple, installed Balusulamma idol and started worshipping.
- Kakatiyas is an **Andhra dynasty that flourished in the 12<sup>th</sup> century CE**. The Kakatiya dynasty **ruled from Warangal (Telangana) from CE 1083-1323**.

- They were known for the **construction of a network of tanks for irrigation and drinking water** and thereby gave a big boost to the overall development of the region.
  - Telangana has launched a massive rejuvenation movement in the form of “**Mission Kakatiya**” which involves the restoration of irrigation tanks and lakes/minor irrigation sources built by the Kakatiya dynasty.
- There are **hundreds of Hindu temples** built under the patronage of Kakatiya kings like **Ganapati Deva, Rudrama Devi and Prataparudra** of Kakatiya dynasty. E.g.
  - **Thousand Pillar Temple or Rudreshwara Swamy Temple**, Telangana. It is a star-shaped, triple shrine (Trikutalayam) dedicated to Vishnu, Shiva and Surya.
  - **Ramappa Temple**, Warangal, Telangana.
- **Golconda Fort** in Hyderabad (Telangana) was also constructed by the Kakatiya rulers.
  - Later, it became the **capital of the Qutb Shahi kings**, who ruled from CE 1518-1687.

#### 4.34 Ramdhari Singh Dinkar

Prime Minister Narendra Modi has paid tributes to the Rashtrakavi Ramdhari Singh Dinkar on his birth anniversary.

- **Dinkar**, was an Indian Hindi poet, essayist, patriot and academic, who is considered as one of the most important modern Hindi poets.
- He emerged as a **poet of rebellion** as a consequence of his **nationalist poetry** written in the days before Indian independence.
- His poetry exuded **veer rasa**, and he has been hailed as a **Rashtrakavi (“national poet”)** on account of his inspiring patriotic compositions.
- He was a regular poet of **Hindi Kavi sammelan** on those days and is hailed to be as popular and connected to poetry lovers for Hindi speakers as Pushkin for Russians.
- Dinkar initially supported the revolutionary movement during the Indian independence struggle, but **later became a Gandhian**. However, he used to call himself a “**Bad Gandhian**” because he **supported** the feelings of **indignation and revenge** among the youth.
- In Kurukshetra (one of his major poetic works), he accepted that war is destructive but

argued that it is **necessary for the protection of freedom.**

- He was close to prominent nationalists of the time such as **Rajendra Prasad, Anugrah Narayan Sinha, Sri Krishna Sinha, Rambriksh Benipuri and Braj Kishore Prasad.**
- Dinkar was elected three times to the **Rajya Sabha**, and he was the member of this house from 3 April 1952 to 26 January 1964, and was awarded the **Padma Bhushan in 1959.** He was also the **Vice-Chancellor of Bhagalpur University** (Bhagalpur, Bihar) in the early 1960s.
- During The Emergency, Jayaprakash Narayan had attracted a gathering of one lakh people at the Ramlila grounds and recited Dinkar's famous poem: ***Singhasan Khaali Karo Ke Janata Aati Hai*** ("Vacate the throne, for the people are coming")
- Some of his greatest works are ***Rashmirathi*** and ***Parashuram ki Prateeksha.***

#### 4.35 National Service Scheme Awards

The President of India Shri Ram Nath Kovind has virtually conferred the National Service Scheme (NSS) Awards for the year 2018-19.

The National Service Scheme (NSS) Award for the year 2018-19 was given to 42 awardees in 3 different categories like University/ +2 Council, NSS Units and their Programme Officers and NSS Volunteers.

#### NSS

- **Ministry of Youth Affairs & Sports**, Department of Youth Affairs confers every year the National Service Scheme Award to **recognise and reward outstanding contributions towards voluntary community service** made by the Universities/Colleges, (+2) Councils, Senior Secondary, NSS Units/ Programme Officers and NSS Volunteers, with a view to further promote NSS in the country. At Present, NSS has about 40 lakh volunteers on its rolls spread over the country.
- NSS is a **Central Sector Scheme** which was **launched in the year 1969** with the primary objective of **developing the personality and character of the student youth through voluntary community service.**
- The ideological orientation of the NSS is inspired by the **ideals of Mahatma Gandhi.** Very appropriately, the motto of NSS is "**NOT ME, BUT YOU**" in Hindi('स्वयंसेपहलेआप').
- **The NSS volunteers work on issues of social relevance**, which keep evolving in

response to the needs of the community, through regular and special camping activities. Such issues include (i) literacy and education, (ii) health, family welfare and nutrition, (iii) environment conservation, (iv) social service programmes, (v) programmes for empowerment of women, (vi) programmes connected with economic development activities, (vii) rescue and relief during calamities, etc.

#### 4.36 Centralised Farm Machinery Performance Testing Portal

Union Agriculture Ministry has launched the 'Centralised Farm Machinery Performance Testing Portal', developed by the Department of Agriculture, Cooperation and Farmers Welfare as a step to improve series of farm machinery testing institutions and bringing out transparency in the entire process of testing and evaluation of machines.

##### Highlights

- This portal will facilitate manufacturers in **applying, communicating and monitoring** the progress of testing of their machines in a seamless manner as it is easily accessible from any location and from any device connected to the Internet.
- It offers the possibility of **integrated management in a unified manner** within the organisation and thus will help in improving the efficiency of the testing institutes thereby reducing testing time for various agricultural machines and equipments.

##### Benefits

This portal offers following benefits to the users *Feel the Pulse of UPSC...*

- In line with Government Policy of "**Ease of Doing Business**", this would facilitate applying for testing of machinery online.
- Ensure Transparency in the entire processes of testing.
- Faster Feedback
- Help in Reducing testing Time
- Reduced Business Expenses of Agricultural Manufacturers
- Testing Efficiency Improvement
- Thoroughness in Testing
- Flexible Access – Officers concerned at Ministry and manufacturers can monitor testing activities from anywhere with internet access.



#### 4.37 National Biopharma Mission

The National Biopharma Mission was approved by the Cabinet in 2017 with an aim **to transform the health standards of the country** through **affordable product development** and bring 5-7 biopharmaceutical products closer to market.

##### Objectives

- **Specific Product development** under vaccines, bio-similars and medical devices
- **Building shared infrastructure** for product testing, characterisation and manufacturing
- **Promoting scientific research** through establishment of translational research consortia and development of novel biopharmaceuticals and devices
- **Skill development** through trainings
- Creating and enhancing **technology transfer and intellectual property** management.

##### Highlights

- The Mission is **supporting small and medium enterprises** for biopharmaceutical product development, enhancing industry academia interlinkages and providing opportunities to translate knowledge into products/technologies for vaccines, biotherapeutics, devices and diagnostics.
- The **indigenous manufacturing** is promoted through the supported **shared facilities** for process optimisation, clinical grade manufacturing of Biologics, Analytical testing labs, cell line repository, prototyping facilities, large animal testing facilities and medTech zone for manufacturing devices and diagnostics at large scale.
- These high capital facilities provide **easy access to equipment and infrastructure** thus encouraging indigenous manufacturing. Technology transfer offices have been established to support technology transfer and support entrepreneurship.
- **Financial and mentorship support** has been provided to industry and academia for indigenous product development. This includes projects on development of components of upstream and downstream biologics manufacturing, such as engineered cell lines, media, resins and bioreactors which are currently in-licensed, requiring huge capital.
- To boost innovation, Mission is also supporting **development of novel biologics, novel vaccines and medical devices** like MRI, ventilators, diagnostic probes and Medical grade camera.

## Projects

Five projects are being supported in Haryana, 3 projects in Faridabad district (for Medical Device and Translational Research Consortia) and 2 in Gurgaon district (for Medical device and Clinical Trial network).

### 4.38 Jnanpith Award

Eminent Malayalam poet **Akkitham Achuthan Namboothiri**, popularly known as **Akkitham**, has been chosen for the **55th Jnanpith Award**, according to an announcement by the Jnanpith Selection Board.

- Born in 1926, Mr. Akkitham is one of the revered names in Malayalam poetry. His literary excellence has footprints in genre like drama, reminiscence, critical essays, children literature, short stories and translations.
- Akkitham has contributed such seminal works as *Pathalathinte Muzhakkam*, *Irupatham Noottandinte Ithihasam*, and *Balidarshanam*.
- His work *Balidarshanam* won the State and Central Sahitya Akademi awards in 1972-73.
- Jnanpith Award is a literary award presented by the Bharatiya Jnanpith organisation to Indian writers every year. This was instituted in 1961 and is given only to Indian writers who write in Indian languages and English.
- The winner is given a cash prize of Rs. 11 lakh and a bronze replica of Goddess Saraswati, the Hindu goddess of learning.
- The first recipient of the award was Malayalam writer G Sankara Kurup in 1965 for his novel 'Odakkuzhal' (The Bamboo Flute).
- The first woman writer to be awarded this award was Ashapoorna Devi, a Bengali writer, in 1976.
- The organisation which presents this award was founded in 1944 by industrialist and philanthropist Sahu Shanti Prasad Jain.

### 4.39 Centre unveils the first look of the Regional Rapid Transit System (RRTS) train

The first look **India's first RRTS (Region Rapid Transit System)** train was unveiled recently. It is an environment friendly, energy efficient train which will improve the quality of life in and around NCR by accelerating economic growth, creating economic opportunities and at the same time reducing air pollution, carbon footprint, congestion, and accidents.

### RRTS train

- The state-of-the-art RRTS rolling stock will be first of its kind in India with a **design speed of 180 kmph**.
- With radiating **stainless steel outer body**, these aerodynamic RRTS trains will be **lightweight and fully air-conditioned**.
- Each car will have six automatic plug-in type wide doors, three on each side (Business Class will have four such doors, two on each side) for ease of access and exit.
- The RRTS trains will have **transverse 2×2 seating** with adequate legroom, optimised aisle width with grab handles and grab poles for a comfortable journey for standing passengers, overhead luggage rack, mobile/laptop charging sockets and on board Wi-Fi among other commuter-centric features.
- RRTS rolling stock will have **lighting and temperature control systems** to enhance the passenger experience with **less energy consumption**. Equipped with modern amenities, the RRTS rolling stock will be a unique amalgamation of new-age technology and India's rich heritage.

### Delhi-Ghaziabad-Meerut RRTS Corridor

- The Delhi-Ghaziabad-Meerut RRTS corridor is **one of the three prioritised RRTS corridor** being implemented in phase-1.
- The 82 km long Delhi-Ghaziabad-Meerut Corridor is the **first RRTS corridor** being implemented in India.
- The corridor will **bring down the travel time** between Delhi to Meerut by **around 1/3rd**.
- The commute time from Delhi to Meerut **will be reduced to less than an hour** from 3-4 hours by road at present.

### NCRTC

- National Capital Region Transport Corporation is a **joint venture** of the Government of India (50%) and State Governments of Haryana (12.5%), NCT Delhi (12.5%), Uttar Pradesh (12.5%) and Rajasthan (12.5%).
- It is mandated to design, construct, finance, operate and maintain RRTS in NCR and works under the administrative control of Ministry of Housing & Urban Affairs, GOI.
- NCRTC is mandated to implement **India's first RRTS in NCR**.

#### 4.40 What changes with the new medical education regulator in place?

The National Medical Commission Bill envisaged the creation of a National Medical Commission (NMC) to replace the erstwhile Medical Council of India. In line with this objective, the National Medical Commission (NMC) has been constituted along with four Autonomous Boards.

- This new body would be **responsible for the medical accreditation** of all medical education institutions within the country as well as **maintaining a national registrar of all certified allopathic medical practitioners** within the country.
- Along with NMC, **the four Autonomous Boards of UG and PG Medical Education Boards, Medical Assessment and Rating Board, and Ethics and Medical Registration Board** have also been constituted to help the NMC in day to day functioning.
- With the coming into effect of the NMC Act, **the Indian Medical Council Act, 1956 stands repealed** and the Board of Governors appointed in supersession of Medical Council of India has also been dissolved.

#### Functions of NMC

- The key functions of the NMC will be further **streamlining regulations, rating of institutions, HR assessment, focus on research.**
- Besides they will work on modalities of the common final year exam after MBBS (NEXT-National Exit Test) to serve for both registration and PG entrance; prepare guidelines for fee regulation by private medical colleges; and developing standards for Community Health Providers to serve in primary healthcare with limited practicing licence.
- It may be recalled that the **National Medical Commission Act, 2019** was passed by the Parliament in August, 2019.

#### MCI

- The Medical Council of India (MCI) was established in 1934 under the Indian Medical Council (IMC) Act of 1933.
- At the time, its primary function was to **standardise both training in medicine and the accreditation of medical and surgical proficiency.**
- In 1956, the original IMC Act was repealed and redesigned. It has subsequently received face-lifts with amendments enacted in 1964, 1993, and 2001.

- The Council was composed of **one representative from each State** (appointed by the Central Government), **one medical faculty member from each University** (appointed by the Senate of the public University), **one representative of each State which maintains a Medical Register** (elected by members on the register), **seven members enrolled on any of the State Medical Registers** (elected from amongst themselves) and **eight Central Government representatives** (appointed by the Central Government).
- The MCI elected its President and Vice-President.

### Road Ahead

After looking at various other countries and their accreditation systems,, five changes can be recommended –

- **Removing NMC members** from the Medical Advisory Council,
- Creating **regional medical councils** in the place of third party organisations,
- **Adopting WHO guidelines** as the basis of all standards set by the Under-Graduate Medical Education Board and the Post-Graduate Medical Education Board,
- Ensuring that post-graduate schools receive **accreditation only if they have a research based meritocracy** for students and staff, and
- Mandating that all medical school graduates **work in the country** for a limited amount of time.

————— Since 2005 ——— *Feel the Pulse of UPSC...*

#### 4.41 Offset Clause

The Defence Ministry has **removed the offset clause requirement in Inter-Governmental Agreements (IGA) in the new Defence Acquisition Procedure (DAP), 2020**. It also introduces a new category for leasing of military equipment.

#### What is an ‘offset clause’?

Under offset clause, foreign companies are required to invest part of their deal value in the country and meant to improve the domestic defence manufacturing.

#### Why it has been removed?

The government has removed some of the offset requirements as they are not found to be working. From now on there will be no offset clause in government-to-government, single vendor and IGAs. No offset has led to a transfer of technology and many of them had to do with product purchase.

### What has been changed now?

- The offset guidelines have been revised, wherein **preference will be given to manufacture of complete defence products** over components and various multipliers have been added to give incentivisation in discharge of offsets.
- Other proposed measures include **making after sales support part of capital acquisition contract, higher indigenous content in acquisitions and incentives for local material and software and emphasis on product export** under offsets.

### What is the 'lease option'?

Leasing has been introduced as a **new category for acquisition** in addition to the existing 'Buy' and 'Make' categories to **substitute huge initial capital outlays with periodical rental payments**. This will be useful for **military equipment not used in actual warfare** like transport fleets, trainers, simulators, among others.

#### 4.42 Rajnath Singh launches Defence India Startup Challenge-4

Raksha Mantri Shri Rajnath Singh has launched the **Defence India Startup Challenge (DISC 4) during the iDEX event**, featuring the initiatives aimed at expanding the horizons of Innovations for Defence Excellence (iDEX) ecosystem.

**IDEX4Fauji initiative and Product Management Approach (PMA) guidelines** were also launched by the Raksha Mantri during the event. Each of these initiatives is expected to facilitate iDEX-DIO to scale up the program qualitatively and quantitatively.

#### iDEX initiative

The iDEX initiative of the Department of Defence Production was **launched by Prime Minister Shri Narendra Modi** in April 2018 with the objective **to encourage and nurture innovations in the Indian Defence sector and create an ecosystem where Startups, MSMEs and individual innovators could interact easily with the Indian defence establishment** and provide the latest technological innovations for specific challenges experienced in operational environments through co-development and co-production of innovative solutions. The iDEX initiatives are **executed by Defence Innovation Organisation (DIO), a Section 8 company of DPSUs BEL and HAL**.

#### 'iDEX4Fauji'

- IDEX4Fauji is a first of its kind initiative, **launched to support innovations identified by members of the Indian Armed Forces** and will **bolster frugal innovation ideas**



**from soldiers/ field formations.**

- There are more than 13 Lakh service personnel working in the field and on borders, handling extreme conditions and equipment and would be having many ideas and innovations to improve such equipment. **There was no mechanism to support such innovations.**
- IDEX4Fauji would open this window and **allow our Faujis to become part of the innovation process** and get recognised and rewarded.
- Services Headquarters will **provide support to the soldiers & field formations** all over the country to ensure maximum participation.

#### **Defence India Startup-Challenge 4**

Under Defence India Startup Challenge (DISC) 4, eleven challenges from Armed forces, OFB & DPSUs were thrown open to **prospective startups, innovators, MSMEs** alike to provide their innovative ideas on technologies which find their application in the defence sector. The challenges are as follows –

- Autonomous Underwater Swarm Drones
- Predictive, Preventive & Prescriptive Machine Monitoring
- Super Resolution for Improving Spatial Resolution
- AI based Satellite Image Analysis
- Prediction and forecasting of atmospheric visibility
- Computer Generated Targets for Virtual Training
- Remote Real Time In-Flight Health Monitoring of Aircrew
- MF-TDMA based Wideband SATCOM Modem
- Foliage Penetration Radar
- Reduction of RCS of Naval Warships
- Target Detection in Chaff Environment

iDEX-DIO has launched **three rounds of Defence India Startup Challenge (DISC)** with 18 problem statements from Armed Forces, DPSUs&OFB and identified 55+ start-ups/ individuals to receive innovation grants in technological areas through the Prototype funding guidelines called “**Support for Prototype and Research Kickstart**” (SPARK), which entail provisioning of grants upto Rs 1.5 crore to the Startups on the basis of milestones through multiple tranches, for prototype development.

#### 4.43 Defence Acquisition Procedure-2020

Raksha Mantri Shri Rajnath Singh has unveiled the 'Defence Acquisition Procedure (DAP) – 2020'.

- The **first Defence Procurement Procedure (DPP)** was promulgated in the year **2002** and has since been revised periodically to provide impetus to the growing domestic industry and achieve enhanced self reliance in defence manufacturing.
- Raksha Mantri had approved constitution of Main Review Committee under Chairmanship of DG (Acquisition) **Shri Apurva Chandra** in August 2019 for preparation of DAP-2020.
- DAP 2020 will be applicable with effect from 01 October 2020.

#### Salient features of DAP-2020

With the new Foreign Direct Investment policy announced, DAP 2020 has adequately included provisions to encourage FDI to establish manufacturing hubs both for import substitution and exports while protecting interests of Indian domestic industry. Specific reforms enunciated in Atmanirbhar Bharat Abhiyan, have been incorporated as under –

- **Notify a List of Weapons/Platforms for Ban on Import** – Relevant incorporation has been done in the DAP to ensure that NO equipment is procured ex import post timelines notified.
- **Indigenisation of Imported Spares.**
- **Request For Information** – RFI stage will explore willingness of the prospective foreign vendors to progressively undertake manufacture and setup an indigenous eco system at the spares/sub component level.
- **New Category of Buy (Global – Manufacture in India)** – The new category incorporates 'manufacture of either the entire/part of the equipment or spares/assemblies/sub-assemblies/Maintenance, Repair and Overhaul (MRO) facility for the equipment, through its subsidiary in India.
- **Co-production through Inter-Governmental Agreement (IGA)** – This enables establishment of co-production facilities through IGA achieving 'Import Substitution' and reduce Life Cycle Cost.
- **Contractual Enablement** – Buyer's Right to optimise Life Cycle Support costs and system enhancements through indigenous eco system incorporated.
- **FDI in Defence Manufacturing** – With the announcement of new FDI Policy, suitable

provisions have been incorporated like new category 'Buy (Global – Manufacture in India)' done to encourage foreign OEMs to setup 'manufacturing/maintenance entities' through its subsidiary in India while enabling requisite protections to domestic industry.

- **Time Bound Defence Procurement Process and Faster Decision Making** – As part of the Defence Reforms announced in the Atmanirbhar Abhiyan, setting up of a PMU has been mandated to support contract management. The PMU will facilitate obtaining advisory and consultancy support in specified areas to streamline Acquisition process. Other issues included in these reforms are:-
- **Simplification of Trial Procedures** – DAP 2020 emphasises the need to conduct trials with an objective to nurture competition based on the principles of transparency, fairness and equal opportunities to all and not as a process of elimination.
- **Ease of Doing Business** – One of the key focus areas of the review was to implement 'Ease of Doing Business' with emphasis on simplification, delegation and making the process industry friendly with certain specific provisions.
- **Reservation in Categories for Indian Vendors** – The categories of Buy(Indian-IDD), Make I, Make II, Production Agency in Design &Development, OFB/DPSU and SP model will be exclusively reserved for Indian Vendors meeting the criteria of Ownership and Control by resident Indian Citizens with FDI not more than 49%. This reservation will provide exclusivity in participation to domestic Indian industry.
- **Enhancement of Indigenous Content**
- **Offsets** – The Offset guidelines have been revised, wherein preference will be given to manufacture of complete defence products over components and various multipliers have been added to give incentivisation in discharge of Offsets.

#### 4.44 First 'Meenakshi' reference on Paavai Vilakku

According to the archaeological experts who looked at the inscriptions found at the temple, the present structure of Meenakshi Sundareswarar temple in Madurai might have been reconstructed during the rule of **Jatavarman Kulasekara Pandya** (1190-1216 C.E.). This structure was damaged due to unknown reasons and was again renovated in the 13th century during the period of **Maravarman Sundarapandyan II**.

- Another important finding is that in all the **13th century inscriptions belonging to**

**Pandya period**, the name of the presiding god is mentioned as '*Thiru Alavaya Udaiya Nayanar*' and goddess was mentioned as '*Thirukkamakkottam Udaiya Aludaiya Nacchiyar*'.

