

# CURRENT AFFAIRS

*Month of*  
**JULY-2020**



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## CURRENT AFFAIRS ANALYST

WEEK- 1 (JULY, 2020)

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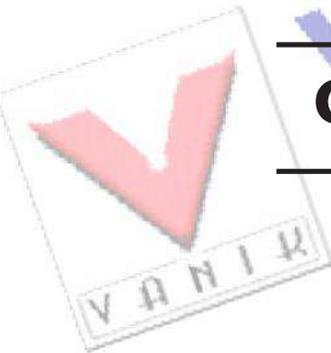
# **SECTION: A**

## **(MAINS)**

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### **CURRENT AFFAIRS**

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## POLLINATOR WEEK

### CONTEXT

The Pollinator Week is observed every year from 22<sup>nd</sup> June to 28<sup>th</sup> June.

#### ◎ BACKGROUND

- œ In 2007, the U.S. Senate created a National Pollinator Week to “recognize the importance of pollinators to ecosystem health and agriculture in the United States.”
- œ The Pollinator Week (June 22-28) was initiated by non-profit Pollinator Partnership and the United States’ Senate.
- œ Each year since then, recognition of National Pollinator Week has grown, with many states and local groups planning educational events.
- œ The week is often a time for light stories on pollinator-friendly gardening tips and social media posts of cute bees and butterflies.

#### ◎ ANALYSIS

##### Understanding Pollination

- œ Pollination is the delivery of pollen to the female organs of a plant (stigma in flowers). Pollen is made by the male organs of a plant (stamens in flowers) and contains genetic information needed for plant reproduction.
- œ Pollen may be transferred to female organs on the same plant (self-pollination) or another plant of the same species (cross-pollination).
- œ As a result of pollination the plants produce seeds.
- œ Pollen can be dispersed by wind, water and animal pollinators such as insects, bats and birds.

##### What are Pollinators?

- . Pollinators are animals that transfer pollen from the anthers to the stigma of a flower, enabling the flower to set seed and fruit (fertilization) and, through cross-fertilization, they play an important role in maintaining plant diversity.
- . The important ecosystem service of pollination is provided by a variety of animals, chiefly insects. Bees, flies, butterflies, moths, wasps, beetles, thrips and some other insect orders encompass the majority of pollinating species.
- . There are two categories of pollinators:

- > **Invertebrates:** Well-known invertebrate pollinators include bees, moths, flies, wasps, beetles and butterflies.
- > **Vertebrates:** Monkeys, rodents, lemurs, tree squirrels and birds also facilitate pollination and are among the vertebrate pollinators.

##### The Global situation

- œ More than 180,000 plant species, including 1,200 crop varieties, across the world depend on pollinators to reproduce. But the little creatures, like the bees and the butterflies, have increasingly been under threat. This is a week for them.
- œ There are 150,000 species across the world who visit flowers, of which bees, being dominant pollinators, account for 25,000-30,000 species, according to the Food and Agriculture Organization (FAO).
- œ Around 40 per cent of invertebrate pollinator species — particularly bees and butterflies — face extinction across the world, according to the FAO.
- œ The US saw a decline in its bee population as well: In 2017, there were 2.88 million honey bee colonies, a 12 per cent dip from the 3.28 million colonies in the country in 2012, according to the FAO.
- œ Similarly, around 16.5 per cent of vertebrate pollinators are threatened with extinction, according to the FAO.
- œ Of these, 45 species of bats, 36 species of non-flying mammals, 26 species of hummingbirds, seven species of sunbirds and 70 species of passerine birds, face extinction, according to the FAO’s rapid assessment on pollinators’ status.

##### India’s case

- œ In India, wild honeybees of the genus *Apis* — including the Asian bee (*A. cerana*) and the little bee (*A. florea*) — declined steadily for the past 30 years, said *Pollinators Unknown: People’s perception of native bees in an agrarian district of West Bengal, India, and its implication in conservation*, a 2017 study.
- œ Nearly 168 bees died every day due to poor waste management, pointed out *Decline in honey bee population in southern India: Role of disposable paper cups*, a 2014 study.
- œ Overall, 35,211 bees died every month, the study said.

- œ In India, most of the food crops need insect (mainly bee) pollinators for sufficient successful pollination.
- œ Oil seeds (such as Sunflower, niger, safflower), vegetables (Cucurbitaceous Vegetable Crops, legume crops) and many fruit crops are profoundly reliant on pollinators.
- œ A list of crops pollinated by bees is as follows
  - > Fruits and nuts: Almond, apple, apricot, peach, strawberry, citrus and litchi.
  - > Vegetable and Vegetable seed crops: Cabbage, cauliflower, carrot, coriander, cucumber, melon, onion, pumpkin, radish and turnip.
  - > Oil seed crops: Sunflower, niger, rape seed, mustard, safflower, gingelly.
  - > Forage seed crops: Lucerne, clover.

### Why Bees are so crucial?

- . Among the pollinator groups, bees have been considered a priority group.
- . Bees are synonymous with insect pollinators and they are publicly shared assets, most species and populations belonging to nobody, yet benefiting all of us through pollination – a perfect example of 'positive externality', in economic parlance.
- . In general, bees are the main pollinators of angiosperms.
- . The Food and Agriculture Organisation (FAO) of the U.N. estimates that of the slightly more than 100 crop species that provide 90 percent of food supplies for 146 countries, 71 are bee-pollinated (mainly by wild bees), and several others are pollinated by thrips, wasps, flies, beetles, moths and other insects.
- . In India, Honeybees (*Apis* spp.) are always valued for honey and wax, earning them due importance and never appreciated for pollination services.

### Why Pollinator matters?

- œ Pollinators are crucial in the functioning of almost all terrestrial ecosystems including those dominated by agriculture because they are in the front line of sustainable productivity through plant reproduction.
- œ One-third of the world's crops require pollination to set seeds and fruits and the great majority of them are pollinated by bees.
- œ These pollinators also provide an important ecosystem service that is essential for sustaining wild floral biodiversity.

- œ Pollinators are responsible for one out of every three bites of food we eat and vital to the production of 75 percent of the world's top food crops—everything from apples to zucchini.
- œ They are also critical to the reproduction of nearly 90 percent of flowering plants (i.e., most plants on the face of the Earth).
- œ Further losses of pollinators not only jeopardize our food security, but also the survival of our ecosystems.

### Economic value of pollination for crops

- œ The role of pollinators in enhancing biodiversity and increasing crop yield is so significant that its economic value is worth billions of dollars.

Crop	Economic value (in Rs crore)
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Rapeseed and mustard	19,355.70
Oilseeds	43,993.08
Fruits	17,095.45
Vegetables	19,498.20
Fibres (mainly cotton)	17,290.66
Spices and condiments	10,109.43

### What's triggering the Pollinator apocalypse?

There are several causes for the decline in the number of pollinators. Most of them are the result of an increase in human activities:

- œ Land-use change and fragmentation
- œ Changes in agricultural practices including use of chemical pesticides, fungicides and insecticides
- œ Change in the cropping pattern and crops like the cultivation of Genetically Modified Organisms (GMOs) and mono-cropping
- œ High environmental pollution from heavy metals and nitrogen
- œ Growth of invasive alien species

### ◉ WAY FORWARD

The only way forward is to "stabilise carbon emissions and hold warming to 1.5 degrees Celsius above pre-industrial levels.

## EXTENSION OF THE OBC COMMISSION

### CONTEXT

The Union Cabinet decided to extend the tenure of the OBC Commission by six months as its functioning was affected due to the coronavirus lockdown.

#### ● BACKGROUND

- œ Constituted in October 2017, the Commission, headed by Justice G Rohini (retired), has interacted with all the states/UTs which have sub-categorised Other Backward Classes (OBCs).
- œ The Commission was of the view that it would require some more time to submit its report since repetitions, ambiguities, inconsistencies and errors of spelling or transcription appearing in the existing Central List of OBCs need to be cleared.
- œ It had, therefore, earlier sought extension of its term up to July 31 this year.
- œ However, due to the nationwide lockdown and travel restrictions owing to the COVID-19 pandemic, the Commission was not able to complete its task even during the extended time.
- œ Therefore, the term of the Commission is being extended for a period of 6 more months i.e. up to 31 January 2021.
- œ The communities in the existing OBC list that have not been able to get any major benefit of reservation -- in appointments on central government posts and in admissions in central educational institutions -- are expected to benefit once the recommendations of the Commission are implemented.
- œ The Commission is likely to make recommendations for benefit of such marginalised communities in the Central List of OBCs.

#### ● ANALYSIS

##### Who are Other Backward Classes?

- œ Communities that have been historically marginalised in India and continue to face oppression, and social, economic and educational isolation, but do not fall into the Scheduled Caste and Scheduled Tribes list, fall into the Other Backward Class category.
- œ **Article 340** of the Constitution of India gives the President of India the power to constitute a committee to investigate the conditions of

backward class in India and recommend measures for their welfare, upliftment and development.

- œ The Mandal Commission was constituted under this Article.

#### Mandal Commission

- . The Mandal Commission was constituted in 1979, under Article 34 of the Constitution to identify backward communities in India and recommend policy initiatives for their upliftment and welfare.
- . The Commission listed 11 criteria, falling under social, economic and educational categories, to identify and classify communities and Backward classes.

- œ Article 15 and 16 of the Constitution of India which are applicable to the member of the Scheduled Caste communities, apply to the members of the OBC communities as well.

- œ The National Commission for Backward Classes places Backward Classes within the expression of the term 'Scheduled Castes'.

#### Reservation for OBCs

- œ Reservation Policy in India is a process of reserving certain percentage of seats (maximum 50%) for a certain class such as Scheduled Castes, Scheduled Tribes, Backward classes, etc. in the public sector units, union and state civil services, union and state government departments and in all public and private educational institutions.

#### The current scenario of Reservation in India is:

- . 15% seats are reserved for Scheduled Castes (SC).
- . 7.5% seats are reserved for Schedule tribes (ST).
- . 27% seats are reserved for Other backward classes (OBC).
- . Total constitutional reservation percentage is 49.5% and the rest 50.5% seats are open to all i.e. general, SC, ST And OBC.