- It was during the Nayak period when the name '*Chokkanatha*' for the presiding god was mentioned for the first time. The name of the goddess as '*Meenakshi*' was mentioned on the engravings of a '*pavaivilaku*' dated to 1752 CE. The present name of the goddess, Meenakshi Sundareswarar, was first mentioned on the engravings on a **Tiruvachi lamp stand** dated to 1898 C.E.
- A total of 410 inscriptions found at the temple were copied and published as part of a survey. Among them only 79 inscriptions were in a readable format. As many as 301 inscriptions were fragmented and dislocated during the renovations of the temple.
- Out of the 79 inscriptions, **78 were in Tamil language and one inscription was in Sanskrit language with grantha characters**. Among these inscriptions, the earliest one belongs to the **Arikesari Parankusa Maravarman period (700 CE)**.
- Inscriptions of Pandya rulers like Maravarman Sundara Pandya I and II, Jatavarman Sundara Pandya and Madurai Nayak rulers like Thirumalai Nayak and Vijayaranga Chokkanatha Nayak, were also found in the temple. These inscriptions also **mention various donations made by the rulers**.

#### 'Meenakshi Sundareswarar Temple'

- The ancient city of Madurai, more than 2,500 years old, was built by the Pandyan king, **Kulashekarar**, in the 6th century B.C. He built the main portions of the three-storeyed gopura at the entrance of the temple.
- But the reign of the Nayaks marks the golden period of Madurai when art, architecture and learning flourished expansively. The most beautiful buildings in the city including its most famous landmark, the **Meenakshi temple**, were built **during the Nayak rule**.
- Located in the heart of the city of Madurai, the **Meenakshi-Sundareshwarar temple is dedicated to goddess Meenakshi, the consort of lord Shiva**. For the people of Madurai, the temple is the very centre of their cultural and religious life.
- It is said that the people of the city wake up, not by the call of nature but by the chant of hymns at the temple. All the major festivals of Tamil Nadu are celebrated here with gaiety, most important being the **Chitrai festival that is held in April/May**, when

the **celestial marriage of Meenakshi and Sundareshwarar** is celebrated, drawing a huge crowd of people from all over the state.

- The sculpted pillars are adorned with the **exquisite murals** that celebrate the ethereal beauty of princess Meenakshi and **the scenes of her wedding with Lord Shiva**. At the **Sundareshwarar** temple across the courtyard, **Lord Shiva is represented as a lingam**. The pillars depict scenes from the wedding of Meenakshi and Sundareshwarar. There are **985 richly carved pillars here** and each one surpasses the other in beauty.

#### 4.45 Can Punjab declare entire state 'Principal Market Yard'? What are the implications?

To nullify the negative impact of the Agricultural Bill on **Farmers' Produce Trade and Commerce (Promotion and Facilitation)**, SAD president Sukhbir Badal has suggested to Punjab Chief Minister Captain Amarinder Singh to declare the entire state as a 'Principal Market Yard'.

##### Principal Market Yard

- According to Punjab Agriculture Produce Market Committee (APMC) Act, there are three types of yards under the Punjab Mandi Board (PMB) – Principal Market Yard, Sub Yard and Purchase centres.
- These yards are notified by the PMB in a specific area in certain acres. As per APMC Act, the PMB has 151 principal market yards, 287 sub yards and over 1,400 small mandis or purchase centres.
- **Proper infrastructure is developed in these principal yards** which included *civic amenities, sheds, office buildings, canteen, platform, canteen roads, electrification and even public health facilities*. The small mandis have temporary arrangements of minimum civic amenities during the procurement season.

##### What will change if the entire state is declared a Principal Market Yard?

Experts said declaring the entire state as Principal Market Yard would mean the **purchaser has to pay the same taxes outside the PMB yards** even in a private trade area.

##### Is it even possible to declare the whole Punjab as Principal Mandi Yard?

- It is possible under its own APMC Act. But the bigger the question here is how the state government will manage the entire state as a market yard.
- In the current yards of PMB, there is market committee staff to manage the sale and purchase. How the state will manage the sale purchase outside the PMB yards? The

government will have to **develop a system to bring every purchaser under one tax regime in the state.**

- Despite the APMC Act only farmers directly selling to companies go to the PMB yards. In Punjab around 18 million tonnes wheat, which is government purchase, is produced out of which 13 million tonnes is sold to the government for the contribution in the national pool and out of remaining around 5 million tonnes, 2 million tonnes is kept by the farming families for seed and self-consumption purpose and nearly 3 million tonnes is sold in the open market to the flour mills, bread companies and other processing units etc. How this trade will be managed if the entire state is declared a Principal Mandi Yard. It is difficult to implement practically.

#### **What can be the implications of such a move?**

- Such a step could isolate Punjab and be beyond the centre's Bills on agriculture applicable to the rest of India.
- Prof Gian Singh, retired Economics Professor of the Punjabi University in Patiala, said that the Centre, which purchases the wheat and paddy of Punjab, may not like the idea if the state nullifies its Bills and could decide now to purchase from the state, an annual expenditure of Rs 65,000 crore. "The state government does not have money to pay its staff's salaries then how it will purchase this huge crop?"
- Even if the Punjab government purchase it, where it will be stored? The state does not have the infrastructure to store it because centre's Food Corporation of India (FCI) manages the entire storage of wheat and paddy in the state," explained Prof Gian Singh. Prof Bangu said trader who will be supposed to pay the taxes even outside the mandis will start paying even lesser to the farmers to keep their profit margin intact.

#### **4.46 NPPA caps price of Liquid Medical Oxygen and Medical Oxygen cylinders as COVID-19 cases rise**

The Empowered Group 2, Government of India has recommended NPPA to consider capping the ex-factory price of liquid oxygen in order to ensure its supply to fillers at reasonable prices. It has also requested NPPA to consider a cap for ex-factory price of oxygen in cylinders in order to ensure supply of oxygen cylinders from filler at reasonable prices.

#### **National Pharmaceutical Pricing Authority**



- The National Pharmaceutical Pricing Authority (NPPA), is an **independent body of experts under the Ministry of Chemicals and Fertilisers**, formed in the year 1997 so as to implement and **enforce the provisions of the Drugs Prices Control Order (DPCO)** for regulating medicine prices in accordance with the powers delegated to it.
- NPPA is delegated with the powers to exercise the functions of the Central Government in respect of various paragraphs of the Drug Price Control Orders (DPCO) – DPCO, 1995 and now DPCO, 2013.
- The functions of NPPA include **fixation and revision of prices of scheduled drugs** (those medicines included in Schedule I of the DPCO which are subject to price control) and formulations, Monitoring of prices of decontrolled drugs and formulations, Implementation and enforcement of the provisions of DPCO in accordance with the powers delegated, Monitoring the availability of drugs, identify shortages, taking remedial steps, etc.
- The organization is also **entrusted with the task of recovering amounts overcharged by manufacturers** for the controlled drugs from the consumers.
- All the powers of Government of pricing according to **Essential Commodities Act** have been delegated to it. Under DPCO, 2013 the powers to Review are vested with the Government.

————— Since 2005 ——— *Feel the Pulse of UPSC...*

## POLITICAL ISSUES, HUMAN RIGHTS AND GOVERNANCE

### 5.1 RO-RO service Bengaluru to Solapur flagged off by Yediyurappa and Angadi

Shri B S Yediyurappa, Chief Minister of Karnataka and Shri Suresh C. Angadi, Minister of State of Railways have flagged off first ever RORO service of South Western Railway from Nelamangla (near Bengaluru) to Bale (near Solapur).

#### ‘RO-RO service’

- Roll On Roll Off (RORO) is a concept of **carrying road vehicles loaded with various commodities, on open flat railway wagons**. RO-RO train services were **first introduced in Indian Railways on Konkan Railways in 1999**, and are running successfully since then.
- RORO services are **combination of best features of road and rail transports** in the

sense that they **offer door to door service with minimal handling** transported by fast and direct rail link.

- Road transport has advantage of door to door delivery of goods. However, increasing traffic on roads is leading to congestion and delays to passenger vehicles. This will cause unsafe travel conditions. Also, delays at interstate check posts due to inspection of various documents, etc. contribute to increased travel time.
- On the other hand, Railways provide hassle free and environmentally friendly transport to medium to large quantum of freight. Rail transport is most fuel efficient of all means of transport and is much safer than road.

### **Advantages of RO-RO service**

Roll-on-Roll-off is a multimodal delivery model with following advantages –

- Faster movement of goods and essentials, reducing time taken by trucks to reach destinations due to traffic congestion in between cities
- Reduces congestion on the roads
- Saves precious fuel
- Reduces carbon footprint
- Relief to crew of truck as it avoids long distance driving
- No hassles of check posts/toll gates etc
- Seamless inter-operability between roadways & railways-Inter-modal transport on existing track — Since 2005 — Feel the Pulse of UPSC...
- Ensuring uninterrupted supply of essential commodities
- Free time for loading/ unloading is 3 hours
- Provides link between agriculture producing regions and agro consumption centres
- Connects and Balances the commodity deficient and surplus markets.

### **5.2 Cabinet approves Mission Karmayogi to re-skill civil servants for New India**

The Union Cabinet has approved launching of a **National Programme for Civil Services Capacity Building (NPCSCB)** with the following institutional framework –

- Prime Minister's **Public Human Resources (HR) Council**,
- **Capacity Building Commission**
- **Special Purpose Vehicle** for owning and operating the digital assets and the

technological platform for online training,

- **Coordination Unit** headed by the **Cabinet Secretary**.

### Salient features

- NPCSCB has been carefully designed to lay the foundations for capacity building for Civil Servants so that **they remain entrenched in Indian Culture and sensibilities and remain connected, with their roots**, while they learn from the best institutions and practices across the world.
- The Programme will be delivered by setting up an **Integrated Government Online Training – iGOT Karmayogi Platform**. The core guiding principles of the Programme will be –
  - Supporting Transition from **'Rules based'** to **'Roles based'** **HR Management**. Aligning work allocation of civil servants by matching their competencies to the requirements of the post.
  - To emphasise on **'on-site learning'** to complement the **'off-site'** learning,
  - To create an ecosystem of **shared training infrastructure** including that of learning materials, institutions and personnel,
  - To **calibrate all Civil Service positions** to a Framework of Roles, Activities and Competencies (FRACs) approach and to **create and deliver learning content** relevant to the identified FRACs in every Government entity,
  - To make available to all civil servants, an opportunity to **continuously build and strengthen their Behavioural, Functional and Domain Competencies** in their self-driven and mandated learning paths.
  - To **enable all the Central Ministries and Departments** and their Organisations to **directly invest their resources** towards co-creation and sharing the **collaborative and common ecosystem of learning** through an annual financial subscription for every employee,
  - To encourage and partner with the **best-in-class learning content creators** including public training institutions, universities, start-tips and individual experts,
  - To **undertake data analytics** in respect of data emit provided by iGOT-Karmayogi pertaining to various aspects of **capacity building**,

**content creation, user feedback and mapping of competencies** and identify areas for policy reforms.

### Objectives

- It is also proposed to set up a **Capacity Building Commission**, with a view to ensure a uniform approach in managing and regulating the capacity building ecosystem on collaborative and co-sharing basis.
- The role of Commission will be as under-
  - To **assist the PM Public Human Resources Council** in approving the Annual Capacity Building Plans.
  - To exercise **functional supervision over all Central Training Institutions** dealing with civil services capacity building.
  - To create **shared learning resources**, including internal and external faculty and resource centres.
  - To **coordinate and supervise the implementation of the Capacity Building Plans** with the stakeholder Departments.
  - To **make recommendations on standardisation of training** and capacity building, pedagogy and methodology
  - To **set norms for common mid-career training programs** across all civil services.
  - To **suggest policy interventions** required in the areas of **HR Management and Capacity Building** to the Government.

### iGOT-Karmayogi Platform

- **iGOT-Karmayogi platform** brings the scale and state-of-the-art infrastructure to augment the capacities of over two crore officials in India.
- The platform is expected to evolve into a **vibrant and world-class market place for content** where carefully curated and vetted digital e-learning material will be made available.
- Besides capacity building, **service matters** like confirmation after probation period, deployment, work assignment and notification of vacancies etc. would eventually **beintegrated with the proposed competency framework**.

### Public Human Resources Council

A **Public Human Resources Council** comprising of **select Union Ministers, Chief Ministers, eminent public HR practitioners, thinkers, global thought leaders** and Public Service functionaries under the **Chairmanship of Hon'ble Prime Minister** will serve as the apex body for providing **strategic direction to the task of Civil Services Reform and capacity building.**

### **5.3 Adjusted Gross Revenue [AGR] Judgement Day HIGHLIGHTS: SC allows 10 years for payment of AGR dues**

The Supreme Court has allowed the telecom companies 10 years' time to pay their adjusted gross revenue (AGR) dues to the government.

#### **How will the payment be made?**

- The telecom operators would make the **payment of 10% of the total dues** as demanded by Department of Telecom by March 31, 2021.
- The yearly instalments would commence from April 1, 2021, up to March 31, 2031. The instalments would be paid by March 31 every year.
- The **managing director/ chairman or other authorised officer** should give an undertaking within four weeks, to make payment of arrears.
- The telcos shall **keep alive the existing bank guarantees** they had submitted regarding the spectrum until the payment is made.
- In the event of any default, **interest would become payable along with penalty and interest on penalty without reference to court.** Besides, it would be punishable for contempt of court. Compliance should be reported every year on April 7.

#### **AGR**

- Adjusted Gross Revenue (AGR) is the usage and licensing fee that telecom operators are charged by the Department of Telecommunications (DoT).
- It is divided into spectrum usage charges and licensing fees, pegged between 3-5 percent and 8 percent respectively.
- As per DoT, the charges are calculated based on all revenues earned by a telco – including non-telecom related sources such as deposit interests and asset sales. Telcos, on their part, insist that AGR should comprise only the revenues generated from telecom services.
- In 2015, Telecom Disputes Settlement and Appellate Tribunal ruled that the companies' definition is right. However, in October 2019, the Supreme Court set aside the tribunal's

judgement saying government definition is right.

## WHAT IS ADJUSTED GROSS REVENUE

---

■ Telecom operators are required to pay licence fee and spectrum charges in the form of 'revenue share' to the government

■ The revenue amount used to calculate this revenue share is termed as the adjusted gross revenue, or AGR

### Supreme Court Judgement

- The Supreme Court has upheld the definition of Adjusted Gross Revenue (AGR) calculation as stipulated by the Department of Telecommunications.
- This means that telecom companies will have to pay up as much as Rs 92,642 crore to the government, more than half of which are owed by Airtel and Vodafone.
- Terming the issues raised by telcos with respect to AGR as 'frivolous', the SC held that not only the original charges, but principal interest and penalties on delayed payments would also be payable.

### 5.4 Prashant Bhushan's conviction seems at odds with international free speech law:

#### International Commission of Jurists

The International Commission of Jurists (ICJ) has said that civil rights lawyer Prashant Bhushan's conviction for criminal contempt of court by the Supreme Court seemed to be inconsistent with the freedom of expression law guaranteed by the International Covenant on Civil and Political Rights that India was a party to.

#### ICJ say

It said that "while some restrictions of freedom of expression are permitted by international standards, a particularly wide scope must be preserved for debate and discussion about such matters as the role of the judiciary, access to justice, and democracy, by members of the public, including through public commentary on the courts".



### International Commission of Jurists

- The International Commission of Jurists (ICJ) is **an international human rights non-governmental organisation**.
- It is a standing **group of 60 eminent jurists**—including senior judges, attorneys and academics—who work to **develop national and international human rights standards** through the law.
- Commissioners are known for their experience, knowledge and fundamental commitment to human rights. **The composition of the Commission aims to reflect the geographical diversity of the world and its many legal systems.**
- The Commission is supported by an International Secretariat based in **Geneva, Switzerland**, and staffed by lawyers drawn from a wide range of jurisdictions and legal traditions.
- The Secretariat and the Commission undertake advocacy and policy work aimed at **strengthening the role of lawyers and judges in protecting and promoting human rights and the rule of law.**

### International Covenant on Civil and Political Rights

- The ICCPR is **a multilateral treaty adopted by the United Nations General Assembly (UNGA)**. The ICCPR is **monitored by the United Nations Human Rights Committee**.
- The covenant commits (not legally binding) its parties to respect the civil and political rights of individuals, including the right to life, freedom of religion, freedom of speech, freedom of assembly, electoral rights and rights to due process and a fair trial.
- The ICCPR is part of the **International Bill of Human Rights**, along with the **International Covenant on Economic, Social and Cultural Rights (ICESCR)** and **the Universal Declaration of Human Rights (UDHR)**.
- The Covenant was adopted by the U.N. General Assembly in 1966 and came into force in 1976. As of December 2018, 117 countries have ratified the Covenant.

### 5.5 'Direct Democracy in Operation': Experts Decry Suspension of Question Hour

Recently, the Lok Sabha and Rajya Sabha secretariats notified that there will be no Question Hour during the Monsoon Session of Parliament.

### Question Hour

- Question Hour is the liveliest hour in Parliament. It is during this one hour that **Members of Parliament ask questions of ministers and hold them accountable** for the functioning of their ministries. The questions that MPs ask are designed to elicit information and trigger suitable action by ministries.
- Over the last 70 years, MPs have successfully used this parliamentary device to shine a light on government functioning. Their questions have exposed financial irregularities and brought data and information regarding government functioning to the public domain.
- With the **broadcasting of Question Hour since 1991**, Question Hour has become one of the most visible aspects of parliamentary functioning.
- Prior to Independence, **the first question asked of government was in 1893**. It was on the burden cast on village shopkeepers who had to provide supplies to touring government officers.

### Zero Hour

- While **Question Hour is strictly regulated**, **Zero Hour is an Indian parliamentary innovation**. The phrase **does not find mention in the rules of procedure**.
- The concept of Zero Hour **started organically in the first decade of Indian Parliament**, when MPs felt the need for raising important constituency and national issues.
- During the initial days, Parliament used to break for lunch at 1 pm. Therefore, the opportunity for MPs to raise national issues without an advance notice became available at 12 pm and could last for an hour until the House adjourned for lunch. This led to the hour being popularly referred to as **Zero Hour** and the issues being raised during this time as Zero Hour submissions.

### Are the questions only for ministers?

- MPs usually ask questions to hold ministers accountable. But the **rules also provide them with a mechanism for asking their colleagues a question**.
- Such a question should be **limited to the role of an MP relating to a Bill or a resolution** being piloted by them or **any other matter connected with the functioning of the House** for which they are responsible.

- Should the presiding officer so allow, MPs can also ask a question to a minister at a notice period shorter than 15 days.

### 5.6 Why the Centre's Bill on Official Languages in J&K Is Facing Opposition?

The Union Cabinet has approved a Bill to include **Kashmiri, Dogri and Hindi** as official languages in the newly-created Union Territory of Jammu and Kashmir.

- Only **English and Urdu** were official languages in the erstwhile State.
- The Cabinet had approved the Jammu and Kashmir Official Languages Bill to be introduced in Parliament to make **Urdu, Kashmiri, Dogri, Hindi and English** official languages for the Union Territory.

#### Official Language

- Part **XVII of the Indian constitution** deals with the official languages in **Articles 343 to 351**.
- The Constitutional provisions related to the Eighth Schedule are – **Article 344:** Article 344(1) provides for the constitution of a **Commission by the President** on expiration of **five years** from the commencement of the Constitution. **Article 351:** It provides for the spread of the Hindi language to develop it so that it may serve as a medium of expression for all the elements of the composite culture of India.
- The Eighth Schedule to the Constitution consists of the following 22 languages: (1) Assamese, (2) Bengali, (3) Gujarati, (4) Hindi, (5) Kannada, (6) Kashmiri, (7) Konkani, (8) Malayalam, (9) Manipuri, (10) Marathi, (11) Nepali, (12) Oriya, (13) Punjabi, (14) Sanskrit, (15) Sindhi, (16) Tamil, (17) Telugu, (18) Urdu (19) Bodo, (20) Santhali, (21) Maithili and (22) Dogri.
- Originally, 14 languages were included in the Constitution. Bodo, Dogri, Maithili, and Santhali were the most recent addition to the list by **92nd Amendment Act of 2003**.
- **96th Constitutional Amendment Act** of 2011 changed the name of 'Odia' to 'Oriya'.

### 5.7 NCRB data on suicides and accidental deaths – Maximum Deaths By Suicide Among Farmers, Daily Wagers, Second Largest Among Housewives

The number of suicide cases and accidental deaths registered an increase across the country last

year from the 2018 figures, according to the annual National Crime Records Bureau report.

- The most cases of **mass/family suicides** were reported from Tamil Nadu (16), followed by Andhra Pradesh (14), Kerala (11) and Punjab (9) and Rajasthan (7).
- Suicides in the country went up slightly from 1,34,516 to 1,39,123. Of the 97,613 male suicides, the **most were of daily wage earners** (29,092), followed by self-employed persons (14,319) and the unemployed (11,599). Of the 41,493 female, **over half were housewives**.
- The **most suicides by unemployed persons were in Kerala** at 14% (1,963), followed by 10.8% in Maharashtra, 9.8% in Tamil Nadu, 9.2% in Karnataka and 6.1% in Odisha. Most suicides by those in business activities were in Maharashtra (14.2%), Tamil Nadu (11.7%), Karnataka (9.7%), West Bengal (8.2%) and Madhya Pradesh (7.8%).
- The **suicide rate in cities (13.9%) was higher** compared to the all-India average.
- In the Central Armed Police Forces, a total of 36 personnel died by suicide, 38.9% were due to “family problems”. Five such suicides were reported in Rajasthan, followed by four in Tamil Nadu. In all, 104 personnel died in various accidents.

**What does the data about ‘accidental deaths’ say?**

- Accidental deaths in the country **increased by 2.3%**. Compared with 4,11,824 in 2018, the figure stood at 4,21,104 last year.
- The rate (per lakh population) increased from 31.1 to 31.5. The **most casualties of 30.9% were reported in the 30-45 age group**, followed by 26% in the 18-30 age group.
- **Maharashtra** reported the **highest** deaths (70,329), amounting to **nearly one-sixth of the total figure**.
- Uttar Pradesh, the most populous State, accounted for 9.6% cases, followed by Madhya Pradesh (10.1%).
- A total of 8,145 deaths was due to the causes attributable to forces of nature, including 35.3% due to lightning, 15.6% by heat/sun stroke and 11.6% deaths in floods. The most deaths (400) due to lightning was reported each from Bihar and Madhya Pradesh, followed by Jharkhand (334) and Uttar Pradesh (321).
- The major causes were ‘**traffic accidents**’ (43.9%), ‘sudden deaths’ (11.5%), ‘drowning’ (7.9%), ‘poisoning’ (5.1%), ‘falls’ (5.1%) and ‘accidental fire’ (2.6%). A majority (57.2%) of deaths was in the age groups of 18-45 years.

### National Crime Records Bureau (NCRB)

- NCRB was set-up in 1986 to function as a repository of information on crime and criminals so as to assist the investigators in linking crime to the perpetrators, **based on the recommendations of the National Police Commission (1977-1981) and the MHA's Task force (1985).**

NCRB developed Integrated Investigation Forms (IIF) in 1989-93 and **implemented the Crime and Criminal Information System (CCIS) during the years 1995-2004.**

- NCRB was entrusted with the **responsibility for monitoring, co-ordinating and implementing the Crime and Criminal Tracking Network & Systems (CCTNS)** project in the year 2009.
- The project connects 15000+ police stations and 6000 higher offices of police in the country.

### 5.8 Govt Launches Aatmanirbhar Bharat ARISE Challenge For MSMEs & Startups

Atal Innovation Mission (AIM), NITI Aayog has launched one of its most awaited programmes, the **Aatmanirbhar Bharat ARISE-Atal New India Challenges**, to spur applied research and innovation in Indian MSMEs and startups.

- The programme will be driven by **Indian Space Research Organization (ISRO)**, four ministries—**Ministry of Defence; Ministry of Food Processing Industries; Ministry of Health and Family Welfare; and Ministry of Housing and Urban Affairs**—and associated industries to facilitate innovative solutions to sectoral problems.
- The Aatmanirbhar Bharat ARISE-ANIC programme will **support deserving applied research-based innovations** by providing funding support of up to Rs 50 lakh for speedy development of the proposed technology solution and/or product.

### 5.9 India Post launches Five Star Villages Scheme to ensure rural coverage of postal schemes

The Department of Posts has launched a scheme called **Five Star Villages**, to ensure universal coverage of flagship postal schemes in rural areas of the country.

- The scheme seeks to **bridge the gaps in public awareness and reach of postal products and services**, especially in interior villages.

- All postal products and services will be made available and marketed and publicised at village level, under the Five Star Villages scheme.
- Branch offices will function as **one-stop shop to cater all post office** – related needs of villagers.
- The schemes covered under the Five Star scheme include – i) Savings Bank accounts, Recurrent Deposit Accounts, NSC / KVP certificates, ii) Sukanya Samridhi Accounts/ PPF Accounts, iii) Funded Post Office Savings Account linked India Post Payments Bank Accounts, iv) Postal Life Insurance Policy/Rural Postal Life Insurance Policy and v) Pradhan Mantri Suraksha Bima Yojana Account / Pradhan Mantri Jeevan Jyoti Bima Yojana Account.
- The scheme will be implemented **by a team of five Gramin Dak Sevaks** who will be assigned a village for marketing of all products, savings and insurance schemes of the Department of Posts. The team of Gramin Dak Sevaks will conduct door-to-door awareness campaign on all schemes, covering all eligible villagers.

#### 5.10 Police vs judicial custody in the context of Rhea Chakraborty case

In India, the various procedures of the administration of the criminal law are governed by the legislation called the **Code of Criminal Procedure or Criminal Procedure Code (CrPC)**, which **came into force in 1973**, after its enactment building up on the British era legislation.

#### Provisions of arrest

- **Chapter 5 of the CrPC** starting from **section 41** lists the legal provisions about the **arrest**. Arrest primarily means putting restrictions on the movement of a person. It can be done by a police officer or officer of investigating agency if the officer is satisfied that the arrest is necessary: to prevent the person from committing the offence further, to prevent tampering if evidence, for proper investigation, to prevent the person from dissuading those acquainted with facts and more.
- As per the provisions, **an arrested person has the right to be informed about grounds of arrest** and there is obligation on the person making the arrest, to inform about the arrest, to a nominated person. Arrested person also has the **right to meet an advocate of choice** during interrogation. The law also makes **an examination by a medical practitioner mandatory after the arrest**.



- The arresting authority **can not detain a person in custody for more than 24 hours without producing him or her before a magistrate as per section 57 of CrPC.**
- The **Article 22 of the Constitution of India** also has provisions for protection of a person during arrest or detention.

#### What is 'police custody' and 'judicial custody'?

- Whenever a person is arrested by police or investigating agency and detained in custody and if the investigation can not be completed in 24 hours, the person is mandated to be produced before a magistrate court. The **section 167 of CrPC** and subsequent provisions lay down procedures that may follow in various scenarios.
- The magistrate may further remand the person to **custody of police for a period not more than 15 days as a whole.** The police custody means that the **person is confined at a lock up or remains in the custody of the officer.**
- After lapse of 15 days or the police custody period granted by the magistrate, the person may be further remanded to **judicial custody.** Judicial custody means that **the person is detained under the purview of the judicial magistrate** is lodged in **central or state prison.**
- **Section 167** also has some amendments which are specific to individual states in the country. In some cases investigation agencies may not seek police custody immediately and one of the reasons can be judicious use of the maximum 15 days at their disposal. In some cases courts may directly remand a person to judicial custody, if the court concludes that there is no need of police custody or extension of police custody.
- **In judicial custody, the person can apply for a bail as per the CrPC chapter 33 pertaining to the bails and bonds.** The **judicial custody can extend up to 60 or 90 days** as a whole, depending upon the maximum punishment prescribed for the offence.
- An undertrial person can not remain in judicial custody beyond half the time period of prescribed maximum punishment.

#### Difference between the two

- Apart from basic differences pertaining to the **purview and place of detention** there are some basic differences between the two.
- In police custody, **the investigating authority can interrogate a person** while in judicial custody, officials **need permission of the court for questioning.**

- In police custody, the person has the **right to legal counsel, right to be informed** of the grounds which the police have to ensure.
- In the judicial custody in jails, while the person under responsibility of the magistrate, **the Prison Manual comes into picture** for routine conduct of the person.

### 5.11 Dy Speaker poll up to Lok Sabha, govt; no curb on discussion: OM Birla

Lok Sabha Speaker Om Birla has said that if there is a provision for the post of Deputy Speaker in the Lok Sabha, then it was only obvious that there should be one, but it was not the Speaker's job to appoint one, and that the Deputy Speaker was chosen by the House.

His comments come against the backdrop of renewed efforts by Opposition parties in urging the government to fill the Deputy Speaker's position, which has been vacant for the past 15 months.

#### Deputy Speaker of Lok Sabha

- **Article 93 of the Constitution** provides for the election of both the Speaker and the Deputy Speaker. For the election of Deputy Speaker, there is no need to resign from their original party though as a Deputy Speaker, they have to remain impartial.
- He acts as the presiding officer in case of leave or absence caused by death or illness of the Speaker of the Lok Sabha. Usually, the Deputy Speaker is elected in the first meeting of the Lok Sabha after the General elections from amongst the members of the Lok Sabha. **It is by convention that position of Deputy Speaker is offered to opposition party in India.**
- They hold office until either they cease to be a member of the Lok Sabha or they resign. They can be removed from office by a resolution passed in the Lok Sabha by an effective majority of its members.
- However, it should be noted that there is a constitution-mandated panel of 10 members to preside over the proceedings of the Lok Sabha in the absence of Speaker.

### 5.12 Overseas Friends of BJP registers as foreign agent in US – what this law means & how it works?

The BJP has become the first mainstream political party from India to have named itself as a **foreign principal of an organisation in the United States**, after the Overseas Friends of the BJP (OFBJP) registered under the **1938 Foreign Agents Registration Act (FARA) under the U.S. Department of Justice.**

## FARA

- The **Foreign Agents Registration Act** (FARA) is a United States **law** passed in 1938 requiring that **agents** representing the interests of **foreign** powers in a “political or quasi-political capacity” disclose their relationship with the **foreign** government and information about related activities and finances.
- The FARA requires “*agents representing the interests of foreign powers in a political or quasi political capacity [to]disclose their relationship with the foreign government and information about related finances.*”

## Implications

- Following the registration, the OFBJP will have to **declare any meetings with U.S. legislators, organisation of events and funding from U.S. groups.**
- It will also not be possible for OFBJP members to use organisational help during the U.S. elections as it would then be seen as foreign interference.
- Most other entities from India registered under this Act are legal, lobby or public relations firms engaged by the Indian Embassy or the Tourism Department.

## Some well known registrations

An unknown political party from India, (Democratic Party of India) and a TV channel are also registered. Pakistan’s ruling Tehreek-e-Insaaf (PTI), Pakistan People’s Party (PPP) and Pakistan Muslim League (N) as well as Bangladesh’s opposition Bangladesh Nationalist Party (BNP) are some of the political parties from the South Asian neighbourhood with FARA registration.

In April this year the U.S. Department of Justice had announced that it would conduct an FARA enforcement drive with wider scrutiny of all consultants and organisations and sent a number of “deficiency notices”, asking suspected foreign agents to register or stop activity on behalf of foreign entities.

## 5.13 Farm Bills

Three bills aimed at transformation of agriculture in the country and raising farmers’ income were introduced in Lok Sabha recently to replace ordinances promulgated on 5th June 2020–

1. The Farmers’ Produce Trade and Commerce (Promotion and Facilitation) Bill, 2020
2. The Farmers (Empowerment and Protection) Agreement of Price Assurance and Farm Services Bill, 2020

### 3. The Essential Commodities (Amendment) Bill, 2020

#### 1. The Farmers' Produce Trade and Commerce (Promotion and Facilitation) Bill, 2020

It seeks to provide for the **creation of an ecosystem where the farmers and traders enjoy the freedom of choice relating to sale and purchase of farmers' produce** which facilitates remunerative prices through competitive alternative trading channels to promote efficient, transparent and barrier-free inter-State and intra-State trade and commerce of farmers' produce outside physical premises of markets or deemed markets notified under various State agricultural produce market legislations; to provide a facilitative framework for electronic trading and for matters connected therewith or incidental thereto.

- Farmers in India suffered from **various restrictions in marketing their produce**. There were restrictions for farmers in selling agri-produce outside the notified APMC market yards. The farmers were also restricted to sell the produce only to registered licensees of the State Governments.
- Further, **Barriers existed in free flow of agriculture produce** between various States owing to the prevalence of various APMC legislations enacted by the State Governments. This legislation is a historic-step in unlocking the vastly regulated agriculture markets in the country.
- It will **open more choices for the farmer, reduce marketing costs** for the farmers and **help them in getting better prices**. It will also help farmers of regions with surplus produce to get better prices and consumers of regions with shortages, lower prices.

#### 2. The Farmers (Empowerment and Protection) Agreement of Price Assurance and Farm Services Bill, 2020

It seeks to provide for a **national framework on farming agreements** that protects and empowers farmers to engage with agri-business firms, processors, wholesalers, exporters or large retailers for farm services and sale of future farming produce at a mutually agreed remunerative price framework in a fair and transparent manner and for matters connected therewith or incidental thereto.

- **Indian agriculture is characterised by fragmentation** due to small holding sizes and has certain weaknesses such as weather dependence, production uncertainties and

market unpredictability. This makes agriculture risky and inefficient in respect of both input & output management.

- This legislation will **transfer the risk of market unpredictability from the farmer to the sponsor** and also enable the farmer to access modern technology and better inputs. It will reduce cost of marketing and improve income of farmers.
- Farmers will engage in **direct marketing** thereby eliminating intermediaries resulting in full realisation of price.
- Farmers have been provided adequate protection. **Effective dispute resolution mechanism** has been provided for with clear time lines for redressal.

### 3. The Essential Commodities (Amendment) Bill, 2020

- It seeks to **remove commodities like cereals, pulses, oilseeds, edible oils, onion and potatoes from the list of essential commodities.**
- This will remove fears of private investors of excessive regulatory interference in their business operations.
- The freedom to produce, hold, move, distribute and supply will lead to harnessing of economies of scale and attract private sector/foreign direct investment into agriculture sector.
- While India has become surplus in most agri-commodities, farmers have been unable to get better prices due to **lack of investment in cold storage, warehouses, processing and export** as the entrepreneurial spirit gets dampened due to Essential Commodities Act.
- Farmers suffer huge losses when there are bumper harvests, especially of perishable commodities.
- The legislation will help **drive up investment in cold storages and modernisation of food supply chain.** It will help both farmers and consumers while bringing in price stability.
- It will create **competitive market environment** and also prevent wastage of agri-produce that happens due to lack of storage facilities.

### 5.14 Unlawful Activities Prevention Act, 1967

Delhi Police has arrested Umar Khalid under the Unlawful Activities (Prevention) Act for his

alleged involvement in the Delhi riots of February 2020.

### What is an 'unlawful' activity as per the act?

The Act defines unlawful activity as any action – spoken or written words, signs, or visible representation – which is intended or supports any claim to bring about secession of any part of India or which incites anyone towards secession; disclaims, questions, disrupts or intends to disrupt the sovereignty and territorial integrity of India; and “*which causes or is intended to cause disaffection against India*”. The word “**disaffection**” has **not been defined** in the law, and finds mention only once.

### UAPA

- It is a law which is aimed at **effective prevention of unlawful activities** associations in India.
- Its main objective was to **make powers available** for dealing with **activities directed against the integrity and sovereignty of India**.
- It empowered appropriate authorities to declare any association as ‘**unlawful**’ if it is carrying out ‘**unlawful activities**’.
- This law was comprehensively amended by the Unlawful Activities (Prevention) Amendment Act, 2004 **to deal with terrorist activities**. Like POTA, **it defines a ‘terrorist act’** and also defines a “**terrorist organisation**” as an organisation listed in the Schedule or an organisation operating under the same name as an organisation so listed. ——— Since 2005 ——— *Feel the Pulse of UPSC...*
- It further provides a **mechanism for forfeiture of the proceeds of terrorism** apart from providing stringent punishments for terrorism related offences.
- Further, it is amended in by Unlawful Activities (Prevention) Amendment Act, 2019. **Thus, at present the only Union Legislation dealing specifically with terrorism is the Unlawful Activities (Prevention) Act, 2019.**
- Following the last amendment in 2019, **an individual can be designated a terrorist; only organisations could be designated earlier**. UAPA cases are tried by special courts.

### 5.15 Textiles Ministry partners with states for skilling 4 lakh under ‘Samarth’ scheme

The **Ministry of Textiles** is implementing the Samarth-Scheme for Capacity Building in the



Textiles Sector.

- Samarth Scheme, also known as **Scheme for Capacity Building in the Textile Sector (SCBTS)**, was approved by **Cabinet Committee on Economic Affairs (CCEA)** in **2017** in order to ensure steady supply of skilled manpower in the labour-intensive textile sector.
- **Objectives :**
  - Provide **demand driven, placement oriented National Skills Qualifications Framework (NSQF) compliant skilling programmes** to create jobs in the organized textile and related sectors, covering the **entire value chain of textile, excluding Spinning and Weaving.**
  - Promote **skilling and skill upgradation** in the traditional sectors of handlooms, handicrafts, sericulture and jute.
  - Enable provision of **sustainable livelihood** either by wage or self employment.
- 18 State Governments have been allocated a training target of 3.6 lakh beneficiaries for conducting **training programmes in traditional and organized sectors.**
- Industry/industry associations are being empanelled for undertaking **industry oriented entry level skilling programmes** in the organized sectors.
- **Other Schemes of the Textile Sector**
  - **Scheme for Integrated Textile Park (SITP)**
  - **Power-Tex India**
  - **Silk Samagra Scheme**
  - **Amended Technology Upgradation Fund Scheme (ATUFS)**
  - **National Handloom Day**
  - **Jute ICARE**
  - **National Technical Textile Mission**

### 5.16 No Confidence Resolution against Rajya Sabha Deputy Chairman

Rajya Sabha members of 12 opposition parties moved a **no-confidence resolution against Rajya Sabha Deputy Chairman** over the passage of two controversial **farm Bills** by the **voice vote.**

**Voice Vote**

- It involves the speaker putting a question to the house and then asking the house to put forward its opinion in the forms of ayes (yes) or noes.
- Based on a rough measure of which side was **louder**, the speaker decides if the motion was passed or fell through.
- The **advantage** of a voice vote is that it is **quick**.
- The apparent **disadvantage** is that it is **inaccurate**, given that the speaker decides what the opinion of the house is based on which side is louder.
- **Resolution:**
  - The Deputy Chairman has violated all the canons of law, procedure, parliamentary procedures, practices and fair play. The Deputy Chairman did not allow **points of order** to be raised and did not allow large numbers of members of Rajya Sabha, from diverse political parties, to even speak against **farm bills**.
  - This no confidence resolution is for the removal of the Deputy Chairman. It is **not the same as the No Confidence Motion specified in Rule 198 of the Rules of Procedure and conduct of Lok Sabha**, which can lead to the resignation of the Council of Ministers. **Article 75** of the Constitution specifies that the Council of Ministers shall be collectively responsible to the House of People.
  - **Some Precedents:** Earlier resolutions moved against the first Lok Sabha Speaker G V Mavalankar in 1951, Speaker Sardar Hukam Singh in 1966, and Speaker Balram Jakhar in 1987.
    - All of these resolutions were negated by the House.
- **Options with the Government:**
  - **Suspension of Opposition MPs :** In a counter move, the government is likely to seek the suspension of Opposition MPs who were involved in the unruly scenes witnessed in the House.
    - The government can invoke **Rule 256**, which deals with the suspension of a member.
    - The final decision of suspension rests with the Chairman.
  - **Privilege Motion:** The ruling party can also move a **privilege**

**motion** against some of the Opposition MPs.

- A privilege motion is invoked when there is a breach of parliamentary privileges by a member.

### Relevant Rules of Procedures and Conduct of Business

- **Rule 256, Suspension of member:** This is decided by the presiding officer of the house on the grounds like a member **disregarding the authority of the Chair or abusing the rules** of the Council.
- **Rule 258** of the Rules of Procedure and Conduct of Business in Rajya Sabha makes a provision to enable a member to raise a **point of order**. It provides as follows:
  - Any member may at any time submit a point of order for the decision of the Chairman.
  - The Chairman's decision shall be final in this regard.
- **Point of order:**
  - A point of order is an **objection** to the **pending matter or proceeding is in violation** of a written and unwritten rule of the House.
- **Deputy Chairman of Rajya Sabha**
  - The Deputy Chairman is elected by the Rajya Sabha itself from amongst its members. The post of the Deputy Chairman is not subordinate to the Chairman.
- **In the Role of the Chairman:**
  - The Deputy Chairman performs the duties of the Chairman's office when it is **vacant or when the Vice-President acts as President** or discharges the functions of the President.
  - He also acts as the Chairman when the **Chairman is absent** from the sitting of the House.
    - In both cases, he has all the powers of the Chairman.
  - Like the Chairman, the Deputy Chairman, while presiding over the House, **cannot vote in the first instance**; he can only exercise a casting vote in the case of a tie.
  - **Removal:** According to the **Article 90** of the Constitution, the Deputy Chairman vacates his office in any of the following three cases:

- If he ceases to be a member of the Rajya Sabha;
- If he resigns by writing to the Chairman; and
- If he is removed by a **resolution** passed by a majority of **all the then members** of the Rajya Sabha. Such a resolution can be moved only after giving **14 days' advance notice**.

### 5.17 Tele-Law Service

To commemorate the journey of its Tele-Law programme, union Department of Justice has released its first booklet "Tele-Law – Reaching the Unreached, "Voices of the beneficiaries".

- It is a program by the government where **people can seek legal advice from lawyers through video conferencing** available at the Common Service Centers, on the 'Tele Law' portal – a technology-enabled platform.
- Tele-Law programme was **launched in 2017** to address **cases at pre-litigation stage**.
- Especially designed to **facilitate early detection, intervention and prevention** of the legal problems, the Tele-Law service is proactively outreached to groups and communities through a cadre of frontline volunteers provided by NALSA and CSC- e Gov.
- These grassroots soldiers have been additionally **equipped with a mobile application to pre-register and schedule appointment of the applicants** during their field activity. Dedicated pool of lawyers has been empanelled to provide continued legal advice and consultation to the beneficiaries.
- Under this programme, **smart technology of video conferencing, telephone /instant calling facilities** available at the vast network of Common Service Centres at the Panchayat level are used to connect the indigent, down-trodden, vulnerable, unreached groups and communities with the Panel Lawyers for seeking timely and valuable legal advice.
- A panel of lawyers will be provided by the **National Legal Services Authority (NALSA)** in every state capital to advise the applicants through video conferencing.
- The first phase will be implemented across 1800 panchayats in **Jammu and Kashmir, North Eastern States, Uttar Pradesh and Bihar**.

## SCIENCE AND TECHNOLOGY

### 6.1 CSIR-CMERI develops affordable solar-powered battery based sprayers to tackle water crisis in agriculture

CSIR-CMERI developed two variants of battery operated spray systems one for “*marginal famers*” and other for “*small farmers*”.