- œ Reservation for OBCs, unlike that for Scheduled Castes and Scheduled Tribes, was not initially guaranteed in the Constitution — and extends only to jobs and education, not to elected representatives.

- œ It draws its roots from the Mandal Commission, which was set up in 1979, and its recommendation for 27% OBC quota accepted by the central government in 1990.
- œ In 2006, the reservation was extended to institutions of higher education.
- œ Upper-caste students and anti-quota groups have long opposed reservations, but the protests have been especially fierce against the implementation of OBC quotas, both in 1990 and in 2006.
- œ They argue that many OBC groups are upwardly mobile and socially dominant, don't need state support in jobs and education, and that the presence of quotas hinders merit-based selection.
- œ To be sure, economically well-off OBCs form what is known as a "creamy layer" — annual income of more than ~8 lakh — and are not eligible for quotas.

#### **Creamy layer**

- . The concept of 'creamy layer' was introduced by the Supreme Court in 1993 through the judgement it delivered in the Indira Sawhney case.
- . In its judgment, the top court ruled that the exclusion of such socially advanced members...will make the 'class' a truly backward class."
- . After being introduced, the criterion of income has been periodically revised. In 2013, it was revised from Rs 4.5 lakh to Rs 6 lakh. In 2017 it was revised to Rs 8 lakh.

- . The income criteria is usually reviewed every three years.

#### **What is the need?**

- œ If someone belongs to a Scheduled Caste (SC) or a Scheduled Tribe (ST), he is listed among the 28 parameters, but there is no sub-category for OBC in its current format.
- œ Currently, all 2,633 OBC castes compete for the same 27% quota. 25% of benefits from OBC reservations have been availed by only 10 sub-castes.
- œ There are 983 sub-castes who have availed almost no benefits from reservations.
- œ The communities that have got almost no benefits of reservations include profession-based castes such as Kalaigars, a community that traditionally polishes tins; and Sikligars and Saranias, communities that traditionally sharpen knives; apart from several other marginalised groups.
- œ No Census published since then has ever counted OBCs. The next census, in 2021, is slated to count OBCs for the first time in 90 years.

#### **CONCLUSION**

The Commission's recommendations are expected to benefit the communities in the existing list of OBCs which have not been able to get "any major benefit of the scheme of reservation for OBCs for appointment in central government posts and for admission in central government educational institutions."

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## TUBERCULOSIS STILL A BIG KILLER IN INDIA

### CONTEXT

India notified the highest number of 24.04 lakh tuberculosis cases last year as against an estimated 26.9 lakh cases by WHO, indicating that around three lakh patients missed out from the national TB programme, according to India TB Report 2020.

#### ◎ BACKGROUND

- œ TB has existed in India for several thousand years. TB in India is an ancient disease. In Indian literature there are passages from around 1500 BCE in which consumption is mentioned, and the disease is attributed to excessive fatigue, worries, hunger, pregnancy and chest wounds.
- œ In 1880s it was widely believed that TB was an inherited disease. However, a scientist Robert Koch was convinced that the disease was caused by *Mycobacterium tuberculosis* and was infectious.
- œ In 1882, he published his findings on tuberculosis and later attempted at developing a drug to treat this disease, thereby finding the drug tuberculin which today is used for TB diagnosis.
- œ In 1905 he received the Nobel Prize in Physiology and Medicine for his work with Tuberculosis.
- œ Tuberculosis in India was first recognised through a resolution passed in the All India Sanitary Conference, held at Madras in 1912.
- œ The first open air institution for isolation and treatment of TB patients was started in 1906 in the Himalayas in 1908.
- œ The anti-TB movement in the country gained momentum with the TB Association of India was established in 1939.
- œ Even today, India bears a disproportionately large burden of the world's tuberculosis rates. And it continues to be the biggest health problem in India.

#### ◎ ANALYSIS

##### Learning the truths about TB

- œ Tuberculosis (TB) is a contagious infection that usually attacks your lungs. It can spread to other parts of your body, like your brain and spine.
- œ **Caused by:** A type of bacteria called *Mycobacterium tuberculosis* causes it.
- œ **Symptoms of TB:** Typical symptoms of TB include-
  - > a persistent cough that lasts more than 3 weeks and usually brings up phlegm, which may be bloody

- > weight loss
- > night sweats
- > high temperature
- > tiredness and fatigue
- > loss of appetite
- > swellings in the neck

œ There are two TB-related conditions exist:

- ◎ **Latent TB infection (LTBI):** Latent TB occurs when a person has the TB bacteria in their body. But the bacteria are present in extremely small numbers. People with latent TB are not infectious and do not feel ill. They cannot pass the TB bacteria on to other people.
- ◎ **TB disease or Active TB:** TB disease is what happens when a person has latent TB and then becomes sick.

##### How does it spread?

- œ TB bacteria are spread through the air from one person to another when a person with TB disease coughs, speaks or sings.
- œ When a person breathes in TB bacteria, the bacteria can settle in the lungs and begin to grow.
- œ From there they can move through the blood to other parts of the body.

##### What is drug-resistant TB?

- œ Drug-resistant TB can occur when TB bacteria become resistant to the two most powerful antibiotics normally used to treat the illness.
- œ This means the TB is more difficult to treat and treatment will take much longer (usually at least 18 months).

##### Key-highlights of the India TB Report 2020

- œ The India TB Report 2020 stated that 79,144 deaths due to tuberculosis were reported in 2019, which is much lower than the WHO estimate of 4.4 lakh fatalities.
- œ The "missing cases" — the gap between estimated incidences and notified cases — has drastically reduced from over 10 lakh in 2017 to 2.9 lakh in 2019 through greater engagement with private healthcare sector along with other initiatives.

œ Around 24.04 lakh TB patients were notified in 2019, registering 14 per cent increase over the previous year while the private sector saw an increase of around 35 per cent with 6.78 lakh tuberculosis patients notified.

œ **State TB Index:** On the basis of the score in State TB Index-

- > Gujarat, Andhra Pradesh and Himachal Pradesh were the top three best-performing states for tuberculosis control under the category of states with 50 lakh population.
- > Tripura and Nagaland were best-performing in the category of states having less than 50 lakh population.
- > Dadra and Nagar Haveli, and Daman and Diu were selected as the best performing Union Territories.

### How is the situation worldwide?

œ Worldwide, TB is one of the top 10 causes of death and the leading cause from a single infectious agent (above HIV/AIDS).

œ In 2018, an estimated 10 million people fell ill with tuberculosis (TB) worldwide. 5.7 million men, 3.2 million women and 1.1 million children.

œ TB occurs in every part of the world. In 2018, the largest number of new TB cases occurred in the South-East Asian region, with 44% of new cases, followed by the African region, with 24% of new cases and the Western Pacific with 18%.

œ In 2018, 87% of new TB cases occurred in the 30 high TB burden countries. Eight countries accounted for two thirds of the new TB cases: India, China, Indonesia, Philippines, Pakistan, Nigeria, Bangladesh and South Africa.

### India's target to end TB

œ The global target for eliminating TB is 2030, but the target for India to eliminate TB is 2025, five years before the global target.

œ India's **TB control Programme** renamed as the **National TB Elimination Programme** has set a target of reducing has set a target of reducing the country's TB incidence rate from 217 patients per lakh population in 2015 to 77 by 2023 and 44 by 2025.

### WHO's "END TB Strategy"

- WHO's "END TB Strategy" adopted by the World Health Assembly in 2014 aims to end the TB epidemic globally.
- It aims at 95% reduction by 2035 in the number of TB deaths compared with 2015, 90% reduction by 2035 in the TB incidence rate compared with 2015 and Zero TB-affected families facing catastrophic costs due to TB by 2035.
- The strategy also sets interim milestones for 2020, 2025 and 2030 as the United Nations sustainable development goals include ending the TB epidemic by 2030.

### Government initiatives to end TB

œ **Nikshay Poshan Yojana (NPY):** Government of India introduced Nikshay Poshan Yojana (NPY) through Direct Benefit Transfer (DBT) as monthly financial assistance towards nutrition for TB patients in 2018. It aims to-

- > To determine the number (proportion) of TB patients who received the benefits
- > To explore the challenges encountered by the health care providers in delivering the NPY through DBT
- > To explore the ways the incentives were utilised by the patients.

œ **TB Harega Desh Jeetega:** Launched in 2019, it is a nationwide campaign to spread disease awareness about TB and encourage people with TB symptoms to seek medical attention.

œ **Saksham Pravah Project:** The project provides home-based counselling to MDR-TB patients and caregivers. Patients are encouraged to share fears and talk about the discrimination, depression, and familial discord they face.

### CONCLUSION

India bears the world's largest burden of tuberculosis (TB), accounting for one-fourth of all new infections. Its prevention and control is a challenge at multiple levels, requiring the united efforts of a diverse range of stakeholders. Though India has been proactive against TB in recent years, there is still a long way to go.

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# THE LANDSCAPE OF CYBER SECURITY IN INDIA

## CONTEXT

As the world gets absorbed by the COVID-19 pandemic, cyberattacks have become a critical area for all technology-focused organizations in India. In the evolving situation, India needs an updated cybersecurity situation.

### ◎ BACKGROUND

- œ Cybercrime is vastly growing in the world of technology today. Criminals of the World Wide Web exploit internet users' personal information for their own gain.
- œ They dive deep into the dark web to buy and sell illegal products and services. They even gain access to classified government information.
- œ Cybercrimes are at an all time high, costing companies and individuals billions of dollars annually. What's even more frightening is that this figure only represents the last 5 years with no end in sight.
- œ The evolution of technology and increasing accessibility of smart tech means there are multiple access points within users' homes for hackers to exploit.
- œ While law enforcement attempts to tackle the growing issue, criminal numbers continue to grow, taking advantage of the anonymity of the internet.