- Back Pack Sprayer, having capacity of 5 litres, is made for “marginal farmers”, while the Compact Trolley Sprayer having capacity of 10 litres, is made for “small farmers”.
- These sprayers are equipped with two separate tanks, flow control and pressure regulator to handle different water requirements of the crops, target/site specific irrigation, maintaining appropriate dilution of pesticide/fungicide to control the pest (on foliage, under the leaves, at root zone etc.), creating water based micro-roughness of leaf surface, maintaining soil moisture levels in a narrow range, and weed control.
- The systems functions on Solar-Powered batteries, thus enabling its usage even in energy and power deprived agricultural regions of the Nation, thus reducing dependence on price volatile fossil fuels.
- The sprayers are simple to develop, easy to learn and implement, therefore will help to overcome water crisis faced by Indian farmers.

#### CSIR-CMERI

- The Central Mechanical Engineering Research Institute (CMERI) is the **apex R&D institute for mechanical engineering under the aegis of the Council of Scientific and Industrial Research (CSIR)**.
- Being the only national level research institute in this field, CMERI’s mandate is to **serve industry and develop mechanical engineering technology** so that India’s dependence on foreign collaboration is substantially reduced in strategic and economy sectors.
- Besides, the institute is facilitating innovations and inventions for establishing the claims of Indian talent in international fields where Indian products shall ultimately compete.
- In the new millennium, CMERI is poised to expand its horizon of research activities so as to steer the country forward in cutting-edge and sunrise fields.

### 6.2 Gravitational wave from merger of two black holes over 7 billion years ago detected

Billions of years ago, a collision between two black holes sent gravitational waves rippling through

the universe. In 2019, signals from these waves were detected at the gravitational wave observatory LIGO (United States) and the detector Virgo (Italy).

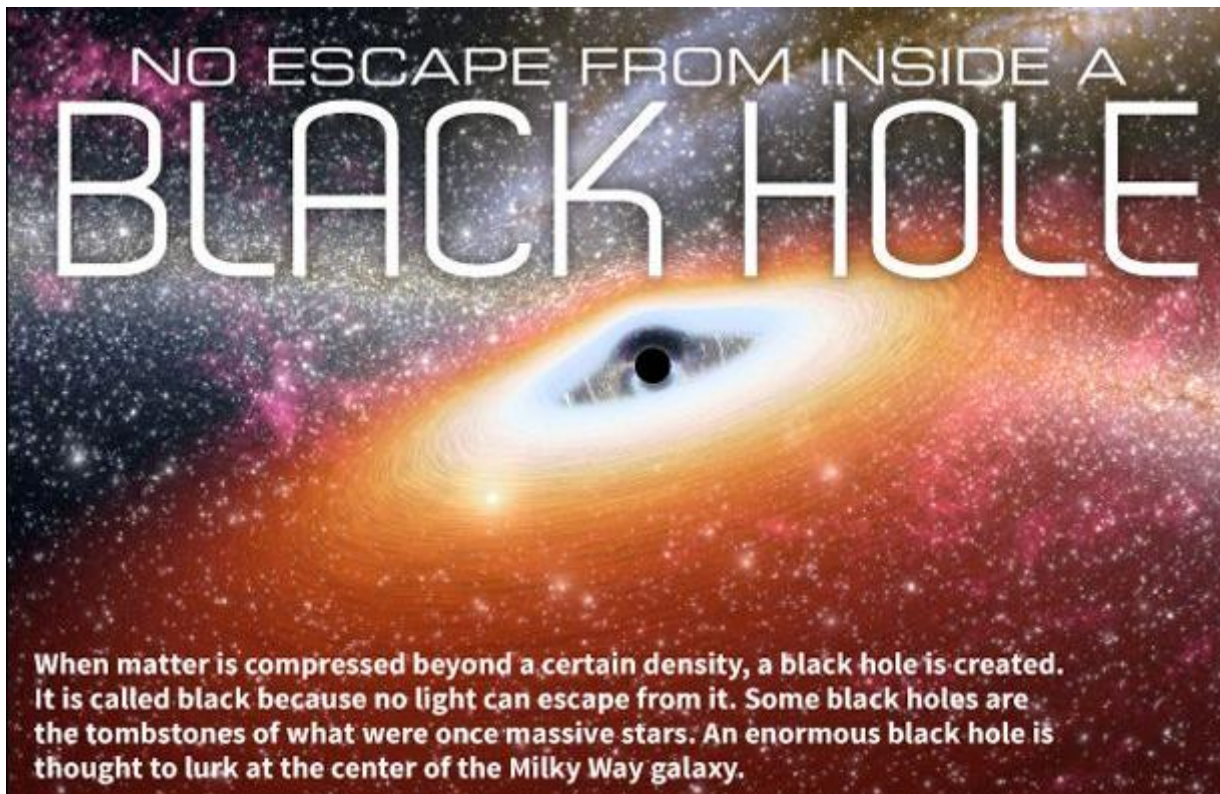
What has excited scientists, however, is the mass of one of the parent black holes, which defies traditional knowledge of how black holes are formed.

- It was a **signal from a gravitational wave**, a relatively new field of discovery. Gravitational waves are invisible ripples that **form when a star explodes in a supernova; when two big stars orbit each other; and when two black holes merge**. Travelling at the speed of light, **gravitational waves squeeze and stretch anything in their path**.
- Gravitational waves were **proposed by Albert Einstein** in his **General Theory of Relativity** over a century ago. It was only in 2015, however, that the **first gravitational wave was actually detected** — by **LIGO**. Since then, there have been a number of subsequent detections of gravitational waves.
- The signal detected at LIGO and Virgo, as described by the LIGO Collaboration, resembled **“about four short wiggles”** and **lasted less than one-tenth of a second**.

### ‘Black Hole’

- A black hole is a place in space **where gravity pulls so much that even light can not get out**. The gravity is so strong because matter has been squeezed into a tiny space. This can happen when a star is dying. Because no light can get out, people can't see black holes. They are invisible.
- Black holes can be big or small. Scientists think the smallest black holes are as small as just one atom. These black holes are very tiny but have the mass of a large mountain. Mass is the amount of matter, or “stuff,” in an object.
- Another kind of black hole is called **“stellar.”** Its mass can be up to 20 times more than the mass of the sun. There may be many, many stellar mass black holes in Earth's galaxy. Earth's galaxy is called the Milky Way.
- The largest black holes are called **“supermassive.”** These black holes have masses that are more than 1 million suns together. Scientists have found proof that every large galaxy contains a supermassive black hole at its centre. The supermassive black hole at the centre of the Milky Way galaxy is called **Sagittarius A**. It has a mass equal to about 4 million suns and would fit inside a very large ball that could hold a few million Earths.





### 6.3 Images sent by Chandrayaan-1 suggest probable rusting of Moon's poles

ISRO's maiden mission to the Moon (Chandrayaan-1) has sent images which show that Moon may be rusting along the poles.

- The sign of this finding is that even though the **surface of the Moon is known to have iron – rich rocks**, it is **not known for the presence of water and oxygen**, which are the two elements **needed** to interact with iron **to create rust**.
- Scientists at the National Aeronautics and Space Administration (NASA) say that this could be because the Earth's own atmosphere is lending a helping hand which, in other words, means that the Earth's atmosphere could be protecting the Moon as well.
- Thus, the Chandrayaan-1 Moon data indicates that the Moon's poles are home to water, this is what the scientists are trying to decipher.

#### Chandrayaan-1

- Chandrayaan-1 is the India's first lunar probe which was launched in October, 2008.
- ISRO lost communication with Chandrayaan-1 in August 2009.
- The spacecraft is a very small cube which is about 1.5 meters on each side i.e about half

the size of a smart car.

- The interplanetary radar has been used to observe small asteroids several million miles from Earth.
- Chandrayaan-1 provided **evidence of lunar caves** formed by an ancient lunar lava flow.
- Among its many achievements was the discovery of widespread presence of water molecules in lunar soil.

#### 6.4 India test-fires hypersonic technology demonstrator vehicle; joins select group

Defence Research and Development Organisation (DRDO) has successfully demonstrated the hypersonic air-breathing scramjet technology with the flight test of Hypersonic Technology Demonstration Vehicle (HSTDV) from Dr APJ Abdul Kalam Launch Complex at Wheeler Island, off the coast of Odisha.

India has become the fourth country in the world to test hypersonic technology vehicle after US, Russia and China.

##### HSTDV

- Hypersonic Technology Demonstrator Vehicle (HSTDV) is **an unmanned scramjet vehicle** with a capability to **travel at six times the speed of sound**.
- The scramjets are a variant of a category of **jet engines called the air breathing engines**. The ability of engines to **handle airflows of speeds in multiples of speed of sound**, gives it a capability of operating at those speeds.
- **Hypersonic speeds** are those which are **five times or more than the speed of sound**. The unit tested by the DRDO can achieve upto six times the speed of sound or Mach 6, which is well over 7000 kilometres per hour or around two kilometres per second.

##### 'Ramjet', 'Scramjet' and 'Dual mode ramjet' engines

- A ramjet is a form of **air-breathing jet engine** that **uses the vehicle's forward motion to compress incoming air for combustion** without a rotating compressor. Fuel is injected in the combustion chamber where it mixes with the hot compressed air and ignites.
- A ramjet-powered vehicle **requires an assisted take-off like a rocket assist** to accelerate it to a speed where it begins to produce thrust.

- Ramjets work most efficiently at **supersonic speeds around Mach 3** (three times the speed of sound) and **can operate up to speeds of Mach 6**. However, the ramjet efficiency starts to drop when the vehicle reaches hypersonic speeds.
- A **scramjet engine** is an improvement over the ramjet engine as it efficiently **operates at hypersonic speeds** and allows supersonic combustion. Thus it is known as **Supersonic Combustion Ramjet, or Scramjet**.
- A **dual mode ramjet (DMRJ)** is a type of jet engine where **a ramjet transforms into scramjet** over Mach 4-8 range, which means it can efficiently operate both in subsonic and supersonic combustor modes.

### 6.5 Is a Bradykinin Storm Brewing in COVID-19?

A recent analysis of samples of patients with the **Covid-19** infection has shown a phenomenon called a '**bradykinin storm**'.

- Doctors treating Covid-19 patients often **cannot identify the severity with which the SARS-CoV-2 virus seems to affect some people** and 'bradykinin storm' might explain the working of the virus in the body.
  - However, the **cytokine storm** is able to explain certain causes for the rapid deterioration in some patients with Covid-19.
- **The bradykinin hypothesis:**
  - SARS-CoV-2 uses a human enzyme called **ACE2** to enter into the cells of its host.
    - ACE2 lowers **blood pressure** in the human body and works against another enzyme known as ACE (which has the opposite effect).
  - The virus causes the levels of ACE to fall in the lungs, and consequently pushes up the levels of ACE2.
  - This happens as a chain reaction and increases the levels of the **molecule bradykinin** in the cells, causing a **bradykinin storm**.
    - **Bradykinin** is a compound that is **related to pain sensation and lowering blood pressure** in the human body.
    - Bradykinin storm causes the blood vessels to expand and become leaky, leading to swelling of the surrounding tissue.
  - **Increase in hyaluronic acid:** The levels of a substance called hyaluronic acid

also increases.

- Hyaluronic acid is a sugar molecule that occurs naturally in the skin, and it helps to bind water to collagen (a protein). It can absorb more than 1,000 times its own weight in water to form a hydrogel.
- **Impact:** The bradykinin storm-induced **leakage of fluid into the lungs combined with the excess hyaluronic acid** would likely result in a **Jello-like substance** that prevents oxygen uptake and carbon dioxide in the lungs of severely affected Covid-19 patients.
  - This rapid accumulation of fluid in the lungs of patients sometimes makes even the most sophisticated intensive care, including ventilators, futile.
- **Significance:** Knowing the mechanism, doctors can target the bradykinin pathway to evolve more **therapeutic interventions** to offset the severe effects of Covid-19.

### Cytokine Storm Syndrome

- **Cytokine Storm Syndrome** is characterised by the overproduction of immune cells and the cytokines themselves because of a dysregulation in the process.
  - **Cytokines** are a large group of proteins that are secreted by specific cells of the immune system.
- **Reasons:** A cytokine storm can occur due to an infection, auto-immune condition (when the body's immune system attacks healthy cells as in case of coeliac disease- an immune disorder that primarily affects the small intestine), or other diseases.
- **Signs and symptoms** include high fever, inflammation (redness and swelling), severe fatigue, and nausea.
- In the case of any flu infection, a cytokine storm is associated with a surge of activated immune cells into the lungs, which, instead of fighting off the antigen, leads to lung inflammation and fluid build-up, and respiratory distress.



## Immune system overdrive

SARS-CoV-2 can trigger a hyperactive response from the patient's own defence mechanism, unleashing an indiscriminate, sometimes fatal, assault

### Cytokine storm

The immune response goes into overdrive

- ▶ Also documented in influenza, SARS and MERS patients
- ▶ Also associated with non-infectious diseases such as multiple sclerosis and pancreatitis



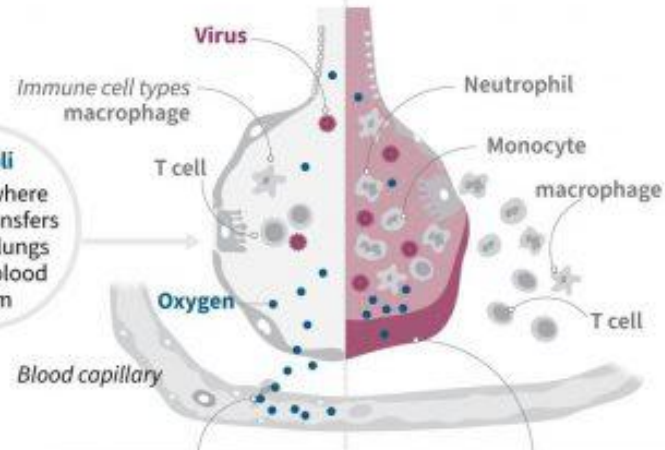
Cytokine molecules stimulate the movement of cells towards sites of inflammation, infection and trauma

### Protective response

Immune cells arrive at the site of infection but do not overwhelm

### Overactive response

Uncontrolled levels of cytokines activate too many immune cells, leading to hyperinflammation



Transfer of oxygen can continue with minimal disruption as immune cells do their job

Hyaline membrane of proteins and dead cells lines alveoli making breathing difficult or impossible

## 6.6 Phosphine – Life on Venus? Astronomers See a Signal in Its Clouds

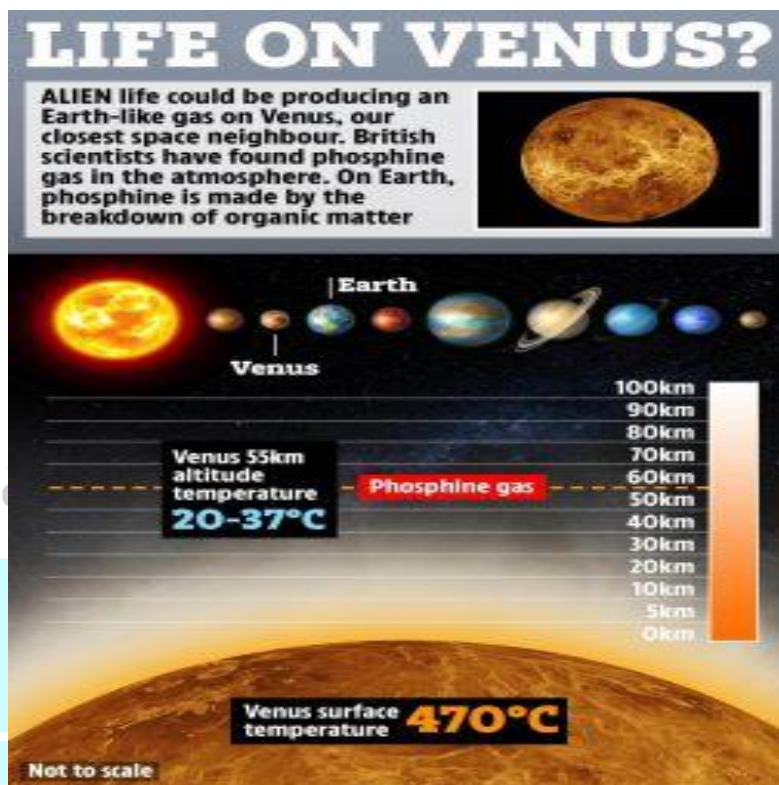
An announcement by an international team of astronomers about the discovery of phosphine gas in the atmosphere of Venus has triggered global excitement about the **possibility of the presence of lifeforms on the neighbouring planet.**

Apart from being produced in industrial processes, **phosphine, a colourless but smelly gas, is known to be made only by some species of bacteria that survive in the absence of oxygen.**

**How can we say that there is life on Venus?**

- The scientists have discovered the **presence of a chemical which is known to be produced only through biological process**, and not through any naturally occurring chemical process.
- There are some other ways in which this chemical might be produced, for example, in the underbelly of volcanoes or meteorite activity, but that would have shown in much lower concentrations.
- In fact, this discovery was made in 2017, and the scientists checked and re-checked their

data over the last three years before deciding to make it public. The paper in Nature Astronomy says this **presence of phosphine is “unexplained”** after an exhaustive study of all the possible other sources and “*production routes in Venus’s atmosphere, clouds, surface and subsurface, or from lightning, volcanic or meteorite delivery*”.



- So, the only possible explanation for the origin of this phosphine, based on our current knowledge, could be in the **biological processes, the way it is produced on Earth, by some microbes.**
- During the announcement, scientists were very careful to emphasise, repeatedly, that this was not a confirmation of the presence of life on Venus.

### Can Venus support life?

- There are several things that we know of about Venus that make life, as we know it, unsustainable on that planet. The **temperature of Venus is too high**, and its **atmosphere is highly acidic**, just two of the things that would make life impossible.
- But it is suggested that this phosphine could be remnants from a time when Venus was a much more hospitable place.

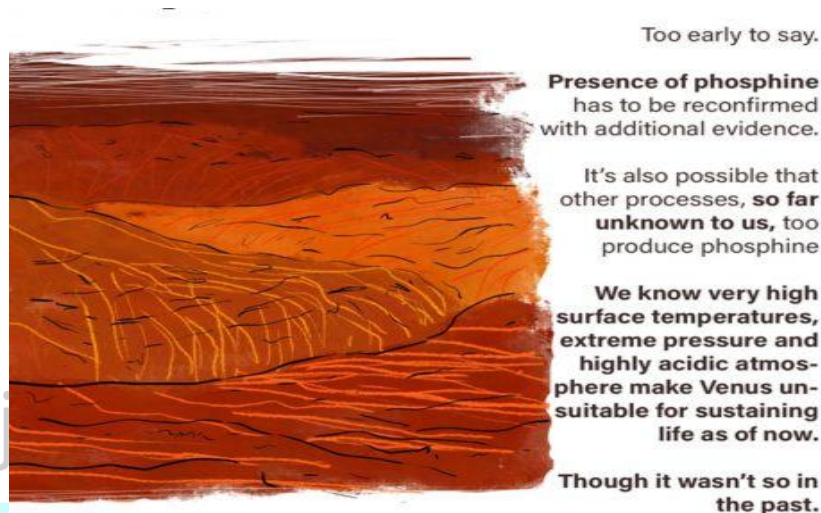
### Missions to Venus

- Missions to Venus are not new. Spacecraft have been going near the planet since the



1960s, and some of them have even made a landing.

- The Indian Space Research Organisation (ISRO) is also planning a mission to Venus, tentatively called **Shukrayaan**, in the near future. As of now, the plan is still on the drawing board. All future missions to Venus would now be attuned to investigating further evidence of the presence of life.



### 'Phosphine'

- **Phosphine** is a **colourless, flammable, and explosive gas** at ambient temperature that has the odour of garlic or decaying fish. Small amounts occur naturally from the break down of organic matter. It is **slightly soluble in water**.
- **Phosphine** is **used in** the semiconductor industry to introduce phosphorus into silicon crystals . It is also **used as** a fumigant, a polymerisation initiator and as an intermediate for the preparation of several flame retardants.
- **Phosphine** has an odour of garlic or decaying fish but is odourless when pure.

### 6.7 Solar Cycle 25: What is it, How will it affect our lives?

Recently, the scientists from NASA and the National Oceanic and Atmospheric Administration (NOAA) announced their predictions about the new solar cycle, called Solar Cycle 25, which they believe has begun. Solar cycles have implications for life and technology on Earth as well as astronauts in space.

#### Solar Cycle

- Since the Sun's surface is a very active space, electrically charged gases on its surface generate **areas of powerful magnetic forces, which are called magnetic fields**.

- Since the gases on the Sun's surface are constantly moving, **these magnetic fields can get stretched, twisted and tangled** creating motion on the surface, which is referred to as solar activity.
- Solar activity varied with the stages of the solar cycle, which **lasts on average for a period of 11 years.**

#### How do scientists track solar activity?

Scientists track a solar cycle by **using sunspots**, which are the dark blotches on the Sun that are associated with solar activity. Sunspots are associated as the origins for giant explosions such as solar flares that can spew light, energy and solar material into space.

#### 6.8 India based Neutrino Observatory

An **India based Neutrino Observatory (INO)** is going to be set up in Bodi West Hills, in Theni district, Tamil Nadu.

- INO Project is a multi-institutional effort aimed at building a world-class underground laboratory with a rock cover of approx. 1200 m for non-accelerator based high energy and nuclear physics research in India.
- **National Neutrino Collaboration group (NNCG):** It includes more than 50 scientists from about 15 Institutes and Universities in India and is tasked with detailing various aspects related to INO activity and come up with a proposal for an underground neutrino laboratory.
- **Funded by :** Dept. of Atomic Energy (DAE) and the Dept. of Science and Technology (DST).
- **Objectives:** INO will observe neutrinos and antineutrinos produced in the atmosphere of the Earth.
  - Over the years this underground facility is expected to develop into a full-fledged underground science laboratory for other studies in physics, biology, geology, hydrology etc.
- **Features:** The project includes:
  - **Underground laboratory** and associated surface facilities at Bodi West Hills.
  - Construction of a **magnetized Iron Calorimeter (ICAL)** detector for studying neutrinos.
    - When completed, ICAL will have the **world's largest magnet.**

- Setting up Inter **Institutional Centre for High Energy Physics (IICHEP)** at Madurai
- **Advantages:**
  - This observation will tell us more about the properties of neutrino particles, whose main source is the **Sun and the Earth's atmosphere**.
  - This will also help in **developing a model of physics** beyond the so-called Standard Model of Particle Physics.
    - The Standard Model of particle physics is the theory describing three of the four known fundamental forces (the electromagnetic, weak, and strong interactions, and not including the gravitational force) in the universe, as well as classifying all known elementary particles i.e. electrons, protons and neutrons.
  - It would also have a great impact on diverse fields such as **nuclear and particle physics, astrophysics and cosmology, medical imaging etc.**
- **Issues Involved:**
  - The project was challenged before the **National Green Tribunal (NGT)** for adversely affecting the ecosystem of Western Ghats. However , it was granted **environmental clearance by NGT**.
  - The **villagers in the Pottipuram Panchayat (at Bodi West Hills)** have been agitating against the proposed observatory under the banner of Poovulagin Nanbargal (Friends of the earth).

### Neutrinos

- Detected for the first time in 1959, neutrinos are the **second most abundant particles** in the world (about a billion of them pass through a cubic centimeter of space every second), after photons, or the light particle.
- Neutrinos are **subatomic fundamental particles, with no charge and little or zero mass** that interacts only via the weak subatomic force and gravity.
- Neutrinos are created by various radioactive decays; during a supernova, by cosmic rays striking atoms etc.
- They are considered mass less according to the Standard Model of Particle Physics.
- However recent experiments indicate that these charge-neutral fundamental particles

have **finite but small mass** which is unknown. Also, different species (or flavours ) of neutrinos seem to mix and oscillate into one another as they traverse through the cosmos.

- **Determination of neutrino masses** is one of the most important open problems in physics today. Neutrino Detectors are used to study the details of the interactions of these particles
- They pass seamlessly through most objects that come in their way, including human beings, machines or the Earth's surface, without being noticed. That is the reason why scientists have to go deep underground to set up special detectors in a bid to catch the faint signals of neutrinos in an environment that is relatively free from 'noise' and disturbance.

### 6.9 ABHYAS

Successful flight test of **ABHYAS – High-speed Expendable Aerial Target (HEAT)** was conducted by Defence Research and Development Organisation (DRDO) recently from the Interim Test Range, Balasore in Odisha.

- Abhyas is **designed & developed by Aeronautical Development Establishment (ADE), DRDO.**
- The air vehicle is **launched using twin underslung booster.**
- It is powered by a **small gas turbine engine** and has **MEMS based Inertial Navigation System (INS) for navigation** along with the Flight Control Computer (FCC) for guidance and control.
- The vehicle is programmed for **fully autonomous flight.**
- The check out of air vehicle is done using laptop based Ground Control Station (GCS).
- During the test campaign, the user requirement of 5 km flying altitude, vehicle speed of 0.5 mach, endurance of 30 minutes and 2g turn capability of the test vehicle were successfully achieved.
- The vehicle can be used as target for **evaluation of various missile systems.**

### 6.10 Prototype Fast-Breeder Reactor

Union Minister of State for Atomic Energy and Space, Dr Jitendra Singh has said that Protoype Fast

Breeder Reactor (PFBR) being **constructed by Bharatiya Nabhikiya Vidyut Nigam Limited (BHAVINI)** is expected to get commissioned by October 2022. On completion of commissioning, PFBR will be **adding 500 MW of electrical power** to the national grid.

- The **Prototype Fast Breeder Reactor (PFBR)** is a 500 MWe **fast breeder nuclear reactor** presently being constructed at the Madras Atomic Power Station in Kalpakkam, Tamil Nadu. The Indira Gandhi Centre for Atomic Research (IGCAR) is responsible for the design of this **reactor**.
- The construction started in the year 2004, Originally planned to be commissioned in 2012, the construction of the reactor suffered from multiple delays. As of August 2020, criticality is planned to be achieved in 2021 (now October 2022).
- The reactor is a pool-type reactor with 1,750 tonnes of **sodium** as **coolant**.

### **What is India's three-phase nuclear power programme?**

The Indian nuclear power programme, **launched in 1954**, envisaged a three-stage development of nuclear power generation from the country's uranium and thorium resources.

1. The **first stage programme** consists of setting up of **pressurised heavy water reactors (PHWRs)**. PHWRs are **natural uranium-fuelled**, heavy water moderated and cooled. The uranium reserves in the country are adequate to support the first stage nuclear power programme of 10,000 MWe through PHWRs. In addition to generating power, PHWRs progressively make available **plutonium as a by-product**. The technologies for the reprocessing of plutonium from spent PHWR fuel and for fabrication of plutonium bearing fuels have been systematically established in India through research and development over the past several years.
2. The **second stage** of the nuclear power programme consists of **effective utilisation of plutonium in Fast Breeder Reactors (FBRs)** which will provide the key to full utilisation of the country's uranium resources and prepare the way for the long-term utilisation of the more abundant thorium reserves. **FBRs enable generation of more fresh fissile material than is consumed for power production**. With the deployment of FBRs, the depleted uranium and plutonium generated in the first stage will permit an additional power potential to the extent of 3,50,000 MWe.
3. During the later part of the second stage programme, it is proposed to **use thorium as blanket material in FBRs to generate U-233**, another fissile material for use in



the **third stage** programme based on U-233 fuelled reactor systems.

- **Stage-I:** envisages, construction of Natural Uranium, Heavy Water Moderated and Cooled Pressurised Heavy Water Reactors (PHWRs). Spent fuel from these reactors is reprocessed to obtain Plutonium.
- **Stage-II:** envisages, construction of Fast Breeder Reactors (FBRs) fuelled by Plutonium produced in stage-I. These reactors would also breed U-233 from Thorium.
- **Stage-III:** would comprise power reactors using U-233 / Thorium as fuel.

### 6.11 *Brucella abortus* S19Δ per vaccine

A Technology License Agreement (TLA) ceremony on “*Brucella abortus* S19Δ per vaccine” developed by ICAR-Indian Veterinary Research Institute (IVRI) was held recently.

- Brucellosis is one of the most important **zoonotic diseases** worldwide and also **endemic in India** causing huge economic losses to dairy industry due to **infertility, abortion, birth of weak offsprings and reduced productivity**.
- Brucellosis is a **bacterial infection** that affects thousands of people worldwide. Avoiding unpasteurised dairy products and taking precautions when working with animals or in a laboratory can help prevent brucellosis.
- Symptoms may include joint and muscle pain, fever, weight loss and fatigue. Some people develop stomach pain and cough.

#### Vaccine

- In India, **calf-hood vaccination** is practiced using live **attenuated *B. abortus* S19 strain** for control of the disease.
- *B. abortus* S19 strain is a **very strong immunogen and provides lifelong immunity**. However, this vaccine strain has **several drawbacks** like – residual virulence to human and animals, not suitable for vaccination in adult animals, causes abortion when used in pregnant animals and also interferes with sero-diagnosis of clinical infection.
- To overcome some of these drawbacks, a modified strain of *B. abortus* S19 has been developed at ICAR-IVRI. The vaccine candidate was developed under Department of Biotechnology funded “**Brucellosis network program**”.
- In the process of modifying the S19 strain, lipopolysaccharide (LPS) structure of the organism was altered through deletion mutation. The newly developed strain was named



as *B. abortus* S19Δper. Vaccine potential of S19Δper has been evaluated in experimental small animal model and also in buffalo calves.

- The vaccine has great demand in India and will be of **immense help in the national control programme on brucellosis**. The vaccine has **DIVA capability** meaning that it can differentiate between naturally infected and vaccinated animals.

### 6.12 Data Sonification

While telescopes offer glimpses of outer space by translating digital data into stunning images, NASA's Chandra X-Ray Centre (CXC) has gone a step further by unveiling a new 'sonification' project that transforms data from astronomical images into audio.

- Users can now '**listen**' to images of the Galactic Centre, the remains of a supernova called Cassiopeia A, as well as the Pillars of Creation Nebula, which are all located in a region around 26,000 light years away from Earth.
- The data has been collected by NASA's Chandra X-Ray Observatory, Hubble Space Telescope and Spitzer Space Telescope – each of which is represented by a different musical 'instrument'.

#### 'Data Sonification'

- Data sonification refers to the **use of sound values to represent real data**. Simply put, it is the **auditory version of data visualisation**.
- In NASA's recent Chandra project, for instance, data is represented using a number of musical notes.
- With this data sonification project, **users can now experience different phenomena captured in astronomical images** as an aural experience.
- The birth of a star, a cloud of dust or even a black hole can now be '**heard**' as a high or low pitched sound.

#### How did NASA translate astronomical images into sound?

- NASA's distant telescopes in space collect inherently digital data, **in the form of ones and zeroes**, before converting them into images.
- The images are essentially **visual representations of light and radiation** of different

wavelengths in space, that can't be seen by the human eye.

- The Chandra project has created a celestial concert of sorts by translating the same data into sound.
- Pitch and volume are used to **denote the brightness and position of a celestial object or phenomenon**. So far, the astronomers behind Project Chandra have released three examples made using data collected from some of the most distinct features in the sky – **the Galactic Centre, Cassiopeia A, and Pillars of Creation Nebula**.

### 6.13 Indian Government allows use of H-CNG for transportation

In a major step toward adopting alternative clean fuel for transportation, the Ministry of Road Transport and Highways has allowed use of H-CNG (18% mix of hydrogen) in CNG engines. A notification for amendments to the **Central Motor Vehicles Rules 1989**, for inclusion of H-CNG as an automotive fuel has been published.

#### Hydrogen-CNG

- HCNG is a vehicle fuel which is a **blend of compressed natural gas and hydrogen**, typically 8-50% hydrogen by volume.
- Existing natural gas engines can be used with HCNG, although higher hydrogen blends require re-tuning of the engines for optimal performance. Studies indicate that **HCNG mixtures with 20- 30% hydrogen by volume are optimal** for vehicle performance and emissions reduction.
- Delhi has become India's first city to **launch hydrogen-enriched CNG (HCNG) buses in 2019**.

#### Advantages

- **No retrofitting required** – It does not need any modification of the engine or retrofitting. Only some calibration is required thus allowing governments and agencies to promote the use of hydrogen to greater number of people at less cost. It is usable with the existing CNG infrastructure. It requires only small hydrogen storage and a column for the mixing of hydrogen with natural gas. Safety properties are similar to CNG.
- **Lower pollutant emissions** – Global HCNG testing to date has demonstrated the fuel's potential to reduce nitrous oxide (NOx), carbon dioxide (CO<sub>2</sub>), carbon monoxide (approximately 70%) and hydrocarbon emissions (approximately 15%) vehicle emissions

compared to traditional CNG. Hydrogen addition to natural gas can decrease engine's unburned hydrocarbons and speed up the combustion process.

- **Improves fuel economy** – It improves the engine efficiency, lowers fuel consumption upto 5 per cent as compared to a CNG bus.
- The thermal efficiency of both Natural gas and HCNG increases with increase in load which makes it an ideal fuel for high load applications and heavy-duty vehicles.

### Issues

- **Determining the most optimised hydrogen/compressed natural gas ratio-** If the hydrogen fraction increases above a certain limit, it will result in abnormal combustion such as pre-ignition, knock and backfire occur.
- **Ensure safe infrastructure**– Probably most evident challenge for wide-spread use of the new fuel is the current lack of infrastructure. Similar to other gaseous fuels, natural gas and hydrogen are both lighter than air, therefore if there is a leak it will quickly disperse into air with adequate ventilation.
- **Cost and continuous availability-** The cost of Hydrogen is higher than cost of Natural gas resulting in HCNG being costlier than CNG. Further, continuous availability of HCNG needs to be assured before embarking on its major use in IC engines.
- **Continued engine performance,** emissions and durability testing in variety of engine types and sizes need to be developed to increase consumer and manufacturer confidence.

————— Since 2005 ——— Feel the Pulse of UPSC...

### 6.14 Workshop to celebrate 2m Himalayan Chandra Telescopes 20th birthday to highlight science it produced

In the cold, dry desert of Ladakh, 4500 meters above the mean sea level, for two decades, the 2-m diameter optical-infrared Himalayan Chandra Telescope (HCT) at the Indian Astronomical Observatory (IAO) has been scanning the night sky in search of stellar explosions, comets, asteroids, and exo-planets.

- The Himalayan Chandra Telescope is a 2.01-meter (6.5 feet) diameter **optical-infrared telescope** named after India-born Nobel laureate **Subrahmanyam Chandrasekhar**.
- It was installed at the Indian Astronomical Observatory (IAO), Mt. Saraswati, Digpa-ratsa Ri, Hanle, Ladakh at an altitude of 4500 m (15000 ft) above mean sea level (msl) by the **Indian Institute of Astrophysics (IIA), Bangalore**, in August 2000.

- Its primary goal is to **study electromagnetic counterparts to gravitational wave sources, young supernovae and near-earth asteroids.**
- It contains a modified **Ritchey-Chretien system** with a primary mirror made of ULE ceramic which is designed to withstand low temperatures it experiences.
- The telescope is mounted with 3 science instruments called – Himalaya Faint Object Spectrograph (HFOSC), Near-IR imager and Optical CCD imager.
- The telescope is **remotely operated via an INSAT-3B satellite link** which allows operation even in sub-zero temperatures in winter.
- This dedicated link is provided by the Centre for Research & Education in Science & Technology (CREST), Indian Institute of Astrophysics, Bangalore.
- It is the **country's first robotic telescope** and the first one designed to observe dynamic or transient events in the universe.

Raja Sir's

## SOCIAL ISSUES AND DEVELOPMENT

### 7.1 Global Multidimensional Poverty Index: NITI to leverage monitoring mechanism

NITI Aayog as the nodal agency has been assigned the responsibility of leveraging the monitoring mechanism of the Global Multidimensional Poverty Index (MPI) to drive reforms. Global MPI is part of Government of India's decision to monitor the performance of the country in 29 select Global Indices.

The objective of the “**Global Indices to Drive Reforms and Growth (GIRG)**” exercise is to fulfil the need to measure and monitor India's performance on various important social and economic parameters and enable the utilisation of these Indices as tools for self-improvement, bring about reforms in policies, while improving last-mile implementation of government schemes.

#### Global MPI

- Global MPI is **an international measure of multidimensional poverty** covering 107 developing countries and was **first developed in 2010 by Oxford Poverty and Human Development Initiative (OPHI) and United Nations Development Programme (UNDP)** for UNDP's Human Development Reports.
- The Global MPI is released at the High-Level Political Forum (HLPF) on Sustainable Development of the United Nations in July, every year.
- Global MPI is **computed** by scoring each surveyed household on **10 parameters** based

on – nutrition, child mortality, years of schooling, school attendance, cooking fuel, sanitation, drinking water, electricity, housing and household assets.

- It utilises the **National Family Health Survey (NFHS)** which is conducted under the aegis of Ministry of Health and Family Welfare (MoHFW) and International Institute for Population Sciences (IIPS).

### Performance of India

- According to Global MPI 2020, **India is 62nd among 107 countries with an MPI score of 0.123 and 27.91% headcount ratio**, based on the NFHS 4 (2015/16) data.
- Neighbouring countries like Sri Lanka (25th), Bhutan (68th), Nepal (65th), Bangladesh (58th), China (30th), Myanmar (69th) and Pakistan (73rd) are also ranked in this index.
- The latest NFHS 5 (2019/20) is set to see remarkable national improvement brought about by focused schemes and interventions in these parameters since NFHS 4, especially in sanitation, cooking fuel, housing, drinking water and electricity. The survey has been paused due to the COVID-19 pandemic.

### 7.2 What is the 'green-blue' policy proposed by Delhi Master Plan 2041?

The Delhi Development Authority (DDA) is holding public consultations for the **preparation of the Master Plan for Delhi 2041**, a vision document for the city's development over the next two decades. The existing Master Plan 2021 will be outdated next year, and the agency wants to notify the new plan by the time that happens.

There are several features in the draft policy but the focus on water bodies and the land around it, which is referred to as the "Green-Blue policy", promises to give the city a new shape.

#### Green-Blue infrastructure

- '**Blue**' infrastructure refers to water bodies like rivers, canals, ponds, wetlands, floodplains, and water treatment facilities; while '**Green**' stands for trees, lawns, hedgerows, parks, fields, and forests.
- The concept refers to **urban planning where water bodies and land are interdependent, and grow with the help of each other** while offering environmental and social benefits.

#### How does DDA plan to go ahead with it?

- Delhi has around **50 big drains (blue areas)** managed by different agencies, and due to

their poor condition and encroachment, **the land around (green areas) has also been affected.**

- DDA, along with other agencies, will **integrate them and remove all sources of pollution** by checking the outfall of untreated wastewater as well as removal of existing pollutants.
- A **mix of mechanised and natural systems** may be adopted, and **dumping of solid wastes in any of these sites will be strictly prohibited** by local bodies, through the imposition of penalties.

#### **What will the areas look like after redevelopment?**

- Land around these drains, carrying stormwater, will be declared as **special buffer projects**. A network of **connected green spaces** would be developed in the form of green mobility circuits of pedestrian and cycling paths. It will be developed along the drains to serve functional as well as leisure trips.
- There is also a plan to develop spaces for yoga, active sports (without formal seating), open air exhibitions, museums and information centres, open air theatres, cycling and walking facilities, arboretums, greenhouses, community vegetable gardens, facilities for boating, restaurants, and other low impact public uses that may be encouraged as part of special projects.
- The nature of use, extent of public access, type of vegetation, suitability for developing water bodies, etc. shall be ascertained on a case-to-case basis through scientific assessments. Thereafter, real estate would be developed along these integrated corridors.

#### **Challenges**

- The biggest challenge here is the **multiplicity of agencies**. DDA wants to bring together different agencies like Delhi Jal Board, Flood and Irrigation Department, and municipal corporations as stakeholders in the project. It will be a tough task, especially as DDA has no supervisory power over these bodies.
- Secondly, **cleaning of water bodies and drains** has been a challenge for agencies in Delhi for years now. A report by researchers of IIT-Delhi on 20 major sewer drains and five prominent sites on the River Yamuna found abundant presence of coliform and other pollutants. Only rainwater is supposed to flow in these drains, but the study found sewage waste and even industrial waste in some.



### 7.3 AP tops State ranking on Business Reform Action Plan 2019

Union Minister of Finance Smt. Nirmala Sitharaman has announced the 4th edition of Business Reform Action Plan (BRAP) ranking of states.

#### Rankings

**The top ten states** under State Reform Action Plan 2019 are – Andhra Pradesh, Uttar Pradesh, Telangana, Madhya Pradesh, Jharkhand, Chhattisgarh, Himachal Pradesh, Rajasthan, West Bengal and Gujarat.

#### 'Business Reform Action Plan'

- Ranking of States is based on the implementation of **Business Reform Action Plan** started in the year 2015. Till date, State Rankings have been released for the years 2015, 2016 and 2017-18.
- The Business Reform Action Plan 2018-19 **includes 180 reform points covering 12 business regulatory areas** such as **Access to Information, Single Window System, Labour, Environment, etc.**
- The larger objective of attracting investments and increasing Ease of Doing Business in each State was sought to be achieved by introducing an element of healthy competition through a system of ranking states based on their performance in the implementation of Business Reform Action Plan.
- The ranking this time gives full weightage to the feedback from over thirty thousand respondents at the ground level, who gave their opinion about the effectiveness of the reforms.
- State rankings will help attract investments, foster healthy competition and increase Ease of Doing Business in each State.
- The ranking of the states are announced by the **Department of Industrial Promotion and Internal Trade (DPIIT), under the Ministry of Commerce and Industry.**

### 7.4 40% of children are not fully vaccinated, says NSO report

Although almost all children in India are vaccinated against tuberculosis, and receive their birth dose of polio vaccine, two out of five children do not complete their immunisation programme, according to the '**Health in India**' report recently published by the National Statistical

Organisation (NSO).

### Findings of the report

- Most of these children **remain unprotected against measles**, and partially protected against a range of other diseases.
- In the national capital, less than half of all children have been given all eight required vaccines.
- The report is based on the **75th round of the National Sample Survey (July 2017-June 2018)** on **household social consumption** related to health.
- Across the country, **only 59.2% of children under five years are fully immunised**, according to the NSO report. This contradicts the Centre's Health Management Information System portal data, which claimed that full immunisation coverage for 2017-18 stood at 86.7%.

### 'Full Immunisation'

- Full immunisation means that a child receives a cocktail of eight vaccine doses in the first year of life.
- **About 97% of children across the country received at least one vaccination** – mostly BCG and/or the first dose of OPV at birth – a statistic that remains steady across income groups and geographies. However, only 67% of children are protected against measles.
- **Only 58% got their polio booster dose**, while 54% got their DPT booster dose.
- Among States, Manipur (75%), Andhra Pradesh (73.6%) and Mizoram (73.4%) recorded the highest rates of full immunisation. At the other end of the spectrum lies Nagaland, where only 12% of children received all vaccinations, followed by Puducherry (34%) and Tripura (39.6%).

### 7.5 NSO report shows stark digital divide affects education

A recent report on the latest National Statistical Organisation (NSO) survey shows just **how stark is the digital divide across States, cities and villages, and income groups**. The survey on household social consumption related to education was part of the NSO's 75th round, conducted from July 2017 to June 2018.

### Findings

- Across India, **only one in 10 households have a computer** – whether a desktop, laptop or tablet. However, **almost a quarter of all homes have Internet facilities**, accessed via a fixed or mobile network using any device, including smartphones.
- Most of these Internet-enabled homes are **located in cities, where 42% have Internet access**. In **rural India**, however, **only 15% are connected to the Internet**.
- The national capital has the **highest Internet access**, with 55% of homes having such facilities. **Himachal Pradesh and Kerala** are the only other States where more than half of all households have Internet.
- At the other end of the spectrum is **Odisha**, where **only one in 10 homes have Internet**. There are **10 other States with less than 20% Internet penetration**, including States with software hubs such as **Karnataka and Tamil Nadu**.