### ◎ ANALYSIS

#### India's digital situation

- œ The digital economy today comprises 14-15% of India's total economy, and is targeted to reach 20% by 2024. India has more than 120 recognised 'data centres' and clouds.
- œ Although India was one of the few countries to launch a cybersecurity policy in 2013, not much has transpired in terms of a coordinated cyber approach.
- œ Unlike the US, Singapore, and the UK where there is a single umbrella organisation dealing in cybersecurity, India has 36 different central bodies—most ministries have their own—that deal with cyber issues, and each has a different reporting structure; each state government has its own CERT.
- œ Add to this the fact that while the National Cyber Security Strategy 2020 was to devise a cyber-

readiness roadmap for organisations and the government for cyber-readiness, this is yet to be announced.

- œ While CERT-IN has responded to cyber threats, it has been late in conducting security checks, and often has released advisories once an attack has taken place.
- œ In the case of WhatsApp and Pegasus, CERT-IN only came in after others had warned of the possibility of individuals being compromised.

#### What does India need?

- œ With countries resorting to digital warfare and hackers targeting business organisations and government processes, India needs comprehensive cybersecurity guidelines and standards for checking cyber vulnerabilities and cyber responses.
- œ In many cases, as it happens, the government itself uses legacy systems which are vulnerable to cyberattacks; countries like China and Singapore, in the meanwhile, have progressed towards creating cyber defence networks.
- œ India cannot afford to be complicit about cybersecurity.
- œ In 2018, when Wannacry disrupted the national health service systems in the UK, the country's health system was brought to a standstill.
- œ An attack explicitly directed towards these services can cause much more damage. India should not wait for an attack to upgrade its infrastructure.
- œ In India, the private sector has started playing a significant role in operating critical information infrastructure, particularly in power, transportation and healthcare.
- œ It is now more necessary than ever before to take cognisance of new directions and shifts in policies across the world.
- œ It will be necessary to undertake a thorough risk and gap assessment of the current cyber resilience of India's various economic sectors, as well as that of the governance structure that enforces and manages the cybersecurity policy and framework.

- œ National cybersecurity projects such as the National Cyber Coordination Centre (NCCC), National Critical Information Infrastructure Protection Centre (NCIIPC) and the Computer Emergency Response Team (CERT) need to be strengthened manifold and reviewed.

### The rise of digital mediums

- œ Financial services, payments, health services, etc are all connected to digital mediums; and thanks to Corona, this is expected to increase.
- œ The average data consumption per person a year is in the range of 15-20 gigabits. The growth rate in data generation is more than 35%.
- œ With more inclusion of artificial intelligence (AI), machine learning (ML), data analytics, cloud computing and Internet of Things (IoT), cyberspace will become a complex domain, giving rise to issues of a techno-legal nature.

### Cyber attacks in India

- œ In India, too, attacks have been happening with increasing frequency.
  - > In 2016, banks had reportedly announced a leak of personal information of 3.2 million debit cards.
  - > In 2018, Pune-based Cosmos Bank lost Rs 94 crore in a malware attack.
  - > In 2019, the Kudankulam plant was attacked using malware.
  - > And, CERT-IN has recently issued an advisory that there is a threat of a massive phishing attack.
- œ For three months in 2019, India faced the most cyber-attacks in the world.
- œ While the US was the most cyber-targeted nation in 2019, India held the top spot in April, May and June.
- œ The most cyber-attacked countries in 2019 were the US, India, UK, Singapore, Ukraine, UAE, Nigeria, Japan, South Korea and Spain respectively.

### The countries targeting India

- œ According to the data, 74,988 cyber-attacks targeting India originated in Slovenia. This was followed by Ukraine (55,772 attacks), Czech Republic (53,609 attacks), China (50,000 attacks), and Mexico (35, 201 attacks).
- œ The report says the attacks were carried out through 'botnets' that are used to inject malware into a victim's device, allowing those controlling the botnet to take control of the device, gather information of the device and even remotely make

the victim's device perform specific tasks such as sending information back to the person controlling the botnet.

- œ A 'botnet' is a set of devices, which have computing ability and can be connected to each other through the internet — for example, computers, drones, and smartphones can be connected to each other via the internet.

### Types of Cybercrime

- œ **DDoS Attacks:** These are used to make an online service unavailable and take the network down by overwhelming the site with traffic from a variety of sources. Large networks of infected devices known as Botnets are created by depositing malware on users' computers. The hacker then hacks into the system once the network is down.
- œ **Botnets:** Botnets are networks from compromised computers that are controlled externally by remote hackers. The remote hackers then send spam or attack other computers through these botnets. Botnets can also be used to act as malware and perform malicious tasks.
- œ **Identity Theft:** This cybercrime occurs when a criminal gains access to a user's personal information to steal funds, access confidential information, or participate in tax or health insurance fraud. They can also open a phone/internet account in your name, use your name to plan a criminal activity and claim government benefits in your name. They may do this by finding out user's passwords through hacking, retrieving personal information from social media, or sending phishing emails.
- œ **Cyberstalking:** This kind of cybercrime involves online harassment where the user is subjected to a plethora of online messages and emails. Typically cyberstalkers use social media, websites and search engines to intimidate a user and instill fear. Usually, the cyberstalker knows their victim and makes the person feel afraid or concerned for their safety.
- œ **PUPs:** PUPs or Potentially Unwanted Programs are less threatening than other cybercrimes, but are a type of malware. They uninstall necessary software in your system including search engines and pre-downloaded apps. They can include spyware or adware, so it's a good idea to install an antivirus software to avoid the malicious download.
- œ **Phishing:** This type of attack involves hackers sending malicious email attachments or URLs to users to gain access to their accounts or computer. Cybercriminals are becoming more established and many of these emails are not flagged as spam. Users are tricked into emails claiming they need to change their password or update their billing information, giving criminals access.

œ **Online Scams:** These are usually in the form of ads or spam emails that include promises of rewards or offers of unrealistic amounts of money. Online scams include enticing offers that are “too good to be true” and when clicked on can cause malware to interfere and compromise information.

### Indian laws concerning Cyber Security

œ **Information Technology Act, 2000:** The act provides legal recognition to e-commerce and e-governance and facilitates its development as an alternative to paper-based traditional methods. It aims to protect the advancement in technology by defining crimes, prescribing punishments, laying down procedures for investigation and forming regulatory authorities.

œ **Crime and Criminal Tracking Network System (CCTNS):** It is a nationwide network infrastructure for evolution of IT-enabled state-of-the-art tracking system around “investigation of crime and detection of criminals”.

œ **National Cyber Security Policy, 2013:** It provides for:

- > To build a secure and resilient cyberspace.
- > Creating a secure cyber ecosystem, generate trust in IT transactions.
- > Creation of a 24x7 National Critical Information Infrastructure Protection Center (NCIIPC).
- > Indigenous technological solutions.
- > Testing of ICT products and certifying them.

œ **National Technical Research Organization (NTRO):** NTRO is a highly specialized technical intelligence gathering agency. It develops technology capabilities in aviation and remote sensing, data gathering and processing, cyber security, cryptology systems, strategic hardware

and software development, and strategic monitoring.

œ **National Critical Information Infrastructure Protection Centre (NCIIPC):** Creation of National Critical Information Infrastructure Protection Centre, the national nodal agency in respect of protection of critical information infrastructure. It is placed under the National Technical Research Organization.

œ **CERT-In:** CERT-In has been designated to serve as the national agency to perform the following functions:

- > Collection, analysis, and dissemination of information on cyber incidents.
- > Forecast and alerts of cybersecurity incidents
- > Emergency measures for handling cybersecurity incidents
- > Coordination of cyber incident response activities
- > Issue guidelines, advisories, vulnerability notes and white papers relating to information security practices, procedures, prevention, response and reporting of cyber incidents

œ **National Cyber Coordination Centre (NCCC):** It is a critical component of India’s cyber security against hackers and espionage as well as to track terrorist activity online.

### © CONCLUSION

India needs an accountable national cyber security that provides clear mandates and empowering provisions. It should supervise and enforce policies across the country to strengthen the cyber security framework.

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# **SECTION: B**

## **(PRELIMS)**

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**CURRENT AFFAIRS**



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## **KERALA TO START INTERCROPPING**

◎ **CONTEXT:**

The state government of Kerala would seek the mandate of the Left Democratic Front (LDF) to modify specific laws that govern the plantation sector to allow the management to intercrop food crops with cash crops such as tea, coffee, cardamom and rubber.

### **Agriculture in Kerala**

- . The unique features of Kerala agriculture are predominance of cash crops, homestead system of cultivation, inter-cropping of annual and perennial crops, shrinkage of area under rice crop and dominance of small holders.
- . During the past three decades the agricultural sector of Kerala has undergone wide-ranging changes in terms of ownership of land, cropping pattern, cultivation practices, productivity and intensity of cultivation.
- . The salient features of the agricultural sector in Kerala are:
  - œ Average holding size- 0.12 ha
  - œ Predominance of small and marginal farmers (92%)
  - œ Less area under food crops with low productivity
  - œ Predominance of perennial and plantations crops like coconut, rubber, tea, coffee, cashew, pepper, spices etc.
  - œ High cost of production mainly due to high labour cost
  - œ Highly erratic monsoon rains

### **Proposed Modifications**

- . Some provisions of the Kerala Land Reforms Act, Kerala Grants and Leases (Modification of Rights) Act and Kerala Land Utilisation Order might come up for legislative review if the LDF permitted.
- . The proposed modification would also permit plantations to diversify into dairy and poultry farming.
- . It would spur investment in precision farming characterised by high yield food crops, reduced use of toxic pesticides, chemical fertilisers and water.
- . Plantations encompassed 8 lakh hectares in Kerala. An amendment of the law would free up an estimated 2 lakh hectares for inter-cropping.
- . The Kerala Agriculture University had zoned Kerala into 23 agro-climatic sectors.
  - œ It had suggested that oranges, apples, avocados, grapefruit and winter vegetables as ideal intercrop for high altitude tea plantations in regions such as Munnar.
  - œ In rubber growing regions, it suggested the cultivation of rambutan, mangosteen and other tropical fruits in small plots interspersed among the trees.
  - œ It had also suggested jack fruit as shade trees in tea, coffee and cardamom plantations. The participants also mooted rejuvenation of cashew plantations and use of cashew mango to produce ethanol.