#### Digital divide by economic status

- The biggest divide is by economic status, which the NSO marks by dividing the population into five equal groups, or quintiles, based on their usual monthly per capita expenditure. Even in **Odisha, almost 63% of homes in the top urban quintile have Internet facilities**. In the **poorest quintile of rural Odisha**, however, that **figure drops to an abysmal 2.4%**.
- **Kerala shows the least inequality** – more than 39% of the poorest rural homes have Internet, in comparison to 67% of the richest urban homes. **Himachal Pradesh also fares well**, with 40% of the lowest rural quintile having Internet.
- Assam shows the most stark inequality, with almost 80% of the richest urban homes having the Internet access denied to 94% of those in the poorest rural homes in the State.

#### Literacy rates

- The NSO report shows that **20% of Indians above the age of 5 years had basic digital literacy, doubling to just 40% in the critical age group of 15 to 29 years**, which includes all high school and college students as well as young parents responsible for teaching younger children.
- **More than one in five Indians above 7 years still cannot read and write** in any language. Over the last decade, literacy rates have increased from 71.7% to 77.7%, with the highest gains coming among rural women.
- A State-wise split of literacy rates also throws up some unexpected results. **Andhra**

**Pradesh has the country's lowest literacy rate, at just 66.4%**, significantly lower than less developed States such as Chhattisgarh (77.3%), Jharkhand (74.3%), Uttar Pradesh (73%), and Bihar (70.9%). Kerala remains at the top of the pile with 96.2% literacy, followed by three northern States: Delhi (88.7%), Uttarakhand (87.6%) and Himachal Pradesh (86.6%).

### 7.6 PM Modi Launches Rs 20,050 Crore Scheme For Fisheries Sector, App For Farmers

Prime Minister Narendra Modi has digital launched the 'Pradhan Mantri Matsya Sampada Yojana' and 'e-Gopala' app, a comprehensive breed improvement marketplace and information portal for direct use of farmers.

#### 'Pradhan Mantri Matsya Sampada Yojana'

- The **Pradhan Mantri Matsya Sampada Yojana (PMMSY)** is a **flagship scheme for focused and sustainable development of fisheries sector** in the country with an estimated investment of Rs. 20,050 crores for its implementation during **a period of 5 years from FY 2020-21 to FY 2024-25 in all States/Union Territories**, as a part of **AatmaNirbhar Bharat Package**.
- Out of the investment of Rs 20,050 crores, an investment of about Rs 12,340 crores is proposed for beneficiary-oriented activities in **Marine, Inland fisheries and Aquaculture** and about Rs 7710 crores investment for **Fisheries Infrastructure**.
- PMMSY aims at **enhancing fish production by an additional 70 lakh tonne by 2024-25, increasing fisheries export earnings to Rs.1,00,000 crore by 2024-25, doubling of incomes of fishers and fish farmers, reducing post-harvest losses from 20-25% to about 10% and generation of additional 55 lakhs direct and indirect gainful employment opportunities** in fisheries sector and allied activities.
- PMMSY is designed to address critical gaps in fish production and productivity, quality, technology, post-harvest infrastructure and management, modernisation and strengthening of value chain, traceability, establishing a robust fisheries management framework and fishers' welfare.
- While aiming to consolidate the achievements of Blue Revolution Scheme, **PMMSY envisages many new interventions** such as fishing vessel insurance, support for new/up-gradation of fishing vessels/boats, Bio-toilets, Aquaculture in saline/alkaline

areas, Sagar Mitras, FFPOs/Cs, Nucleus Breeding Centres, Fisheries and Aquaculture start-ups, Incubators, Integrated Aqua parks, Integrated coastal fishing villages development, Aquatic Laboratories Network and Extension Services, Traceability, Certification and Accreditation, RAS, Biofloc & Cage Culture, E-Trading/Marketing, Fisheries Management Plans, etc.

- PMMSY scheme primarily focuses on adopting '**Cluster or Area based approaches**' and **creation of Fisheries clusters through backward and forward linkages**. Special focus will be given for employment generation activities such as seaweed and ornamental fish cultivation. It emphasises on interventions for quality brood, seed and feed, special focus on species diversification, critical infrastructure, marketing networks etc.

#### e-Gopala App

- e-Gopala App is a **comprehensive breed improvement marketplace and information portal** for direct use of farmers.
- At present no digital platform is available in the country for farmers managing livestock including **buying and selling of disease free germplasm** in all forms (semen, embryos, etc); availability of quality breeding services (Artificial Insemination, veterinary first aid, vaccination, treatment etc) and guiding farmers for animal nutrition, treatment of animals using appropriate ayurvedic medicine/ethno veterinary medicine.
- There is no mechanism to send alerts (on due date for vaccination, pregnancy diagnosis, calving etc) and inform farmers about various government schemes and campaigns in the area. The e-Gopala App will provide solutions to farmers on all these aspects.

#### 7.7 NGT directs CPCB to lay down guidelines for disposal of cigarette, bidi butts in three months

Recently, the **National Green Tribunal (NGT)** has directed the **Central Pollution Control Board (CPCB)** to lay down guidelines pertaining to **disposal of cigarette and beedi butts** within three months.

- NGT held that tobacco is undoubtedly harmful and it is mainly concerned with the



manner of disposal of cigarette and beedi butts.

- An NGO 'Doctors for You' sought instructions to **regulate the disposal** of cigarette and beedi butts apart from **prohibiting the consumption of tobacco in public places**.
- The Ministry of Health and Family Welfare highlighted that cigarette and beedi butts are not biodegradable but the Ministry of Environment, Forest and Climate Change noted that these are **not listed as hazardous**.



- **CPCB Report:**
  - A report by CPCB highlighted that the analysis of the cigarette and beedi butts reflects that their **concentrations detected will not be toxic to humans and the environment**.
  - **Cellulose acetate** is a major component (95%) of the cigarette butts **along with the wrapping paper and rayon** and its degradation studies show that it will persist for a longer duration.
  - However, the **toxicity data for cellulose acetate is not available yet**.
- **Findings of a Study:**



- A study conducted by the **Indian Institute of Toxicology Research (IITR) approves the CPCB report** and holds that the concentration of various parameters analysed is lower than the prescribed limits and will not be toxic.
- It added that **natural environmental conditions and laboratory stimulating conditions would be required** to conclude the safety or toxicity of cigarette butts to further correlate with human and environmental health risk assessment.
- **Suggestions:**
  - An **inter-ministerial or departmental committee should be constituted** to consult at the national level for conducting an impact study of discarded cigarette and beedi butts and spitting of tobacco products in public places.
  - **Recycling of cellulose acetate** after recovery from cigarette butts may be an immediate solution to the problem.
  - There is a **need for more studies and research** so that degradation and safety data can be generated which would be helpful in forming guidelines.

#### Steps Taken by the Indian Government to Control Tobacco Consumption

- **WHO Framework Convention on Tobacco Control (WHO-FCTC):**
  - It is the **first international treaty** negotiated under the auspices of the **World Health Organisation**.
  - It was developed in response to the globalization of the tobacco epidemic and is an evidence-based treaty that reaffirms the right of all people to the highest standard of health.
  - **India ratified it in 2004.**
- **mCessation Programme:**
  - It is an initiative **using mobile technology for tobacco cessation**.
  - India launched **mCessation** using text messages in 2016 as part of the government's **Digital India initiative**.
  - It uses two-way messaging between the individual seeking to quit tobacco use and programme specialists providing them with dynamic support.

- **Cigarettes and other Tobacco Products (Packaging and Labelling) Amendment Rules, 2020:**
  - These **rules** have been notified by the Ministry of Health and Family Welfare to amend the 2008 rules which were notified under the Cigarettes and other Tobacco Products (Prohibition of Advertisement and Regulation of Trade and Commerce, Production, Supply and Distribution) Act, 2003.
- **National Tobacco Control Programme:**
  - The Ministry of Health and Family Welfare **launched the programme in 2007-08.**
  - It aims to **facilitate the effective implementation of the Tobacco Control Law**, to bring about greater awareness about the harmful effects of tobacco as well as to fulfil the obligations under the WHO-FCTC.
- **Other Efforts:**
  - **World No Tobacco Day:** Every year, 31<sup>st</sup> May is observed as the **World No Tobacco Day** by WHO and global partners.
    - The annual campaign is an opportunity to raise awareness on the harmful and deadly effects of tobacco use and second-hand smoke exposure, and to discourage the use of tobacco in any form.
  - Since 2007, the Ministry of Health and Family Welfare has been pushing to introduce **stronger graphic health warnings on tobacco packets**, with mixed success.

### 7.8 Eggs or not: Why is Madhya Pradesh debating anganwadi meals again?

Recently, the Women and Child Welfare Minister of Madhya Pradesh Government, Smt. Imarti Devi reiterated her proposal to provide eggs to children in anganwadis and pregnant women to fight malnourishment.

#### What is being proposed now?

The Minister said that she stick to her proposal to **provide eggs to children and pregnant women, because eggs are high in nutrition.** It would **not be compulsory** but only for those willing to eat eggs. **For vegetarians, alternatives would be available** in the form of milk and banana.

## Malnutrition in Madhya Pradesh

- Madhya Pradesh is one of the worst affected states by malnourishment, with the state's tribal population worst affected. According to the National Family Health Survey (NHF-4), **at least 42% of children under age five are stunted while another 43% are underweight.** Again, 26% are wasted (thin for their height) while 9% are severely wasted.
- The lockdown has disrupted various government schemes for providing nutrition. A survey conducted by the NGO Vikas Samvad in 122 villages of six districts – Rewa, Satna, Panna, Umariya, Niwari and Shivpura – found that the nutrition intake dropped in children (by 51%), pregnant women (67%) and lactating mothers (68%). The majority of the residents in these villages were tribals and SCs.

### Why to provide eggs?

Eggs are a complete food that contain all nutrients except vitamin C. For providing a wholesome meal for children, the right combination of various food including dal, rice, fruits and milk will have to be supplied in the right quantity if they are not given eggs.

### What is the issue?

Over 40% of Madhya Pradesh's population is **vegetarian**. The proposal has faced stiff opposition from various communities, notably the Jain community. In a post on social media, Jain community leaders have warned that only those parents who wished to have their children fed eggs should vote for Imarti Devi. — Since 2005 — *Feel the Pulse of UPSC...*

### How many states provide eggs to children at anganwadi centres?

At least 14 states have so far been providing eggs as a part of the ICDS. According to the National Baseline Survey of 2014, in nine of these 14 states – **Telangana, Odisha, Andhra Pradesh, West Bengal, Jharkhand, Tamil Nadu, Bihar and Kerala** – **95% of the population is non-vegetarian**. In the remaining five states – Tripura, Karnataka, Jammu and Kashmir, Assam and Chhattisgarh – **over 70% of the population is non-vegetarian**.

## 7.9 Pradhan Mantri Jan Vikas Karyakram

The Pradhan Mantri Jan Vikas Karyakram (PMJVK) has been restructured in 2018 and is now being implemented in 1300 identified Minority Concentration Areas, with an objective of developing socio-economic infrastructure and basic amenities in the said areas.

For larger coverage of the scheme, the areas under PMJVK have been increased from 90 Districts originally to 308 Districts of the country, which include 870 Blocks, 321 Towns and 109 District Headquarters.

- The erstwhile **Multi-sectoral Development Programme (MsDP)**, a centrally sponsored scheme has been **restructured and renamed as Pradhan Mantri Jan Vikas Karyakram**.
- MsDP, a **centrally sponsored scheme**, launched to address the development deficits in **90 minority concentration districts** in the country to address the development deficits.
- It has been identified as **one of the Core of the Core Schemes** under National Development Agenda.
- It aims at improving the **socio-economic parameters of basic amenities** for improving the quality of life of the people and reducing imbalances in the **Minority Concentration Areas**.
- Minority Concentration Areas have been identified based on both **population data**(25% of the total population belongs to minority communities) and **backwardness parameters of Census 2001** of these areas.
- The backwardness parameters are –
  - Religion-specific socio-economic indicators at the district level –
    - Literacy rate;
    - Female literacy rate ;
    - Work participation rate; and
    - Female work participation rate; and
  - Basic amenities indicators at the district level –
    - Percentage of households with pucca walls‘
    - Percentage of households with safe drinking water &
    - Percentage of households with electricity
- The **projects considered** are additional class rooms, laboratories, school buildings, hostels, toilets, buildings for Polytechnics, ITIs, Community Health Centres, Primary Health Centres / Sub-centres, Anganwadi Centres, Rural Housing etc.
- **Education, Health and Skill** are the priority under MsDP.

- The projects are funded in the **ratio of 60:40** and for **NE and Hilly States at 90:10** between the Centre and States.

### 7.10 Centre opposes plea seeking recognition of same-sex marriages

The Centre has opposed before the Delhi High Court a petition seeking recognition of same-sex marriages, saying, “*our legal system, society and values do not recognise marriage between same sex couples*”.

On September 6, 2018, a five-judge Constitution Bench, led by then Chief Justice Dipak Misra, unanimously held that criminalisation of private consensual sexual conduct between adults of the same sex under Section 377 of the Indian Penal Code is clearly unconstitutional.

Solicitor General Tushar Mehta, representing the Centre, said the 2018 judgment of the Constitution Bench of the Supreme Court “*merely decriminalises homosexuality or lesbianism, nothing more, nothing less*”.

#### Centre's argument

- The SG is said to have asked the court that “*if a wife dies within seven years, there is a separate punishment. Now, who will be treated as a wife [in same sex marriage]?*”.
- The Solicitor General said the petition was not permissible as it was **asking the court to legislate** and also that any relief granted “**would run contrary to various statutory provisions**”.

#### Argument of the petitioner

- The petition was filed by **Abhijit Iyer Mitra**, a member of the LGBT community, and three others seeking to recognise same sex marriages under **Section 5 of the Hindu Marriage Act** on the ground that “*it does not distinguish between homosexual and heterosexual couples*”.
- The petitioners argued that “*despite the fact that there is absolutely no statutory bar under the Hindu Marriage Act of 1955 and the Special Marriage Act of 1956 against gay marriage, the same are not being registered throughout the country and also in the National Capital Territory of Delhi*”.
- The prohibition of marriage of LGBT people on the basis of sexual orientation and gender identity is an **absolute discrimination towards them** and is also **violative of Right to Equality** as granted by the Constitution of India. The petition also cited names

of 27 countries including the U.S. where same sex marriage is legal.

### Decriminalisation of homosexuality

- The Supreme Court in 2018 unanimously ruled that Gay sex among consenting adults is not a criminal offence. The bench maintained that it is a part of a 158-year-old colonial law that criminalised it, **violated the constitutional right to equality and dignity.**
- It unanimously held that the Lesbian, Gay, Bisexual, Transgender and Queer (LGBTQ) **community possess the same constitutional rights as other citizens of the country.**
- It termed **sexual orientation as a “biological phenomenon” and “natural”** and held that any discrimination on this ground was violative of the fundamental rights. It ruled that it is declared that insofar as Section 377 criminalises consensual sexual acts of adults in private, is **violative of Articles 14, 15, 19, and 21 of the Constitution.**
- It is, however, clarified that such **consent must be free consent, which is completely voluntary in nature, and devoid of any duress or coercion.** The bench also said that homosexuality was not a mental disorder, but a completely natural condition.

### Section 377

The **Chapter XVI, Section 377** of the Indian Penal Code (IPC) 1860 was introduced during the British rule of India. The section **criminalises sexual activities “against the order of nature”.** The bench diluted the controversial section to exclude all kinds of adult consensual sexual behaviour. ————— Since 2005 ———— *Feel the Pulse of UPSC...*

### Why there is opposition to LGBT rights in India?

- The **Apostolic Churches Alliance** was opposing case since they argued that homosexuality was an abomination in the Bible.
- It is contended that decriminalising homosexuality would make the **Prevention of Immoral Trafficking Act, 1956 redundant.**
- It is also maintained that if the section is allowed then **sexual transmitted diseases like AIDS would further spread and harm the people.**
- Moreover, they contended that it would lead **a big health hazard and also morally degrade** the society.

### 7.11 India ranks 116 in World Bank’s human capital index



Recently, the **World Bank** released the **Human Capital Index (HCI)** report for 2020. The index **benchmarks key components of human capital** across countries.

- India has been ranked at the **116<sup>th</sup> position** in the HCI 2020.
- **Human Capital:** It consists of the **knowledge, skills, and health** that people accumulate over their lives, enabling them to realize their potential as productive members of society.
- **Parameters Used in HCI:** The HCI 2020 includes **health and education data of children for 174 countries** up to March 2020. Thus providing a pre-pandemic baseline.
  - It covers 98% of the world's population.
- **Outcome:** The HCI 2020 shows that **pre-pandemic**, most countries had made **steady progress** in building human capital of children, with the **biggest strides made in low-income countries**.
  - However, despite this progress, a child born in a typical country could expect to achieve just 56% of their potential human capital, relative to a benchmark of complete education and full health.
- **Pandemic Effect:** The pandemic puts at **risk the decade's progress in building human capital**, including the improvements in health, survival rates, school enrollment, and reduced stunting.
  - More than **1 billion children have been out of school** and could lose out, on average, half a year of schooling.
  - It has created significant **disruptions to essential health services for women and children**, with many children missing out on crucial vaccinations.
  - It has **increased income inequality**, its economic impact has been particularly deep for women and for the most disadvantaged families, leaving many vulnerable to food insecurity and poverty.
- **India Specific Data:**
  - **Last year India was ranked 115 out of 157 countries.** This year India finds itself at **116<sup>th</sup> from among 174 countries**. However, India's **score increased to 0.49** in 2020 from 0.44 in 2018.
  - **Recent Initiatives by India to Strengthen Human Capital:**

- **Ayushman Bharat Yojana**
- **National Education Policy**
- **Atmanirbhar Bharat Yojana**
- **TULIP: The Urban Learning Internship Program**
- **Samagra Shiksha**
- **Other Reports Published by World Bank:**
  - **Global Economic Prospects**
  - **Ease of Doing Business**
  - **World Development Report**
- The HCI provides a basis on which the government of India can prioritize and a dimension to support human capital.
- The World Bank is working with India on supporting livelihood for the poor. Given the progress that has been made in recent times, it seems more significant for now due to Covid-19.
- Protecting and investing in people is vital as countries work to lay the foundation for sustainable, inclusive recoveries and future growth.

#### 7.12 COVID-19 infection spreads to vulnerable tribal community in Odisha

Six members of two **Particularly Vulnerable Tribal Groups (Bondas and Didiayis)** in **Odisha** contracted **Covid-19**, the **National Commission for Scheduled Tribes** has sought a report from the state government and has termed it a “matter of grave concern”.

- Also, **Particularly Vulnerable Tribal Groups (PVTGs) from Andaman** contracted Covid-19.
- **Particularly Vulnerable Tribal Group:**
  - The classification among tribes was adopted by the Government of India (GoI) after the **Dhebar Commission (1960-1961)** stated that within the Scheduled Tribes there existed an inequality in the rate of development.
  - During the 4<sup>th</sup> Five Year Plan (1969-74), a **sub-category** was created within Scheduled Tribes to identify groups at a lower level of development. This sub-category was called “**Primitive tribal group**”, which is **now PVTG**.
  - **Criteria:** A **PVTG** is a GoI classification for tribes based on their:

- Relative physical isolation,
- Stagnant or declining population,
- Low levels of literacy,
- Absence of written language,
- Pre-agricultural stage of economy, such as hunting, food gathering, shifting cultivation and terrace cultivation.
- **75 tribal groups** have been **categorized by the Ministry of Home Affairs** as **PVTGs**.
- The **Ministry of Tribal Affairs** implements the **Scheme of 'Development of PVTGs'** exclusively for them.
- **PVTGs in Odisha:**
  - Of the **62 tribal groups** in Odisha, **13 are recognised as PVTGs** – the highest in the country.
  - Odisha has a population of **2.5 lakh** belonging to the PVTGs.
  - The PVTGs of the state have been identified as: **Bonda, Birhor, Chuktia, Didayi, Dongaria Kandha, Juang, Kharia, Kutia Kondh, Lanjia Saora, Lodha, Mankirida, Paudi Bhuyan and Saora.**
- **Bondas and Didiayis Tribes:** The **Bondas and Didiayis** are found in the **Malkangiri district** of the state, which shares its border with Andhra Pradesh and Chhattisgarh.
  - The **Bondas**, scattered across **32 remote hilltop villages** in the **Eastern Ghats**, are believed to have come to India as part of the **first wave of migration out of Africa** about 60,000 years ago.
  - The **Didayis** – an **Austro-Asiatic tribe** – live in the immediate neighbourhood of the Bondas. The population of Didayis is 7,250 according to the 2011 Census. They live in the **Konda Kamberu hills** of Malkangiri.
- **Contracting Covid is a matter of grave concern:** According to the **2018** newsletter of the **Poverty and Human Development Monitoring Agency (PHDMA)**:
  - **Low Health Status:** Diseases like upper respiratory problem and malaria, gastrointestinal disorders like acute diarrhoea and intestinal protozoa, micro nutrient deficiency, and skin infection are common among PVTGs.
  - **Reasons:** Multiple factors like poverty, illiteracy, lack of safe drinking water,

poor sanitary conditions, difficult terrain, malnutrition, poor access to maternal and child health care services, superstition, nonavailability of adequate health care services and deforestation.

### 7.13 Role of women in Indian Navy

The Indian Navy has recently announced selection of two women officers as Observers in the helicopter stream, making them **first women airborne combatants** who would be operating from warships. The Navy had also inducted the first woman pilot in December last year.