### **What is intercropping?**

- . Intercropping is a farming method that involves planting or growing more than one crop at the same time and on the same piece of land.
- . It means having more than one type of crop growing in the same space at the same time.



- . The rationale behind this farming practice is that different crops planted are not likely to share insects and disease-causing agents while the goal is to produce even greater yield than would be if space was utilized by one crop.
- . However, the careless congregation of plants is not considered as intercropping.

### **Types of Intercropping**

- . While intercropping involves the planting of more than one crop on the same piece of land at the same time, there are different methods of maximizing yield from this type of farming.
  - œ **Row intercropping** involves planting more than one crop simultaneously, with at least one of the crops planted in a row.
  - œ **Strip intercropping** is a more industrialized version of row planting and involves the planting of different crops in alternate strips, with rows big enough to allow for harvesting with machinery.
  - œ **Mixed intercropping** involves growing more than one crop simultaneously without any distinct row arrangement. Plants are bunched together naturally but in an orderly manner.
  - œ **Relay intercropping** involves the planting of more than one crop on the same piece of land with the planting of the second crop after the first crop has flowered or completed its development or just before harvesting the first crop.

### **Significance of intercropping**

- . **Suppress weeds:** Besides improving yield, it helps to suppress weeds since the crops take up much space that would have allowed the weeds to grow. Some weeds also find it difficult to grow alongside some crops.
- . **Increase fitness:** Growing two crops alongside each other can be of great benefit, especially if their interactions increase the fitness of one or both plants.
- . **Pest control:** Crop diversity has proved to be one of the ways of improving pest management by reducing homogeneity of the crop. Pests can be controlled through intercropping by trap cropping, repellent intercropping, or push-pull cropping.
  - œ Trap cropping involves planting a crop that is more attractive to pest compared to the production crop.
  - œ Repellent intercropping involves growing crops with certain repellent effect.
  - œ Push-pull cropping is a mix of trap and repellent cropping.



## **ECOLOGICAL DISASTER AT BAGHJAN**

### **◎ CONTEXT:**

Assam's pollution watchdog has told Oil India Ltd (OIL) to shut down production and drilling at all installations in Upper Assam's Baghjan oilfield following some irregularities.

### **About OIL**

- . Oil India Limited is the second largest hydrocarbon exploration and production Indian public sector company with its operational headquarters in Duliajan, Assam, India.
- . A Navratna PSU, OIL is a fully integrated Exploration & Production (E&P) company in the upstream sector.
- . OIL was drilling a well at Baghjan which led to a massive blowout. Baghjan is about 17 km from Doomdooma town in Tinsukia district, Assam.

- . The Baghjan oil field has been in operation since 2003 and is one of the high yielding gas and oil fields of OIL.
- . The Baghjan oilfield has 21 functioning wells — four of them are gas wells (including the one that reported the blowout) and 17 are oil wells.

### The ecological disaster

- . The ecological disaster at Baghjan in Tinsuika district was precipitated by the blowout at well number 5, reported on May 27.
- . On June 9, the well—located close to the Dibru-Saikhowa national park—caught fire, leading to the deaths of two OIL firefighters.
- . Around 11,000 people from the surrounding villages are now in relief camps set up by the administration.
- . It affected the flora, fauna and wetlands which is close to the **Maguri-Motapung wetland** and the ecologically fragile **Dibru-Saikhowa National Park**.

### Dibru-Saikhowa National Park

- . Dibru-Saikhowa National Park is located in the Tinsukia district of the state of Assam.
- . This was declared a **wildlife Sanctuary in 1986** by the government of Assam by uniting two Reserve forest, viz., Dibru and Saikhowa including some other areas.
- . Dibru-Saikhowa wildlife Sanctuary was declared as a **National park in 1999**.
- . Dibru-Saikhowa National Park is one of the **19 biodiversity hotspots** in the world. It is also a biosphere reserve.
- . The park is bounded by the Brahmaputra River and Arunachal hills in the north and Dibru and Patkai hills on the south.
- . It mainly consists of semi wet evergreen forests, tropical moist deciduous forest, bamboo, cane brakes and grasslands. Situated in the flood plains of Brahmaputra, at an altitude of about 118 m above sea level.

### Maguri-Motapung wetland

- . Located less than 10 km south of Dibru-Saikhowa National Park is Maguri Motapung beel.
- . Spread over 9.6 sq. km, Maguri Motapung beel was declared an important bird and biodiversity area in 1996.
- . It is host to over 110 bird species, including eight listed as threatened on the IUCN Redlist, such as the swamp grass babbler, the ferruginous duck, the white-winged wood duck and the falcated duck.
- . Other rare and migratory birds that visit this wetland include the lesser adjutant, the swamp francolin, the lesser teal and the bar-headed goose.
- . It is also home to 84 species of fish, including the golden *mahseer*.

### Is it first time?

- . Though rare, blowout happens in the oil industry all over the world. Blowout is the worst thing that can happen to an oil industry.
- . ONGC offshore rig ( drilling inside the sea bed), 160 km from Mumbai had a massive blowout in 2005, another blow out at Rudrasagar, Sivsagar of a well belonging to ONGC, a blow out at Dikom, Dibrugarh district in the year 2005 when OIL drilled a well, are few examples.
- . During Dikom blowout, global experts were brought in to contain the blowout which took 45 days.



- So Baghjan is the second blowout for OIL after a long 15 years.

### The closure notice

- As per the closure notice from PCBA, OIL has been operating the Baghjan oil field installation "without obtaining prior consent to establish/consent to operate from Pollution Control Board Assam, which is a serious violation of the provisions of the **Water Act, 1974, Air Act, 1981 as well as Environment Protection Act, 1986**".
- It is mandatory to obtain prior permission / clearance from MoEF&CC as well as State PCB for production, drilling, pumping of crude oil and laying pipeline activities as per EIA notification, 2006 and various provisions under the Section 25/26 of the **Water (Prevention of Control of Pollution) Act, 1974** and Section **21 of the Air (Prevention of Control of Pollution) Act, 1981** and Authorization under the **Hazardous & other waste (Management & Transboundary Movement) Rules, 2016** as amended upto date.

## **ANIMAL HUSBANDRY INFRASTRUCTURE DEVELOPMENT FUND (AHIDF)**

### ◎ **CONTEXT :**

In pursuance of recently announced Atma Nirbhar Bharat Abhiyan stimulus package for ensuring growth in several sectors, the Cabinet Committee on Economic Affairs has approved setting up of Animal Husbandry Infrastructure Development Fund (AHIDF) worth Rs. 15000 crore.

### ◎ **ABOUT:**

- AHIDF would facilitate much needed incentivisation of investments in establishment of such infrastructure for dairy and meat processing and value addition infrastructure and establishment of animal feed plant in the private sector.
- Eligibility:** The eligible beneficiaries under the Scheme would be
  - œ Farmer Producer Organizations (FPOs)
  - œ MSMEs
  - œ Section 8 Companies
  - œ Private Companies and individual entrepreneur with minimum 10% margin money contribution by them. The balance 90% would be the loan component to be made available by scheduled banks.
- Government of India will provide 3% interest subvention to eligible beneficiaries. There will be 2 years moratorium period for principal loan amount and 6 years repayment period thereafter.

### **Dairy Infrastructure Development Fund (DIDF)**

- Government had earlier approved the Dairy Infrastructure Development Fund (DIDF) worth Rs. 10,000 crores.
- It aims to incentivize investment by cooperative sector for development of dairy infrastructure.

### **Credit Guarantee Fund**

- A Rs.750 crore Credit Guarantee Fund would be set up and managed by NABARD.
- Credit guarantee would be provided to those sanctioned projects which are covered under MSME defined ceilings.
- Guarantee Coverage would be upto 25% of Credit facility of borrower.

### Why India's farming sector needs a boost?

- . The livestock sector—within it, dairy—needs to play a larger role in the nation's goal to **double farmer's income** by FY23.
- . Milk is the largest crop in India in terms of value—at `6.5 lakh crore, it's more than the total value of paddy and wheat put together.
- . Further, promoting dairy will also lead to a more equitable income, and this aspect needs to be appreciated.
- . Milch animal holding is far more equitable than land holding. About 85% of the total farmers are small and marginal. While they together own about 47% of farmland, they own about 75% of milch animals.
- . The productivity of milch animals in India is around one-eighth of the global average. Land prices in India are very high, which makes running large dairy farms unviable.
- . So, dairy farming in India will continue to be dominated by small and marginal farmers.

### Benefits of the Fund

- . **Focused investment:** Investment incentivization in AHIDF would leverage 7 times private investment.
- . **Higher productivity in farming:** It would also motivate farmers to invest more on inputs thereby driving higher productivity leading to increase in farmers income.
- . **Livelihood creation:** The measures approved through AHIDF would also help indirect and indirect livelihood creation for 35 lakh.

## CREDIT GUARANTEE SCHEME FOR SUBORDINATE DEBT (CGSSD)

### ● CONTEXT:

The government launched Rs 20,000-crore 'Credit Guarantee Scheme for Subordinate Debt (CGSSD)' to support distressed small businesses.

### ● ABOUT:

- . Under the Credit Guarantee Scheme for Subordinate Debt (CGSSD), the government will provide a **subordinate debt facility** to the promoters of **micro, small and medium enterprises** that are either distressed or classified under non-performing assets.
- . In case of default, creditors giving subordinate debt are paid after primary debt is settled in full.
- . The scheme will provide a guarantee cover worth Rs 20,000 crore to more than two lakh MSMEs, the Ministry of Micro, Small & Medium Enterprises said in an official release.
- . The scheme will be operationalised through the **Credit Guarantee Fund Trust for MSEs (CGTMSE)**.
- . Under the CGSSD programme, the government will provide the guarantee cover to promoters who can take debt from banks to further invest in stressed MSMEs as equity.