#### Women in Indian Navy

- Prior to 1992, women officers were inducted in the Navy **only in the medical stream** from the Armed Forces Medical Service.
- From July 1992, the Navy **started inducting women**, initially through a special entry scheme and later through the **Short Service Commission**, in only select branches of the Navy.
- Over the years, various branches were added to the list, and **currently women officers can join the Navy** in the streams of Air Traffic Control, Observers, Law, Logistics, Education, Naval Architecture, Pilots in Maritime Reconnaissance Stream only and the Naval Armament Inspectorate.
- It needs to be noted like in the Army and the Air Force, **women are currently only inducted as Commissioned Officers and not in Other Ranks** which are of categories of Junior Commissioned Officers and Non-Commissioned Officers.
- In the early 2000s women officers from the Medical and Logistics stream were deployed on board Naval ships. While these deployments went on only for four-five years, they were discontinued for various reasons.

#### Women officers in new streams

- Last December, the Navy announced the **induction of a woman officer as pilot of Dornier aircraft**, which are fixed wing aircraft operating from ashore establishments.
- Recently, the Navy announced induction of two women officers as observers for the helicopter stream. **Observers are airborne tacticians** who fly on board helicopters or fixed-wing aircraft operated by the Navy.
- Till now women were inducted as observers for fixed wing aircraft which take off and

land ashore. **Entry in the helicopter stream means that women officers can now be deployed on frontline warships** from which helicopters can operate.

- In terms of various challenges towards deployment of women onboard warships, the logistics part is not as challenging as one would imagine, especially as most of the large warships of the Navy do have basic living arrangements that can be allocated for women.
- The **question of mindset and gender sensitisation**, on the other hand, is something many believe would require concerted efforts, and concrete steps are being taken in that direction.

#### 7.14 YuWaah

Ministry of Youth Affairs & Sports and United Nations Children Fund (UNICEF) have signed a “Statement of Intent” to establish **YuWaah, Generation Unlimited (GenU), a global multi-stakeholder platform** in India.

As per the Statement of Intent, the objectives of this project are –

- Support young people by **providing entrepreneurship classes (online and offline)** with successful entrepreneurs and experts, towards establishing entrepreneurial mindset among young people.
- **Upskilling of young people on 21st century skills**, life skills, digital skills through online and offline channels and support them through self-learning, for their productive lives and the future of work.
- **Create linkages with aspirational economic opportunities** to connect young people with employment opportunities, including building pathways to connect them with jobs or self-employment. For this, innovative solutions and technology platforms will be engaged to take maximise the scale and reach.
- **Providing career guidance support** to young people through career portal as well as through job-readiness and self-exploration sessions to make young people career-ready.
- The role of **Department of Youth Affairs** in this project is to provide relevant experts to participate on the YuWaah Technical Working Groups/ Task Forces.

#### 7.15 Shuchi Scheme

The Karnataka government that is busy in tackling the COVID-19 pandemic has silently buried a

vital hygiene scheme for adolescent girls. Distribution of sanitary napkins has come to a halt as no funds have been allocated this year for the 'Shuchi' scheme, a menstrual hygiene project.

- The scheme, **started in 2013-14**, was initially a **Centrally-sponsored one**. However, the Centre asked States to take over the scheme from 2015-16.
- Every year, the Karnataka government has been spending a little over ₹49 crore on the scheme.
- It was aimed at **instilling awareness about menstrual hygiene** even among girls in rural areas.

### 7.16 Time-Use Survey – 2nd edition

National Statistical Organisation has released the second edition of the 'Time Use Survey' recently. National Statistical Office (NSO) conducted the **first Time Use Survey in India during January – December 2019**. The survey measures the participation rate and time spent on paid activities, care activities, unpaid activities, etc.

#### 'Time Use Survey (TUS)'

- Time Use Survey (TUS) provides a **framework for measuring time dispositions by the population** on different activities.
- It is an important source of information about the activities that are performed by the population and the time duration for which such activities are performed.
- One distinguishing feature of Time Use Survey from other household surveys is that it can capture time disposition on different aspects of human activities, be it paid, unpaid or other activities with such details which is not possible in other surveys.

#### Objective

- The primary objective of Time Use Survey (TUS) is to measure participation of men and women in paid and unpaid activities.
- TUS is an important source of information on the time spent in unpaid caregiving activities, volunteer work, unpaid domestic service producing activities of the household members.
- It also provides information on time spent on learning, socialising, leisure activities, self-care activities, etc., by the household members.

#### Findings of the survey



- As per the study, **57.3 per cent males were engaged in employment** and related activities while the proportion was **18.4 per cent for females** in the country.
- In the **rural areas**, the proportion of **women engaged in employment and related activities was higher** at 19.2 per cent compared to 16.7 per cent in cities. The **proportion of males above the age of six years** engaged in gainful employment or related activities was **higher in cities at 59.8 per cent in cities compared 56.1 per cent in rural areas**. The study showed that all persons above the age of six years who participated in the survey, were engaged in **self-care and maintenance**.
- Overall **53.2 per cent of participants** in the survey were engaged in **unpaid domestic services for household members**. The proportion of **females** in the category was **higher at 81.2 per cent compared to 26.1 per cent for males**. The proportion of **females** engaged in unpaid domestic services for household members in **rural areas was higher at 82.1 per cent compared to 79.2 per cent in cities**. The proportion of **males engaged in unpaid domestic services** for household members in **villages too was higher at 27.7 per cent** compared to 22.6 per cent in cities. Overall, the **percentage of persons** engaged in unpaid domestic services for household members in **villages was also higher at 54.6 per cent** compared to 50.1 per cent.
- The TUS also showed that the proportion of people who were **engaged in production of goods for own final use** was 17.1 per cent in the country. The proportion of such males was 14.3 per cent while it was 20 per cent for women in the country.
- As much as 20.7 per cent people were engaged in unpaid caregiving services for household members in the country. The proportion of such men was 14 per cent while it was 27.6 per cent in case of women.
- The study also showed that just 2.4 per cent of people opted for **unpaid volunteer, trainee and other unpaid work**.
- As much as **91.3 per cent people went for socialising and communication, community participation and religious practice**. The proportion of people who opted for **culture, leisure, mass-media and sports practices was 86.9 per cent** in the country
- It also showed that people utilise 50.4 per cent of total time of 1440 minutes in a day on self-care and maintenance followed by 11.4 per cent on employment and related

activities.

### 7.17 Third Rashtriya Poshan Maah being celebrated in the month of September 2020

September month is celebrated as Rashtriya Poshan Maah each year under POSHAN Abhiyaan (PM's Overarching Scheme for Holistic Nourishment), which was launched in 2018. Poshan Maah aims to create mobilisation across the country for improving Nutrition indicators.

#### POSHAN Maah

- The primary objective of the celebration of Poshan Maah is to take the messages of POSHAN to the grass root level.
- The programme is an initiative of WCD Ministry and NITI Aayog, which is supported by 18 line Ministries/Departments/Government Organisations.
- It seeks to synergise all efforts by leveraging technology and intends to take nutrition awareness to the level of Jan Andolan or People's Movement.
- The programme focuses on several themes – Antenatal Care, Optimal Breastfeeding (Early & Exclusive), Complementary Feeding, Anaemia, Growth Monitoring, Girls-education, diet, right age of Marriage, Hygiene & Sanitation, Food Fortification.



#### POSHAN Abhiyaan

- POSHAN stands for **Prime Minister's Overarching Scheme for Holistic Nutrition**.
- The **National Nutrition Mission (NNM)**, also known as the **POSHAN Abhiyan**, aims to **reduce stunting, underweight and low birth weight** each by **2 per cent per annum**; and **anaemia** among children, adolescent girls and women, each by **3 per cent per annum** by 2022.

- However, the **Global Burden of Disease Study 1990–2017** has estimated that if the current trend continues, **India cannot achieve these targets under NNM by 2022.**

## ENVIRONMENT

### 8.1 How PM Modi's Project Dolphin can conserve the friendly water mammals?

In his Independence Day speech this year, Prime Minister Narendra Modi announced the government's plan to launch a Project Dolphin. The proposed project is aimed at saving both river and marine dolphins.

#### How 'Project Dolphin' will help?

- Project Dolphin will be on the lines of Project Tiger. During the first meeting of the National Ganga Council (NGC), headed by the Prime Minister, it was said that "*Special Conservation program needs to be taken up for Gangetic Dolphin which is national aquatic animal and also indicator species for the river Ganga spread over several states,*" state the minutes of meeting.
- So far, the National Mission for Clean Ganga (NMCG), which implements the government's flagship scheme Namami Gange, has been taking some initiatives for saving dolphins. Now, Project Dolphin is expected to be implemented by the Ministry of Environment, Forest and Climate Change.

#### What is the Gangetic dolphin?

- The Gangetic river system is home to a vast variety of aquatic life, including the **Gangetic dolphin (*Platanista gangetica*)**. The Gangetic dolphin is **one of five species of river dolphin** found around the world. It is found mainly in the Indian subcontinent, particularly **in Ganga-Brahmaputra-Meghna and Karnaphuli-Sangur** river systems.
- The Conservation Action Plan for the Ganges River Dolphin, 2010-2020, describes male dolphins as being about 2-2.2 metres long and females as a little longer at 2.4-2.6 m. An adult dolphin could weigh between 70 kg and 90 kg. The breeding season of the Gangetic dolphin extends from January to June. They feed on several species of fishes, invertebrates etc.

#### Efforts to save 'dolphin' till now

The Gangetic dolphin remains listed as **endangered** by the **International Union for the**

### Conservation of Nature.

- **WILDLIFE ACT PROTECTION** – After the launch of Ganga Action Plan in 1985, the government on November 24, 1986 included Gangetic dolphins in the **First Schedule of the Indian Wildlife (Protection), Act 1972**. This was aimed at checking hunting and providing conservation facilities such as wildlife sanctuaries. For instance, Vikramshila Ganges Dolphin Sanctuary was established in Bihar under this Act.
- **CONSERVATION PLAN** – The government also prepared **The Conservation Action Plan** for the Ganges River Dolphin 2010-2020, which “identified threats to Gangetic Dolphins and impact of river traffic, irrigation canals and depletion of prey-base on Dolphins populations”.
- **NATIONAL AQUATIC ANIMAL** – On October 5, 2009, the then Prime Minister Manmohan Singh, while chairing the maiden meeting of the National Ganga River Basin Authority, declared the **Gangetic river dolphin as the national aquatic animal**. Now, the National Mission for Clean Ganga celebrates **October 5 as National Ganga River Dolphin Day**.

**PROJECT DOLPHIN**  
 PRESERVING OUR UNDERWATER FRIENDS

**10-YEAR PROJECT TO FOCUS ON BOTH RIVER AND SEA DOLPHINS**

**AIM TO STRENGTHEN BIODIVERSITY, CREATE EMPLOYMENT OPPORTUNITIES AND ATTRACT TOURISM**

**KILLING, HABITAT FRAGMENTATION BY DAMS AND BARRAGES AND INDISCRIMINATE FISHING HAS REDUCED THE GANGES RIVER DOLPHIN POPULATION FROM TENS OF THOUSANDS TO AROUND 3,700 OVER THE LAST CENTURY**

**GANGES RIVER DOLPHIN, A SPECIES OF FRESHWATER DOLPHINS, IS PRIMARILY FOUND IN GANGA AND BRAHMAPUTRA RIVERS, AND THEIR TRIBUTARIES IN INDIA, BANGLADESH AND NEPAL**

**IN INDIA, THESE DOLPHINS ARE SIGHTED IN DEEP RIVERS IN ASSAM, BIHAR, JHARKHAND, MADHYA PRADESH, RAJASTHAN, UTTAR PRADESH AND WEST BENGAL**

**GANGES RIVER DOLPHIN, OFFICIALLY DISCOVERED IN 1801, CAN LIVE ONLY IN FRESHWATER**

Source: Government of India

## 8.2 Importance of 'Dead' coral reefs and Coral Bleaching

According to a recent study by researchers from University of Queensland (UQ), Australia, **more life can be supported by dead coral remains than live corals.**

- Dead coral reefs support cryptic organisms like hidden sea creatures, including fishes, snails, tiny crabs and worms, who hide under its rubble **to save themselves from predation.**

### Cryptic organisms

- These are organisms that are **morphologically indistinguishable** (identical in appearance) but are **genetically distinct**. Many species that are classified as single



species but are found to be genetically different are called **cryptic species**.

- Examples of cryptic species include the **African elephant**. A 2001 study found the elephants were actually two genetically distinct, non-interbreeding species, the African bush elephant and the African elephant.
- **Method:** The researchers designed three-dimensional-printed coral stacks called **Rubble Biodiversity Samplers (RUBS)** to survey cryptic organisms.
  - The **3D-printed coral** mimicked surrounding reef rubble and invited unwitting reef organisms to be monitored.
  - By sampling the RUBS' structures over time, the team were able to **identify changes in the cryptic population**.
- **Findings:** The researchers found the **missing link in the coral reef food webs**. This data fills important knowledge gaps, such as how small cryptic animals support coral reefs from the bottom of the food chain, all the way up to bigger predators.
  - This also helped to know the importance of **dead coral reef rubble** to the ocean ecosystem.
  - The RUBS technology provides a new opportunity for **reef management**, particularly for **reef education and awareness**.
- **Coral Reefs:**
  - Coral reefs are **large underwater structures composed of the skeletons of colonial marine invertebrates called coral**.
  - Corals extract **calcium carbonate** from seawater to create a hard, durable exoskeleton that protects their soft, sac-like bodies. These exoskeleton remains of millions of corals pile up with time to form coral reefs.
  - The corals have a **sympiotic relationship with an algae** called the **zooxanthellae**.
    - These algae live inside the coral polyp's body and provide the coral with **food**. The polyps, in turn, provide a **home and carbon dioxide** for the algae.
    - These algae are responsible for the variety of **colours** of corals.
  - Coral reefs cover less than 1% of the ocean floor but they are among the most productive and diverse ecosystems on Earth.



- They are referred to as “**the rainforests of the sea**” for their biodiversity,
- **Death of Coral Reefs:** When corals become stressed due to any changes, including pollution or global warming, they can expel algae and get **bleached**, meaning the ‘death’ of the coral reef.
  - There has been increasing **concerns of fast paced coral bleaching** due to **emission of greenhouse gases** and **climate change**.
  - A number of global initiatives are being taken to address the issues, like the **International Coral Reef Initiative**, the US Coral Reef Task Force etc.
  - In india, the **Zoological Survey of India (ZSI)**, with help from Gujarat’s forest department, is attempting a process to restore coral reefs using “**biorock**” or **mineral accretion technology**.

#### Road Ahead

- There has been little information on the role of dead coral reefs so far. The study can help **in studying the oceanic ecosystem** in a more holistic way.
- The research is certainly a lesson that even **dead coral reefs need to be preserved** in order to protect the biodiversity that remains. The understanding of foundational structure of coral reefs might inform efforts to **create artificial reefs**, which may be a short-term solution to the dying coral reef problem.

————— Since 2005 ——— Feel the Pulse of UPSC...

### 8.3 Stubble burning: Punjab to manufacture Bio-CNG from paddy straw

The **Punjab Energy Development Agency (PEDA)** in association with the Govt. of Punjab, is creating alternatives for paddy stubble utilisation.

- This includes setting up **biomass power plants** and **producing Bio CNG** from the paddy stubble biomass.

#### Punjab Energy Development Agency

- It was formed in Sept. 1991 as a **state nodal agency for promotion and development of renewable energy programmes/projects** and energy conservation programme in the state of Punjab. PEDA is registered as a Society under the Societies Act of 1860.
- **Biomass Power Plants:** PEDA has set up **11 biomass power plants** where 97.50 mega watts (MW) of power is generated.

- In these plants, 8.80 lakh metric tonnes of paddy stubble is used annually to generate power.
- **Bio CNG: Eight projects of Bio CNG are under execution in the state.** These will need around 3-lakh metric tonnes of paddy stubble annually.
  - **India's largest Bio CNG project**, which will produce 8,000 m cube biogas per day (equivalent to 33.23 tonnes of Bio CNG per day) is under execution at **Lehragaga tehsil in Sangrur district**. The project is expected to be commissioned by March 2021.
- **Bioethanol Project:** A Bioethanol project of 100 kilolitre is being set up at Talwandi Sabo in **Bathinda**. This will require 2 lakh metric tonnes of paddy stubble annually.
  - **Bioethanol** can be used to run vehicles after blending with diesel and petrol.
- **Advantages of these Projects:** After commissioning of all these projects, Punjab will be able to utilise 1.5 million tonnes (7% of the total) paddy stubble.
  - **Farmers' income:** Farmers can benefit hugely if they can **sell paddy stubble to the industry** instead of burning it.
  - **Environment benefits:** It will reduce the **pollution** caused by stubble burning and also preserve the **fertility** of the soil which is lost due to burning paddy stubble.
  - **Entrepreneurship:** The youth, particularly engineers, graduates in science and technology can start such projects under the '**start-up**' **concept**, which will create entrepreneurship among them.
  - **Employment:** Educated unemployed youth in rural Punjab where such projects will be set up can get big **job opportunities**.
- **Limitations:** Current usage of stubble in these plants is very small compared to the generation of stubble. Punjab needs **varieties of stubble-based industry** where more and more stubble is consumed.
- **Issues involved with Paddy Stubble:**
  - About 20 million tonnes of paddy stubble or paddy crop residue is generated in Punjab annually. **Less than 5% is being utilized** in Bio-gas, Biomass power generation or other environment-friendly uses. The main mode of getting rid of this stubble is **stubble burning**.

- Stubble Burning is a major cause of concern because of environmental and health reasons.
  - Stubble burning is considered to be one of the **factors responsible for smog in Delhi.**
- The burning of stubble **reduces the soil fertility**, besides polluting the environment.
- Additionally, the **heat generated** by stubble burning penetrates into the soil, leading to the loss of moisture and useful microbes.
- **Other alternatives to utilize paddy stubble:**
  - **Torrefaction:** **Torrefaction** is a thermal process to convert biomass into a coal-like material, which has better fuel characteristics than the original biomass.
  - **Fertilizer:** The stubble can be used for preparation of the **high-grade organic fertilizers** by mixing with cow dung and few natural enzymes.
  - **Mechanized Management:** Stubble can be managed in three ways – by **pressing the left over stubble under the earth; sowing wheat directly in the standing stubble in the fields and thirdly, by collecting it in bundles.** This can be aided by use of machines like:
    - **Super SMS (Straw Management System):** It cuts and spreads the straw in uniform manner in the field at the time of harvesting of paddy.
    - **Happy Seeder:** It can sow wheat directly in such fields in standing paddy stubble (the height of which remains around 18 inches after cutting with Super SMS).
    - **Super Seeder:** It is more advanced and it ploughs standing paddy stubble in soil and sows wheat seed simultaneously in a single operation after harvesting.

#### Government Initiatives

- **Promotion of Agricultural Mechanization for In-Situ Management of Crop Residue**– It is a Central Sector Scheme that was launched by the Government of India to tackle air pollution and to subsidize machinery required for in-situ management of crop

residue in the States of Punjab, Haryana, Uttar Pradesh and NCT of Delhi.

- **SATAT Scheme: Sustainable Alternative Towards Affordable Transportation (SATAT) scheme** was launched by the Minister of Petroleum and Natural Gas. Its objectives include reducing pollution from burning of agricultural / organic waste and utilising more than 62 million metric tonnes of waste generated every year in India.
- The **Punjab government** has provided **74,000 subsidised machines** called Super SMS, Happy Seeder and Super Seeders to the farmers for stubble management after harvesting.

Road Ahead

- The government must help the youth in setting start-ups for stubble utilization by **getting sanctioned loans and providing a market.**
- Joint efforts are required on the part of the state, Centre and industries, including public and private participation, to convert all of Punjab's stubble into farmers' income. **Stubble-based projects** can be set up at the block-level to manage stubble of that bloc.
- An expansion of schemes like the **Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA)** for harvesting and composting of stubble will help to resolve the dual problem of unemployment and stubble burning.

#### 8.4 World Ozone Day: Layer Concentration Over Guwahati Low, Reveals Research

Recently, scientists at the **Aryabhata Research Institute of Observational Sciences (ARIES), Nainital (Uttarakhand)** have evaluated the **near surface ozone** in the **Brahmaputra River Valley (BRV).**

- ARIES is an **autonomous research institute under the Department of Science and Technology (DST), Government of India.**
- Scientists analysed the **variability of ozone (O<sub>3</sub>) and other air pollutants over the BRV region.**
- They assessed **seasonal characteristics of ozone** to identify the emission source of ozone and its precursors, especially **methane (CH<sub>4</sub>) and non-methane hydrocarbons (NMHCs).**
  - NMHCs such as **ethane, ethene, propane, propene,** etc. play an important role in **controlling ozone concentrations.**

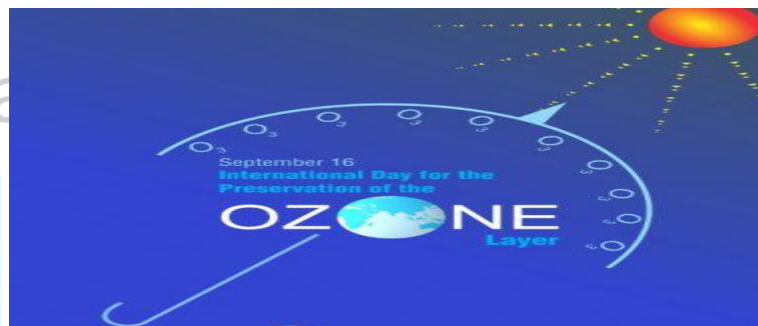
- They also studied the **relationships between the meteorological parameters** like air temperature, wind speed, solar radiation, soil temperature, rainfall, etc. and **ozone** in a tropical setting.
- **Findings:**
  - Scientists have found **relatively low concentration of ozone over BRV (Guwahati – Assam)** compared to the other urban locations in India.
  - The pattern of O<sub>3</sub> concentrations in the BRV indicated that it was **strongly influenced by local oxides of nitrogen (NO<sub>x</sub>) sources** with an **adjacent national highway** being the likely major source.
  - The **mean ventilation coefficient was greater than 6000 m<sup>2</sup>s** during the day in the pre-monsoon season indicating pollutant dispersion.
    - The **ventilation coefficient**, which is the product of mixing depth and the average wind speed, is an atmospheric condition which gives an indication of the air quality and pollution potential i.e. the ability of the atmosphere to dilute and disperse the pollutants over a region.
      - The **higher the coefficient**, the more efficiently the atmosphere is able to dispose of the pollutants and **better is the air quality**.
      - **Low ventilation coefficients lead to poor dispersal of pollutants** causing stagnation and **poor air quality leading to possible pollution related hazards**.
  - **High O<sub>3</sub> winter concentrations** were observed, likely driven by local biomass burning providing reactive **volatile organic compounds (VOCs)** that contributed to ozone formation.
    - VOCs are compounds that have a **high vapor pressure and low water solubility**.
    - Many VOCs are **human-made chemicals** that are used and produced in the manufacturing of paints, pharmaceuticals, and refrigerants.
    - VOCs are common **ground-water contaminants**.
  - In the **pre-monsoon season**, an **impact of solar radiation (SR)** on

the **photochemical formation of O<sub>3</sub>** was observed.