### How will it be done?

- . Promoter(s) of MSMEs meeting the eligibility criteria may approach any scheduled commercial banks to avail benefit under the scheme.
- . They will be given credit equal to 15% of their stake (equity plus debt) or Rs. 75 lakh whichever is lower.

- Promoters in turn will infuse this amount in the MSME unit as equity and thereby enhance the liquidity and maintain debt-equity ratio.
- 90 percent guarantee coverage for this sub-debt will be given under the Scheme and 10 percent would come from the concerned promoters.
- There will be a moratorium of 7 years on payment of principal whereas maximum tenor for repayment will be 10 years.

### Significance of the Scheme

- The scheme will help in reviving the economic activity in the country, and in protecting the livelihoods of millions of people.
- The scheme would provide much required support to around 2 lakh MSMEs and will help in reviving the economic activity in and through this sector.
- It will also help in protecting the livelihoods and jobs of millions of people who depend on them.

## PURCHASING POWER PARITIES AND THE SIZE OF INDIAN ECONOMY

### ◎ CONTEXT:

The World Bank has released new Purchasing Power Parities (PPPs) for reference year 2017, under International Comparison Program (ICP), that adjust for differences in the cost of living across economies of the World. Globally 176 economies participated in 2017 cycle of ICP.

### ◎ ABOUT ICP

- The International Comparison Program (ICP) is the largest worldwide data-collection initiative, under the guidance of **UN Statistical Commission (UNSC)**, with the goal of producing **Purchasing Power Parities (PPPs)** which are vital for converting measures of economic activities to be comparable across economies.
- Along with the PPPs, the ICP also produces **Price Level Indices (PLI)** and other regionally comparable aggregates of GDP expenditure.
- India has participated in almost all ICP rounds since its inception in 1970.
- **The Ministry of Statistics and Programme Implementation** is National Implementing Agency (NIA) for India, which has the responsibility of planning, coordinating and implementing national ICP activities.
- India is also proud to have been a co-Chair of the ICP Governing Board along with Statistics Austria for the ICP 2017 cycle.
- The next ICP comparison will be conducted for the reference year 2021.

### What is Purchasing power parity?

- Purchasing power parity is used worldwide to compare the income levels in different countries. PPP thus makes it easy to understand and interpret the data of each country.
- Purchasing power parity (PPP) is an economic theory of exchange rate determination.
- It states that the price levels between two countries should be equal.
- PPP measures are widely used by global institutions, such as the World Bank, United Nations, International Monetary Fund and European Union.

### Worldwide Status

Results from the 2017 International Comparison Program are as given below

- The **Purchasing Power Parities (PPPs)** of Indian Rupee per US\$ at Gross Domestic Product (GDP) level is now 20.65 in 2017 from 15.55 in 2011.

- . The **Exchange Rate of US Dollar** to Indian Rupee is now 65.12 from 46.67 during same period.
- . The **Price Level Index (PLI)**—the ratio of a PPP to its corresponding market exchange rate—is used to compare the price levels of economies, of India is 47.55 in 2017 from 42.99 in 2011.
- . In 2017, India retained and consolidated its global position, as the *third largest* economy, accounted for 6.7 percent (\$8,051 billion out of World total of \$119,547 billion) of global Gross Domestic Product (GDP) in terms of PPPs as against China (16.4%) and United States (16.3%), respectively.
- . India is also third largest economy in terms of its PPP-based share in global **Actual Individual Consumption and Global Gross Capital Formation**.

## **EARTHQUAKES HIT MIZORAM FOR THE FOURTH DAY**

● **CONTEXT:**

An earthquake of magnitude 4.1 on the Richter scale struck Mizoram, the fourth in the northeastern state in as many days.

● **ABOUT:**

- An **earthquake** is an intense shaking of Earth's surface. The shaking is caused by movements in Earth's outermost layer.
- . The Earth is made of four basic layers:
  - œ a solid crust
  - œ a hot, nearly solid mantle
  - œ a liquid outer core
  - œ a solid inner core
- . The solid crust and top, stiff layer of the mantle make up a region called the **lithosphere**, which is actually made up of giant puzzle pieces called **tectonic plates**.
- . Tectonic plates are constantly shifting as they drift around on the **viscous**, or slowly flowing, mantle layer below.
- . This non-stop movement causes stress on Earth's crust. When the stresses get too large, it leads to cracks called **faults**.
- . When tectonic plates move, it also causes movements at the faults. An **earthquake** is the sudden movement of Earth's crust at a fault line.
- . The location where an earthquake begins is called the **epicenter**.
- . An earthquake's most intense shaking is often felt near the epicenter. However, the vibrations from an earthquake can still be felt and detected hundreds, or even thousands of miles away from the epicenter.
- . The energy from an earthquake travels through Earth in vibrations called **seismic waves**. Scientists can measure these seismic waves on instruments called **seismometer**.

### **Why India's north-east is prone to earthquake?**

- . Geomorphologically, North East India is located in an earthquake prone zone (zone v) of the Indian subcontinent.
- . In this region earthquake comes with land sliding flood and along with series of smaller magnitude earthquakes.
- . Seismologists consider India's mountainous northeast region as the sixth major earthquake-prone belt in the world.
- . The northeast has seen some of the biggest quakes in history.



œ In 1897, a Shillong-epicentred quake measured 8.2 on the Richter scale, while in 1950, an earthquake in Assam measuring 8.7 on the Richter Scale forced the Brahmaputra river to change its course.

### Seismic zones in India

Seismic zones in the Indian subcontinent are divided into the following four seismic zones (II, III, IV, and V):

- . **Seismic Zone II:** Area with minor damage earthquakes corresponding to intensities V to VI of MM scale (MM – Modified Mercalli Intensity scale). It covers the areas which are not covered by other three seismic zones discussed below.
- . **Seismic Zone III:** Moderate damage corresponding to intensity VII of MM scale. It comprises Kerala, Goa, Lakshadweep islands, remaining parts of **Uttar Pradesh, Gujarat and West Bengal, Parts of Punjab, Rajasthan, Madhya Pradesh, Bihar, Jharkhand, Chhattisgarh, Maharashtra, Orissa, Andhra Pradesh, Tamilnadu and Karnataka.**
- . **Seismic Zone IV:** Major damage corresponding to intensity VII and higher of MM scale. It covers remaining parts of **Jammu and Kashmir and Himachal Pradesh, National Capital Territory (NCT) of Delhi, Sikkim, Northern Parts of Uttar Pradesh, Bihar and West Bengal, parts of Gujarat and small portions of Maharashtra near the west coast and Rajasthan.**
- . **Seismic Zone V:** Area determines by pro seismically of certain major fault systems. It is seismically the most active region, and comprises entire northeastern India, parts of **Jammu and Kashmir, Himachal Pradesh, Uttaraanchal, Rann of Kutch in Gujarat, part of North Bihar and Andaman & Nicobar Islands.**

### How vulnerable is Mizoram to earthquake?

- . Mizoram is one of the North Eastern States of India, located in 21°56' and 24°31' N latitude and 92°16' and 93 ° 26' E longitudes with the geographical area of 21,081 sq. km.
- . Mizoram is vulnerable to all-major natural hazards such as Cyclone, Earthquake, and Landslide etc.
- . The State forms a part of the most severe seismic zone in the country, namely **Zone V of Seismic Zone Map of India** that is referred as **Very High Damage Risk Zone.**
- . The seismic risk in the region is growing at an alarming pace with increasing inventory of vulnerable construction.

## GARIB KALYAN ROJGAR ABHIYAAN (GKRA)

- ⦿ **CONTEXT:** The Government launched the 'Garib Kalyan Rojgar Abhiyaan (GKRA)' to boost employment and livelihood opportunities for migrant workers returning to villages, in the wake of COVID-19 outbreak.
- ⦿ **ABOUT:**
  - The "Garib Kalyan Rojgar Abhiyaan" is a programme to generate employment opportunities in rural India for migrant workers returning home amid the coronavirus outbreak and lockdown.
  - . The initiative was flagged off from village Telihar, Block Beldaur, district Khagaria, Bihar.
  - . This Abhiyaan of 125 days, will work in mission mode, will involve focused implementation of 25 categories of works/ activities in 116 districts, each with a large concentration of returnee migrant workers in following 6 states.

S. No.	State Name	Districts	Aspirational Districts
1	Bihar	32	12
2	Uttar Pradesh	31	5
3	Madhya Pradesh	24	4
4	Rajasthan	22	2
5	Odisha	4	1
6	Jharkhand	3	3
Total Districts		116	27

- **Nodal agency:** The **Ministry of Rural Development** is the nodal Ministry for this campaign and the campaign will be implemented in close coordination with the State Governments.
  - œ Central Nodal Officers of the rank of Joint Secretary and above will be appointed to oversee the effective and timely implementation of various schemes in the identified districts.
- **Work areas:** The government has identified 25 work areas for employment in villages, for the development of various works.
  - œ These 25 works or projects are related to meet the needs of the villages like rural housing for the poor, Plantations, provision of drinking water through Jal Jeevan mission, Panchayat Bhavans, community toilets, rural mandis, rural roads, other infrastructure like Cattle Sheds, Anganwadi Bhavans etc.

### Significance of the Scheme

- **Opportunity of employment:** The basket of a wide variety of works will ensure that each migrant worker is able to get an opportunity of employment according to his skill, in the coming 125 days.
- **Beneficial over a longer-term:** The Program will also prepare for expansion and development of livelihoods over a longer-term.

## CHAOLUNG SUKAPHA

### ◎ **CONTEXT:**

Assam Chief Minister Sarbananda Sonowal ordered the state police to arrest Kolkata-based political commentator Garga Chatterjee for making allegedly derogatory remarks by calling the founder of the medieval Ahom dynasty a Chinese invader.

### ◎ **ABOUT:**

- Sukapha was a **13<sup>th</sup>-century** ruler who founded the **Ahom kingdom** that ruled Assam for six centuries. Contemporary scholars trace his roots to **Burma**.
- He reached Brahmaputra valley in Assam from upper Burma with around 9,000 followers.
- In his authoritative book on Assam history — *A History of Assam*, Sir Edward Gait wrote that Sukapha is said to have left a place called **Maulung** in AD 1215 with eight nobles and 9,000 men, women and children — mostly men. He had with him two elephants, and 300 horses.

- . Gait wrote that in AD 1235, Sukapha and his people settled in **Charaideo** in upper Assam after wandering about for years, defeating those who protested his advance, and temporarily staying at different locations.
- . It was in Charaideo that Sukapha established his first small principality, sowing the seeds of further expansion of the Ahom kingdom.
- . Assam celebrates "**Asom Divas**" to commemorate Sukapha and his rule, on **December 2** every year.

### Learning about Ahoms

- . Historically, they are believed to be from beyond the **Patkai mountains**, with their forefathers forming group of states in and around Yunnan province and Upper Burma.
- . The name 'Assam' comes from the word 'Asama' or invincible which is a local name for the Ahoms.
- . The Ahom kingdom in the Brahmaputra valley included most of the present day Assam.
- . They ruled for 600 years between 13<sup>th</sup> and 19<sup>th</sup> century CE, before being ousted by Britishers in 1826.
- . Located around 400 kms from Assam's capital Guwahati, is the town of Charaideo. This was the first capital of the Ahom dynasty.

### What's the matter?

- . Garga Chatterjee, who describes himself as a Bengali nationalist and federalist, indirectly targeted Ahom community as well as greater Assamese society with blatant accusation of being Chinese invaders
- . Chatterjee made the comments after tensions surged between India and China after a violent face-off.
  - œ Twenty Indian soldiers were martyred in the violent face-off at Galwan Valley in eastern Ladakh.
  - œ This was the first instance of casualties on the Line of Actual Control since 1975.

## RUSSIA MARKS WW2 VICTORY DAY

### ◎ CONTEXT:

**Russia has marked 75 years since victory over Nazi Germany in World War Two despite cancelling its traditional military parade because of the coronavirus outbreak.**

### ◎ ABOUT:

- Victory Day marks the end of **World War II** and the victory of the Allied Forces in 1945. The day marks Germany's surrender to the Soviet Union in 1945.
- . It became the end of the Great Patriotic War for the USSR, which lost about 25 million citizens in the four years of fighting.
- . Interestingly, until its 20<sup>th</sup> anniversary (May 9, 1965), Victory Day was not a major holiday.
- . Apart from the anniversaries in 1965 and 1985, Victory Day celebrations in the Soviet Union did not feature a military parade.
- . This tradition started in 1995.

### World War II

- . World War II was a global war that lasted from 1939 to 1945. It was a battle between two groups of countries- the Allies and the Axis.

- > The major Allied Powers were Britain, France, Russia, China and the United States.
- > The major Axis Powers were Germany, Italy and Japan.
- . Before World War 2 began, Germany was ruled by Adolf Hitler. Together with the Nazi Party, he wanted Germany to rule Europe.
- . To gain more land and power, on 1 September 1939 German troops invaded Poland. After Hitler refused to stop the invasion, Britain and France declared war on Germany – World War II had begun.
- . The war resulted in the extension of the Soviet Union's power to nations of eastern Europe, enabled a communist movement to eventually achieve power in China, and marked the decisive shift of power in the world away from the states of western Europe and toward the United States and the Soviet Union.

### **Role of Indian Military**

- . The British Indian Armed Forces during World War-II were one of the largest Allied Forces contingents which took part in the North and East African Campaign, Western Desert Campaign and the European Theatre against the Axis powers.
- . This campaign witnessed sacrifice by over 87,000 Indian servicemen beside 34,354 being wounded.
- . The Indian Military not only fought on all fronts, but also ensured delivery of goods along the Southern, Trans-Iranian Lend-Lease route, along which weapons, ammunitions, spare parts for equipment and food went to the Soviet Union, Iran and Iraq.

### **Key-highlights**

- . The parade was reviewed by Russian President Vladimir Putin, war veterans and guests, including Defence Minister Rajnath Singh.
- . This year, 14,000 troops and several hundred military machines took part in the parade, including 30 historic T-34 tanks.
- . Modern vehicles also participated, including AFV Terminator, T-72, and T-14 Armata tanks, 9K720 Iskander missile systems, and many other cutting-edge military hardware, Sputnik International reported.
- . Planes and helicopters also participated in an air parade, with Su-25s colouring the sky in white, blue, and red — the colours of the Russian flag.

### **What's so special this time?**

- . A 75-member Tri-service contingent of the Indian Armed Forces participated in the 75<sup>th</sup> anniversary of the Victory Day Parade at the iconic Red Square in Moscow.
- . The Tri-Service contingent of the Indian Armed Forces comprised 75 all ranks and marched along with contingents of Russian Armed Forces and 17 other countries, according to an official statement.

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## **CHINA TO JOIN UN ARMS TRADE TREATY**

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◎ **CONTEXT:**

China's top legislative body has voted in favour of the country's bid to join the UN-sponsored ATT, which seeks to regulate international trade in conventional military equipment.

◎ **ABOUT:**

- The ATT was established in December 2014. Key principles of membership include-
  - œ self-defence rights
  - œ the intent to settle disputes through peaceful means

- to refrain from issuing threats or use of force against the territorial integrity of any country
- to respect human rights
- . The treaty requires member countries to keep records of international transfers of weapons and to prohibit cross-border shipments that could be used in human rights violations or attacks on civilians.
- . The treaty has a global membership of 106 countries, with Namibia the most recent to join in April.
- . Major military exporters including France, Germany, Israel, Spain, and the United Kingdom are members of the treaty.

### **Is US behind China's decision?**

- . It comes after US President Donald Trump announced plans last year to pull the United States out of the agreement -- which entered into force in 2014.
- . The US Senate never ratified the 2013 Arms Trade Treaty after former president Barack Obama endorsed it, and Trump has said he would revoke his predecessor's signature.
- . It is among a number of international agreements reached under the Obama administration that Trump has moved to pull out of.

### **China's participation in conventional arms control**

- . China actively implements the **UN Programme of Action to Prevent, Combat and Eradicate the Illicit Trade in Small Arms and Light Weapons in All Its Aspects (PoA)** and participates in the work of the **Group of Governmental Experts (GGE)** on the **United Nations Register of Conventional Arms (UNROCA)** for successive sessions.
- . China serves as the contracting party of the **United Nations Convention on Certain Conventional Weapons (CCW)** and its annexed Protocols and actively fulfills its obligations under the convention, submitting reports of the PoA, the UNROCA and the CCW in time.
- . Besides, China also participated in the negotiation processes of the ATT and participated in the follow-up conferences of the parties as an observer.

### **India's take on the treaty**

- . From the beginning of the ATT process, India has maintained that such a treaty should make a real impact on illicit trafficking in conventional arms and their illicit use especially by terrorists and other unauthorised and unlawful non-state actors.
- . India has also stressed consistently that the ATT should ensure a balance of obligations between exporting and importing states.
- . Further, India cannot accept that the Treaty be used as an instrument in the hands of exporting states to take unilateral force majeure measures against importing states parties without consequences.
- . India has been an active participant in the ATT negotiations. Underlying our participation in these extended negotiations was the principle that member states have a legitimate right to self-defence and our belief that there is no conflict between the pursuit of national security objectives and the aspiration that the Arms Trade Treaty be strong, balanced and effective.
- . This is consistent with the strong and effective national export controls that India already has in place with respect to export of defence items.

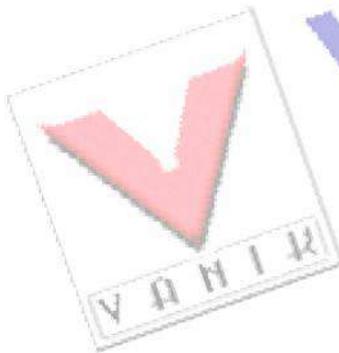
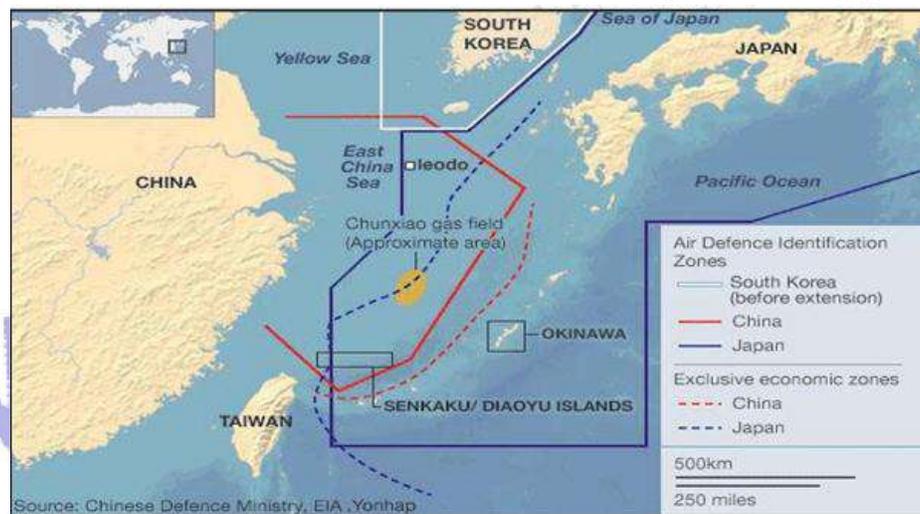
## JAPAN TO RENAME AREAS OF ISLANDS DISPUTED WITH CHINA

◎ **CONTEXT:**

Japan's Ishigaki city Assembly passed a bill to rename an administrative area covering a group of islands in the East China Sea, immediately triggering backlash from China and Taiwan, both of which also claim the uninhabited islets as their own.