- **Tropospheric, or ground-level ozone, is created by chemical reactions between NO<sub>x</sub> and VOC.**
- It usually increases when pollutants emitted by cars, power plants, industrial boilers, refineries, chemical plants, and other sources **chemically react in the presence of sunlight**, impacting human health.

### 8.5 World Ozone Day 2020 – September 16

World Ozone Day is observed on September 16, every year. It is celebrated to spread awareness among people about the depletion of the Ozone Layer and search for possible solutions to preserve it.



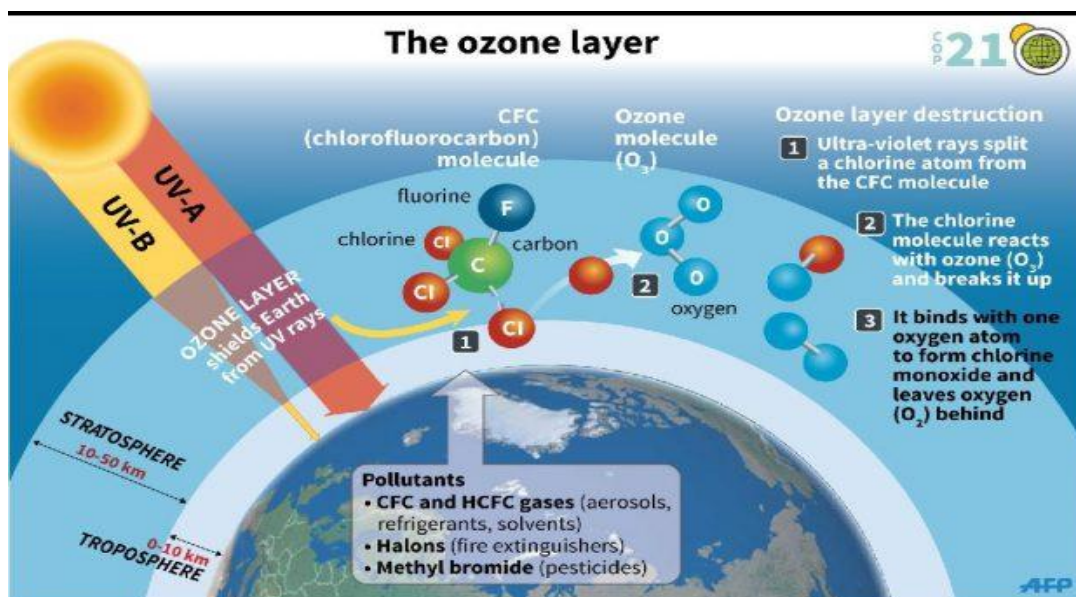
- On December 19, 1994, the **United Nations General Assembly proclaimed September 16 the International Day for the Preservation of the Ozone Layer**, commemorating the date, in 1987, on which the Montreal Protocol on Substances that Deplete the Ozone Layer was signed.
- On September 16, 1987, the United Nations and 45 other countries signed the **Montreal Protocol**, on substances that deplete the Ozone layer. Every year, this day is celebrated as the International Day for the Preservation of the Ozone layer.
- The purpose of the Montreal Protocol is to **protect the Ozone layer by reducing the production of substances that are supposed to be responsible for Ozone layer depletion.**
- “**Ozone for life**” is the **slogan for World Ozone Day 2020**. This year, we celebrate **35 years of global ozone layer protection.**
- The slogan of the day, “**Ozone for life**”, reminds us that ozone is crucial for our life on Earth and we must continue to protect the ozone layer for our future generations also.



- This year, we celebrate **35 years of the Vienna Convention** and **35 years of global ozone layer protection**.

### Ozone layer

- Ozone (chemically, a molecule of three oxygen atoms) is found mainly in the upper atmosphere, an area called the stratosphere, between 10 and 50 km from the earth's surface.
- Though it is talked of as a layer, ozone is present in the atmosphere in rather low concentrations.



- Even at places where this layer is thickest, there are not more than a few molecules of ozone for every million air molecules.
- But they absorb the harmful ultraviolet radiations from the sun. UV rays can cause skin cancer and other diseases and deformities in plants and animals.
- In the Earth's lower atmosphere (troposphere) near ground level, ozone is formed when pollutants emitted by cars, power plants, industrial boilers, refineries, chemical plants, and other sources react chemically in the presence of **sunlight**. **Surface level Ozone** is a harmful air **pollutant**. It may reduce lung function and make breathing difficult.

### 8.6 Blue-Flag Certification

On the eve of International Coastal Clean-Up Day which is celebrated across 100 countries since

1986, Union Ministry of Environment, Forest and Climate Change (MoEFCC) announced at a virtual event that for the first time eight beaches of India are recommended for the coveted International eco-label, the Blue flag certification.

### **BEAM Eco-label**

- The event also saw the launch India's own eco-label **BEAMS**.
- Society for Integrated Coastal Management (SICOM), MoEFCC in pursuit of promoting its policies for sustainable development in coastal regions have embarked upon a highly acclaimed program "**BEAMS**" (**Beach Environment & Aesthetics Management Services**) under its **ICZM (Integrated Coastal Zone Management)** project.
- This is one of the several other projects of ICZM that Government of India is undertaking for the **sustainable development of coastal regions**, striving for globally recognised and the coveted eco-label '**Blue flag**'.
- The **objective of BEAMS program** is to abate pollution in coastal waters, promote sustainable development of beach facilities, protect & conserve coastal ecosystems & natural resources, and seriously challenge local authorities & stakeholders to strive and maintain high standards of cleanliness, hygiene & safety for beachgoers in accordance with coastal environment & regulations. **This program promotes beach recreation in absolute harmony with nature.**

### **Integrated Coastal Zone Management**

- With a view to protect and conserve the coastal and marine ecosystems and environment through a holistic coastal management, the Ministry of Environment, Forests & Climate Change launched the **Integrated Coastal Zone Management (ICZM)** activities in India for a holistic approach with an interactive, dynamic, multidisciplinary, and iterative planning process to promote sustainable development & management of coastal zones through its own wing SICOM.
- The concept of ICZM was **introduced in 1992 during the Earth Summit at Rio de Janeiro** and most of the coastal countries in the World have been adopting ICZM principles for managing their coastal zones. Thus, adoption of ICZM principles for managing and sustainably developing our coastal regions is helping India in keeping with its commitments to international agreements on ICZM.

### **'Blue Flag' certification**

- The 'Blue Flag' is a certification that can be **obtained by a beach, marina, or sustainable boating tourism operator, and serves as an eco-label.**
- The certification is **awarded by the Denmark-based non-profit Foundation for Environmental Education (FEE)**, which sets stringent environmental, educational, safety-related and access-related criteria that applicants must meet and maintain. It is awarded annually to beaches and marinas in FEE member countries.
- The world-renowned certification is known as **an indication of high environmental and quality standards.**
- Forty-seven countries currently participate in the program, and 4,573 beaches, marinas, and boats have this certification.

### 8.7 Increased 145% Increase Reported in Arsenic-affected Habitations in Last Five Years

According to data shared in the Parliament, the number of **arsenic-affected habitations in India has increased by 145%** in the last five years (2015-20).

- **Increase:** India had **1,800 arsenic-affected habitations** in 2015. This increased to 4,421 habitations as of September 2020.
  - **Habitations** are the group of households at a community level in a village.
  - These are the smallest level of settlements that can have between 10-100 households.
- **Regions Affected:** Most of the arsenic-affected habitations lie in the **Ganga and Brahmaputra alluvial plains.** i.e in **Assam, Bihar, West Bengal, Punjab, and Uttar Pradesh (UP).**
  - **Assam had the highest share** of such habitations (1,853), followed by **West Bengal** (1,383).
  - **Jharkhand**, which did not have any such habitation in 2015, has two now (2020).
  - However, **Karnataka** which had nine habitations in 2015, had none in 2020.
- **Decrease in Fluoride Habitations:** The number of **fluoride** affected habitations has significantly come down from 12,727 in 2015 to 5,485 as of September 2020.
  - **Rajasthan** had the highest number of such habitations (2,956), followed by

### Bihar (861).

- Under **Jal Jeevan Mission (JJM)**, priority has been given to such quality-affected habitations through **Community Water Purification Plants (CWPP)** to meet drinking and cooking needs – until potable water supply through tap connection is provided.
  - **JJM** was **started in 2019** with the **aim to provide piped water supply** to every household by **2024**.
  - Under JJM, upto 2% of the allocation to states/ UTs can be utilised for **Water Quality Monitoring & Surveillance activities (WQM&S)**.
  - The WQM&S includes setting up and strengthening of water quality testing laboratories, surveillance by community using field test kits (FTKs), awareness generation and educational programmes on water quality, etc.
- A new Sub-programme under **National Rural Drinking Water Programme (NRDWP)** viz. **National Water Quality Sub-Mission (NWQSM)** was started by the Ministry of Drinking Water and Sanitation (now merged with Ministry of Jal Shakti) in 2017 to address the urgent need for providing clean drinking water in about 28000 Arsenic & Fluoride affected habitations.
  - The NWQSM aims to cover all rural populations in Arsenic/Fluoride affected habitations with **clean drinking water on a sustainable basis by March 2021**.
  - The NWQSM was launched with an outlay of **Rs. 25,000 crore**.
- The **NRDWP was started in 2009**, with a major emphasis on ensuring sustainability of water availability in terms of potability, adequacy, convenience, affordability and equity.
  - NRDWP is a **Centrally Sponsored Scheme with 50:50 fund sharing** between the Centre and the States.

### Arsenic Poisoning

- Arsenic is naturally present at high levels in the **earth crust** and **groundwater** of a number of countries. It is **highly toxic** in its inorganic form.
- **Contaminated water** used for drinking, food preparation and irrigation of food crops poses the greatest threat to public health from arsenic.
- Long-term exposure to arsenic from drinking-water and food can cause **cancer, skin disease, cardiovascular disease and diabetes**.

- In early childhood exposure, it has been linked to negative impacts on **cognitive development** and **increased deaths in young adults**.
- According to the **WHO's guidelines for drinking water quality (2011)**, the permissible limit of **Arsenic in groundwater is 0.01 mg per litre**.
  - However, in India the permissible limit in drinking water has recently been revised from **0.05 mg per litre to 0.01 mg per litre**.
- The most important action in affected communities is the **prevention of further exposure** to arsenic by provision of a **safe water supply**.

### Fluoride Toxicity

- Excessive fluoride intake usually occurs through the **consumption of groundwater naturally rich in fluoride**, particularly in warm climates where water consumption is greater, or where high-fluoride water is used in food preparation or irrigation of crops.
- Such exposure may lead to **dental fluorosis (tooth decay)** or **crippling skeletal fluorosis**, which is associated with **bone deformities**.

### 8.8 Death of two sloth bears in Odisha's Nandankanan zoo spreads panic

Recently, death of two **sloth bears** have been reported from the **Nandankanan Zoological Park**, Bhubaneswar (Odisha).

- The exact cause of deaths is not yet known. Earlier, a 28-year-old **Himalayan black bear** died probably due to old age as bears are known to live for about 30 years.
- **Nandankanan Zoological Park:**
  - It is 15 kms from **Odisha's capital, Bhubaneswar**. It was **inaugurated in 1960**.
  - First zoo in the country to become a **member of the World Association of Zoos & Aquariums (WAZA)**.
    - WAZA is the global alliance of regional associations, national federations, zoos and aquariums, dedicated to the care and conservation of animals and their habitats around the world.
  - It is recognized as a leading zoo for the **breeding of the Indian pangolin** and **white tiger**.
    - Leopards, mouse deer, lions, ratel and vultures are also bred here.



- It was the **world's first captive crocodile breeding centre**, where **gharials** were bred in captivity in 1980.
- The **State Botanical Garden of Nandankanan** is one of the pioneering plant conservation and nature education centres of Odisha.
- **Sloth Bears:**
  - **Scientific Name:** *Melursus ursinus*
  - **Habitat:** Also called honey bear, **Hindi bhalu**, it is a forest-dwelling member of the **family Ursidae** (comprises 8 species of bears) that inhabits tropical or subtropical regions of India and Sri Lanka.
  - **Protection Status:**
    - **'Vulnerable'** in the **IUCN Red List**.
    - **Appendix I** in **CITES listing**.
    - **Schedule I** of the **Indian Wildlife Protection Act, 1972**.
  - **Threats:** Habitat loss, poaching for body parts and are sometimes captured for use in performances or hunted because of their aggressive behavior and destruction of crops.
- **Himalayan Black Bear:**
  - **Scientific Name:** *Ursus thibetensis*
  - **Habitat:** Also called **Asiatic black bear**, it inhabits mountain and heavily forested areas across southern and eastern Asia.
  - **Protection Status:**
    - **'Vulnerable'** in the **IUCN Red List**.
    - **Appendix I** in **CITES listing**.
    - **Schedule I** of the **Indian Wildlife Protection Act, 1972**.
  - **Threats:** Illegal hunting for body parts, specifically the gallbladder, paws and skiing poses the main threat, together with habitat loss caused by logging, expansion of human settlements and roads.

### 8.9 Komodo dragons could become extinct soon due to climate change

A recent study conducted by Australian universities has found out that the **Komodo dragon could become extinct** in the next few decades due to **climate change**.



- In **February 2019**, the government of Australia officially **declared the first known extinction of a mammal (Bramble Cay melomys)** as a result of human-induced climate change.
- **Scientific Name:** *Varanus komodoensis*.
- Komodo dragons are the **largest and heaviest lizards** on Earth. They have long, flat heads with rounded snouts, scaly skin, bowed legs, and huge, muscular tails.
- Komodo dragons **can eat almost anything**, including invertebrates, birds, and mammals like deer, pigs, and even large water buffalo.
- They have **venom glands loaded with toxins** which have been shown to secrete **anticoagulants**.
  - An anticoagulant is a compound which **prevents the victim's blood from clotting**, causing it to bleed to death.
  - The venom lowers blood pressure, causes massive bleeding, and induces shock.
- **Habitat:**
  - Komodo dragons have thrived in the harsh climate of **Indonesia's Lesser Sunda Islands** for millions of years. They **prefer the islands' tropical forests** but can be **found across the islands**.
  - **Komodo National Park**, a UNESCO World Heritage site, is situated in the **Island of Komodo** (eastern Indonesia) and is the only habitat for this lizard species.
- **Threats:**
  - Anthropogenic factors.
  - Small size of population, less prey and higher inbreeding factors.
  - Climate change is likely to cause a sharp decline in the availability of habitat, reducing their populations even further.
- **Conservation:**
  - **IUCN Status: Vulnerable.**
  - **CITES: Appendix I.** (The commercial trading of live specimens or any parts, dead or alive of Komodo is prohibited.)
  - In August 2019, the **Indonesian government ordered the relocation of the**

**residents** of the Island of Komodo in a bid to conserve Komodo dragons and the Komodo National Park.

### 8.10 Increase in Frequency of Medicanes

Scientists have warned that **extra-tropical storms** in the **Mediterranean Sea**, known as 'Medicanes' or 'Mediterranean Hurricanes', could become more frequent due to **human-induced climate change**.

- **Medicanes:**

- Medicanes are **tropical-like cyclones** formed over the Mediterranean Sea.
- With the surrounding dry climate and the relatively shallow waters of the sea, the occurrence of tropical-like cyclones is **infrequent**.
- They typically **form in the fall or winter months and occur once or twice a year**.
- On September 18, 2020, a medicane named **Lanos** made landfall along the coast of **Greece** and caused heavy rainfall and flooding in Greece and surrounding islands.

- **Comparison with Tropical Cyclones:**

- These **occur more in relatively colder waters** than tropical cyclones, **hurricanes** and **typhoons**. Hence, the cores of these storms are also cold, as compared to the warm cores of tropical cyclones (but warmer as compared to extra-tropical cyclones).
- These are typically **smaller in diameter and have lower wind speeds than true tropical cyclones**.
- Sometimes, **warm-cored tropical cyclones transform into cold-cored extratropical cyclones** and in rare cases, the opposite can also happen.
  - Such an event of extra tropical cyclone becoming a tropical cyclone occurred in November 2011 and caused severe flooding in parts of Spain, Italy and France, killing 11 people.

- **Increase in Occurrence**

- Medicanes have **increased in number in the past half-century**.
- Two of these storms, one in 2005 and another in 2012, even formed over

the **Black Sea**, which is a much smaller water body than the Mediterranean Sea.

- Due to global warming, warmer sea surface temperatures in the Mediterranean can allow the storms to **take on more tropical appearances and characteristics**, increasing the wind speeds and making the storms more intense and cause heavier rainfall.
- This year is a **mild La Niña**, according to the **World Meteorological Organization**. La Niña tends to reduce the land falling hurricanes but even if the **La Niña this year is mild, the hurricane season is very active**. This implies that the impacts of **El Niño Southern Oscillation (ENSO) are being modulated by global warming** in all oceans, including the Mediterranean.

- La Niña is the cooling phase of the ENSO cycle in the equatorial Pacific Ocean, as opposed to the warming El Niño phase. It is characterised by the **unusual cooling of the central and east-central equatorial Pacific Ocean**.

- **The Special Report on the Ocean and Cryosphere in a Changing Climate** released Intergovernmental Panel on Climate Change (IPCC) in 2019 warns of increased temperatures **and more frequent extreme El Niño and La Niña events**.
- **Threats:**
  - Increase in frequency of medicanes will be a threat for already vulnerable populations living in North Africa, possibly triggering **human migration**.
  - They could also be a menace for European countries like Italy and Greece.

### 8.11 Another Chinese virus? ICMR warns India of 'Cat Que Virus' which could spread disease in the country

In a study published in the Indian Journal of Medical Research, scientists from the Pune-based Maximum Containment Laboratory and ICMR-National Institute of Virology have noted the presence of antibodies against the Cat Que virus (CQV) in two human serum samples.



### Cat Que virus

- For CQV, domestic pigs are considered to be the primary mammalian hosts. Antibodies against the virus have been reported in swine reared locally in China, which indicates that the virus has formed a “natural cycle” in the local area and has the ability to spread in pigs and other animal populations through mosquitoes.
- A paper published in the journal Vector Borne and Zoonotic Diseases in 2015 says that CQV belongs to the **Simbu serogroup** and **infects both humans and economically important livestock species**.
- It was **first isolated in 2004 from mosquitoes** during the surveillance of arbovirus activity in northern Vietnam. In this study, researchers reported a CQV strain (SC0806), which was isolated from mosquito samples collected in China in 2006 and 2008.

### How can humans get infected and is there a cause for concern?

- Humans can get infected **through mosquitoes** as well. In the study, scientists note that because of positivity in human serum samples and the replication capability of CQV in mosquitoes, there is only a “**possible disease-causing potential**” of CQV in the Indian scenario.
- Further, “Availability of vector, primary mammalian host (swine) and confirmation of CQV from jungle myna signifies the potential of this Orthobunyavirus as a public health pathogen in India,” the study says” (CQV belongs to the genus Orthobunyavirus).

### So, is this virus dangerous?

It is not clear. Other viruses that belong to the same genus as CQV and are similarly transmitted through mosquitoes include the Cache valley virus that can cause meningitis, the La Crosse virus that can cause paediatric encephalitis, the Jamestown Canyon virus that causes Jamestown Canyon encephalitis and the Guaroa virus that causes febrile illness.



# ETHICS & ESSAY X-CLUSIVE



**FROM OCT 20. MAINS SPECIAL**

We predicted the rare and hidden questions in Our GS4 Test Batch

\* Mains 2016 - John Rawls Theory of Justice

\* Mains 2018 - Same Thirukkural

We help you gain

\* Mastery over Key Jargons to be used & Example Generation.

\* Feeling of simplicity and comfortability without exaggerating things.

Study Materials  
will be provided.

**15 CLASSES + 10 TESTS**

**9884 554 654**

**RAJA SIR'S**  
Cracking IAS Academy  
Since 2005 - Feel The Pulse of UPSC

**IN CASE YOU GET  
UPSC GENERAL STUDIES  
MAINS 2020  
QUESTION PAPER???**

**MAINS 2020 - TEST SERIES**

**FROM OCTOBER 11**

**ANY SERIOUS  
IAS ASPIRANT  
CAN UNDERSTAND  
OUR DESIGN.**



**Tests Break - up**

Total Tests: 16

Sectional (GS I, II, III, IV): 8

Full Syllabus (GS I, II, III, IV): 4

Essay Tests (3+1): 4

- \* Hidden Questions Coverage
- \* Answer writing classes
- \* 1-1 discussion
- \* High probability of reflection in mains
- \* Evaluation by Experienced Faculties only  
(Not by Aspirants)