◎ **ABOUT:**

- The disputed islands are known as the Senkaku in Japan and the Diaoyu in China.
- . Ties between China and Japan have been strained by a territorial row over a group of islands, known as the Senkaku islands in Japan and the Diaoyu islands in China.
- . There are total eight uninhabited islands and rocks in the East China Sea.
- . They have a total area of about 7 sq km and lie north-east of Taiwan, east of the Chinese mainland and south-west of Japan's southern-most prefecture, Okinawa. The islands are controlled by Japan.



### The changed names

- . The assembly changed the name of the southern Japan area containing the Senkaku Islands from "Tonoshiro" to "Tonoshiro Senkaku," which both Beijing and Taipei see as an attempt to cement Tokyo's claim by inserting the Japanese name "Senkaku."
- . The renaming takes effect on Oct. 1 and it is aimed at resolving administrative confusion between a locale in downtown Ishigaki, which shares the name "Tonoshiro" with the isles.

### What is Japan's claim?

- . Japan says it surveyed the islands for 10 years in the 19<sup>th</sup> Century and determined that they were uninhabited.
- . On 14 January 1895 Japan erected a sovereignty marker and formally incorporated the islands into Japanese territory.
- . After World War Two, Japan renounced claims to a number of territories and islands including Taiwan in the 1951 Treaty of San Francisco.
- . These islands, however, came under US trusteeship and were returned to Japan in 1971 under the Okinawa reversion deal.

**Claims made by China**

- . China says that the islands have been part of its territory since ancient times, serving as important fishing grounds administered by the province of Taiwan.
- . Taiwan was ceded to Japan in the Treaty of Shimonoseki in 1895, after the Sino-Japanese war.
- . When Taiwan was returned in the Treaty of San Francisco, China says the islands should have been returned too. Beijing says Taiwan's Kuomintang leader Chiang Kai-shek did not raise the issue, even when the islands were named in the later Okinawa reversion deal, because he depended on the US for support.
- . Separately, Taiwan also claims the islands.

**Why are they important?**

- . They matter because they are close to important shipping lanes, offer rich fishing grounds and lie near potential oil and gas reserves.
- . They are also in a strategically significant position, amid rising competition between the US and China for military primacy in the Asia-Pacific region

## **SECRECY OF BALLOT IS THE CORNERSTONE OF FREE AND FAIR ELECTIONS: SC**

**◎ CONTEXT:**

Secrecy of ballot is the cornerstone of free and fair elections. The choice of a voter should be free and the secret ballot system in a democracy ensures it, the Supreme Court has held in a judgment.

**◎ ABOUT:**

- In the democracy of India, at the time of every election, may it be President of India or local body, the method of secret ballot system is adopted.
- . As per the secret ballot system, the voter is given the ballot paper by the presiding officer of the pooling booth.
- . The voter goes behind the curtain along with the ballot paper and marks the stamp against the name of the candidate whom he likes to vote.
- . With this process, no one comes to know that to whom the voter has given his vote.

**Background**

- . The judgment came on an appeal against the Allahabad High Court decision setting aside the voting of a no-confidence motion in a zila panchayat in Uttar Pradesh in 2018.
- . The High Court found that some of the panchayat members had violated the rule of secrecy of ballot.
- . It relied on CCTV footage to conclude that they had either displayed the ballot papers or by their conduct revealed the manner in which they had voted.

**Court's view**

- . It is the policy of law to protect the right of voters to secrecy of the ballot.
- . Even a remote or distinct possibility that a voter can be forced to disclose for whom she has voted would act as a positive constraint and a check on the freedom to exercise of franchise.
- . The principle of secrecy of ballots is an important postulate of constitutional democracy.



- . The Court referred to Section 94 of the Representation of People Act, which upholds the privilege of the voter to maintain confidentiality about her choice of vote.
- . However, a voter can also voluntarily waive the privilege of non-disclosure.
- . The privilege ends when the voter decides to waive the privilege and instead volunteers to disclose as to whom she had voted.
- . No one can prevent a voter from doing. Nor can a complaint be entertained from any, including the person who wants to keep the voter's mouth sealed as to why she disclosed for whom she voted.

#### **Right to Vote in India**

- . In India, the right to vote is provided by the Constitution and the Representation of People's Act, 1951, subject to certain disqualifications.
- . Article 326 of the Constitution guarantees the right to vote to every citizen above the age of 18.
- . Further, Section 62 of the Representation of Peoples Act (RoPA), 1951 states that every person who is in the electoral roll of that constituency will be entitled to vote.

## **DETECTION OF FLUORINE IN HOT EXTREME HELIUM STARS**

### ◎ **CONTEXT:**

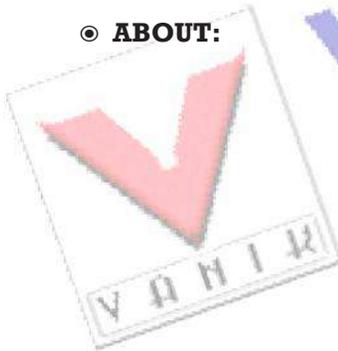
A recent study by the Indian Institute of Astrophysics (IIA) detected the presence of singly ionised fluorine for the first time in the atmospheres of hot Extreme Helium Stars.

### ◎ **ABOUT:**

- . An extreme helium star or EHe is a low-mass supergiant that is almost devoid of hydrogen, the most common chemical element of the universe.
- . There are 21 of them detected so far in our galaxy. The origin and evolution of these Hydrogen deficient objects have been shrouded in mystery.
- . Their severe chemical peculiarities challenge the theory of well-accepted stellar evolution as the observed chemical composition of these stars do not match with that predicted for low mass evolved stars.

### **Key-findings of the research**

- . The research which showed fluorine abundances determined from singly ionized fluorine (F II) lines suggest a very high enrichment of fluorine, about a factor of 100 to 10000 times higher than normal stars.
- . Severe fluorine enrichment w.r.t normal stars (of the order of 800 – 8000) was observed in the cool EHes along-with the cooler classical hydrogen deficient stars, the RCB variables (R Coronae Borealis Stars) hinting at close evolutionary connection between them.
- . The scientists explored the relationship of hot EHes (EHes having effective temperature  $\geq 14000\text{K}$ ), with the cooler EHes, based on their fluorine abundance and spotted it in the former, thus establishing an evolutionary connection across a wide range of effective temperature.
- . High-resolution echelle spectra of 10 hot EHes were obtained from Hanle Echelle Spectrograph (HESP) mounted on the 2-m Himalayan Chandra Telescope at the Indian Astronomical Observatory (IAO) in Hanle, Ladakh, (remotely operated by IIA) including data from McDonald Observatory, USA, and ESO archives.



- By comparing the observed fluorine abundances with other abundances of the key elements, the scientists could determine the formation channels responsible for fluorine enrichment.
- The varied range of observed fluorine abundance across stars having similar atmospheric parameters points out the difference in the individual star's evolution and the ensuing nucleosynthesis.
- Particularly, the enrichment of fluorine in the atmospheres of carbon-rich EHes and absence of the same in carbon-poor EHes suggest that fluorine is profusely produced during the merger of a He-CO WD resulting in a carbon-rich EHe, whereas He-He WD merger that results in carbon-poor EHes does not account for fluorine overabundance.

### Fluorine

- Fluorine is a univalent poisonous gaseous halogen, it is pale yellow-green and it is the most chemically reactive and electronegative of all the elements.
- Fluorine readily forms compounds with most other elements, even with the noble gases krypton, xenon and radon.
- It is so reactive that glass, metals, and even water, as well as other substances, burn with a bright flame in a jet of fluorine gas.

### Why Fluorine is important?

- Clues to evolution of extreme helium stars require accurate determinations of their chemical composition, and the peculiarities, if any, become very important.
- Fluorine plays a very crucial role in this regard to determine the actual evolutionary sequence of these hydrogen deficient objects.

### Significance of the findings

- Finding the formation:** The findings make a strong case that the main formation of hot Extreme Helium Stars objects involves a merger of a carbon-oxygen (CO) and a Helium (He) white dwarf.
- Solving decade-old mystery:** The detection of enhanced fluorine abundances in the atmospheres of hot EHes solves a decade-old mystery about their formation. It firmly places hot EHes in an evolutionary sequence with cool EHes and other hydrogen-deficient stars and zeros in on the evolutionary scenario, which involves the merger of two double de-generate white dwarfs (WDs).

### White dwarfs

- A white dwarf is what stars like the Sun become after they have exhausted their nuclear fuel.
- Near the end of its nuclear burning stage, this type of star expels most of its outer material, creating a **planetary nebula**.
- Only the hot core of the star remains. This core becomes a very hot white dwarf, with a temperature exceeding 100,000 Kelvin.
- Unless it is accreting matter from a nearby star (see Cataclysmic Variables), the white dwarf cools down over the next billion years or so.

## **NATIONAL SPACE PROMOTION AND AUTHORIZATION CENTRE (IN-SPACE)**

◎ **CONTEXT:**

The Government of India has launched a new initiative by the name Indian National Space Promotion and Authorization Centre (IN-SPACE) to provide a level playing field for private companies to use Indian space infrastructure, which will be extended into the Indian Space Research Organisation (ISRO).

◎ **ABOUT:**

- The new Indian National Space Promotion and Authorisation Centre (IN-SPACE), which is expected to be functional within six months, will-
  - œ assess the needs and demands of private players, including educational and research institutions
  - œ explore ways to accommodate these requirements in consultation with ISRO
- IN-SPACE is supposed to be a facilitator, and also a regulator. It will act as an interface between ISRO and private parties, and assess how best to utilise India's space resources and increase space-based activities.
- Existing ISRO infrastructure, both ground- and space-based, scientific and technical resources, and even data are planned to be made accessible to interested parties to enable them to carry out their space-related activities.
- National Space, Promotion & Authorisation Centre (IN-SPACE) will help private players through encouraging policies, through a regulatory environment that is friendly as well as guiding private players in space activities.
- Indian Space Research Organisation (ISRO) will remain the basic body that decides what missions are to be undertaken but this new body will help fill the gaps.

### **Indian Space Research Organization (ISRO)**

- India decided to go to space when Indian National Committee for Space Research (INCOSPAR) was set up by the Government of India in 1962.
- With the visionary Dr Vikram Sarabhai at its helm, INCOSPAR set up the Thumba Equatorial Rocket Launching Station (TERLS) in Thiruvananthapuram for upper atmospheric research.
- Indian Space Research Organisation, formed in 1969, superseded the erstwhile INCOSPAR.
- The Indian Space Research Organization (ISRO) is the pioneer space exploration agency of the Government of India, headquartered at Bengaluru.
- The prime objective of ISRO is to develop space technology and its application to various national needs.



### **What is the need to involve private sector?**

- **Low rate of investment:** Indian space industry had a barely 3 percent share in a rapidly growing global space economy which was already worth at least \$360 billion.
  - œ Only 2 percent of this market was for rocket and satellite launch services, which require fairly large infrastructure and heavy investment.
  - œ The remaining 95 percent related to satellite-based services, and ground-based systems.
- **Less competitive:** Indian industry, however, is unable to compete, because till now its role has been mainly that of suppliers of components and sub-systems.
- **Lack of resources and technologies:** Indian industries do not have the resources or the technology to undertake independent space projects.

- . **Insufficient production:** Additionally, the demand for space-based applications and services is growing even within India, and ISRO is unable to cater to this. The need for satellite data, imageries and space technology now cuts across sectors, from weather to agriculture to transport to urban development, and more.

#### **How will it enhance the space game?**

- . IN-SPACe will ensure equal participation from private players through encouraging policies in a friendly regulatory environment.
- . The new initiative will also hand-hold, promote and guide the private industries in space activities.
- . With the aid of Indian National Space Promotion and Authorization Centre (IN-SPACe), Indian start-ups and technology entrepreneurs will be linked up with nuclear research facilities through technology development and incubation centres to foster synergies.



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# **MISCELLANEOUS**

## **CURRENT AFFAIRS**

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## **DECARBONIZING TRANSPORT IN EMERGING ECONOMIES**

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- œ With an aim to develop a path to a low-carbon transport system for the country, NITI Aayog and the International Transport Forum (ITF) of OECD jointly launched the '**Decarbonizing Transport in Emerging Economies**' (DTEE) project in India.
- œ This is an ambitious 5-year project, which seeks to help India in developing a pathway towards a low-carbon transport system through the development of modelling tools and policy scenarios.
- œ **Current participants:** India, Argentina, Azerbaijan, and Morocco.
- œ India's transport sector, with the fourth-largest rail network in the world and the third-largest global aviation market, presents a huge opportunity, but also challenges in terms of emissions.

## **GOVERNMENT ANNOUNCES 2 PERCENT INTEREST SUBSIDY UNDER MUDRA YOJANA**

- œ The government approved a 2 percent interest subsidy scheme for **Shishu loan account holders** under the Mudra Yojana to help small businesses tide over difficulties created by the lockdown following outbreak of coronavirus disease.
- œ Under Shishu category, lenders provide collateral-free loans of up to Rs 50,000.
- œ The 2 per cent interest subvention is estimated cost of the exchequer approximately Rs 1,542 crore.

### **What is Pradhan Mantri Mudra Yojana?**

- œ The PMMY was launched by Prime Minister Narendra Modi on April 8, 2015, for providing loans up to 10 lakh to the non-corporate, non-farm small/micro enterprises.
- œ The scheme's objective is **to refinance collateral-free loans given by the lenders to small borrowers.**

## **INTERNATIONAL DAY AGAINST DRUG ABUSE AND ILLICIT TRAFFICKING 2020**

- œ International Day Against Drug Abuse And Illicit Trafficking is observed as a mark to strengthen the resolve of an international society free of drug abuse.
- œ On this day, people, communities, organisations across the globe try to raise awareness about the problems that occur due to illicit drugs.
- œ The date of June 26 was chosen after the United Nations General Assembly passed a resolution regarding it on December 7, 1987.
- œ The theme of the day this year is "Better Knowledge for Better Care".
  - > The main idea behind this theme is to stress upon the need of improving the understanding of the world drug problem.
  - > The theme also deals with how better knowledge about this issue can lead to greater international cooperation for countering its impact on health, governance and security.

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## **KUMHAR SASHAKTIKARAN YOJANA**

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- œ The **Khadi and Village Industries Commission (KVIC)** launched its flagship "**Kumhar Sashaktikaran Yojana**" in Pokhran, a small town in the Jaisalmer district of Rajasthan where India conducted its first nuclear test – to restore the lost glory of the pottery site.

- œ The KVIC distributed 80 electric potter wheels to 80 potter families in Pokhran which has a rich heritage in terracotta products.
- œ Pokhran has over 300 potter families engaged with pottery for several decades, but they started looking for other avenues due to heavy drudgery in the work and no market support.
- œ Pokhran was till now only known as the site of nuclear tests but very soon the exquisite pottery will be the new identity of this place.
- œ The main objective of Kumhar Sashaktikaran Yojana is to bring back the potters' community to the mainstream.

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## **KUSHINAGAR AIRPORT DECLARED AS AN INTERNATIONAL AIRPORT**

- œ The Union Cabinet has given its approval for declaration of Kushinagar Airport in Uttar Pradesh as an international airport, stating that it will offer improved connectivity to the important Buddhist pilgrimage site.
- œ Kushinagar will be India's 29<sup>th</sup> international airport and will enhance the connectivity which will inturn increase tourism and hospitality in the region.

### **About Kushinagar**

- œ Kushinagar is located in the north-eastern part of Uttar Pradesh about 50 km east of Gorakhpur and is one of the important Buddhist pilgrimage sites.
- œ Kushinagar is a pilgrimage town in the Kushinagar district of Uttar Pradesh.
- œ It is an important Buddhist pilgrimage site, where Buddhists believe Gautama Buddha attained Parinirvana after his death. It is an international Buddhist pilgrimage centre.

## **LONE WOLF TERRORISTS**

The United Kingdom is facing a growing risk from so-called 'lone wolf' terrorists.

### **Who is a lone wolf' terrorist?**

- œ A lone actor, lone-actor terrorist, or lone wolf is someone who prepares and commits violent.
- œ In the United States, lone wolves may present a greater threat than organized groups, and terrorists have not been limited to Muslims
- œ Lone wolf attacks, in which extremist individuals translate their beliefs into violent actions, are hard to detect and prevent.
- œ In coordinated terror attacks, the chances of competent intelligence agencies detecting the perpetrators are much higher.

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## **NEW BIOMOLECULES TO FIGHT DRUG RESISTANCE IN KALA-AZAR**

- œ A team of researchers at the Department of Biotechnology's National Centre for Cell Science (DBT-NCCS) in Pune has been exploring ways to tackle miltefosine resistance.
- œ The researchers worked with one of the species of Leishmania that causes infection, called Leishmania major.
- œ The only drug available against leishmaniasis, miltefosine, is rapidly losing its effectiveness because of emerging resistance to this drug due to a decrease in its accumulation inside the parasite, which is necessary for the drug to kill the parasite.

**What is Kala- azar?**

- œ Visceral Leishmaniasis (VL), which is commonly known as Kala-azar in India, is a neglected tropical disease affecting almost 100 countries including India.
- œ It is caused by a parasite called Leishmania, which is transmitted through the bite of sand flies.
- œ There are three main forms of leishmaniasis:
  - > visceral, which affects multiple organs and is the most serious form of the disease
  - > cutaneous, which causes skin sores and is the most common form
  - > mucocutaneous, which causes skin and mucosal lesion.

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**PAKISTAN TO REMAIN ON THE GREY LIST OF THE FATF**

Pakistan is likely to remain on the grey list of the Financial Action Task Force (FATF) for failing to comply with the global terrorist financing watchdog's deadline to prosecute and penalise terrorist financing in the country.

**What is FATF?**

- œ FATF is the **Financial Action Task Force**, an inter-governmental body established in Paris in 1989 by the Group of 7 (G7).
- œ It seeks to combat money laundering, terrorist financing and other threats to the international financial system.
- œ It is both a policy-making and enforcement body.
- œ FATF has 2 types of lists:
  - > **Black List:** Countries known as Non-Cooperative Countries or Territories (NCCTs) are put in the blacklist. These countries support terror funding and money laundering activities. The FATF revises the blacklist regularly, adding or deleting entries.
  - > **Grey List:** Countries that are considered safe haven for supporting terror funding and money laundering are put in the FATF grey list. This inclusion serves as a warning to the country that it may enter the blacklist.

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**SCIENTISTS OBSERVE CHANGES IN VERY HIGH ENERGY GAMMA-RAY EMITTING 'BLAZAR'**

Scientists from 9 countries in Europe and Asia including researchers from Aryabhata Research Institute of Observational Sciences (ARIES), Nainital, observed the changes in a very high energy gamma-ray emitting blazar '1ES 0806+524' using seven optical telescopes in Europe and Asia.

**What is a blazar?**

- œ A blazar is a feeding super-massive black-hole (SMBH) in the heart of a distant galaxy that produces a high-energy jet viewed face-on from Earth.
- œ Blazars are one of the most luminous and energetic objects in the known universe with a jet composed of ionized matter travelling at nearly the speed of light directed very nearly towards an observer.

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**SKILLS BUILD REIGNITE**

- œ MSDE-IBM Partnership has unveiled Free Digital Learning Platform "Skills Build Reignite" to reach more job seekers & provide new resources to business owners in India.

The platform is created to address the current skills gap in the country.

- œ The SkillsBuild Reignite tends to provide job seekers and entrepreneurs, with access to free online coursework and mentoring support designed to help them reinvent their careers and businesses.
  - œ Its special feature is the personalized coaching for entrepreneurs, seeking advice to help establish or restart their small businesses as they begin to focus on recovery to emerge out of the COVID 19 pandemic.
- Courses for small business owners include, for example, financial management, business strategy, digital strategy, legal support and more.

### **Directorate General of Training (DGT)**

- . Directorate General of Training (DGT), under the aegis of the Ministry of Skill Development & Entrepreneurship (MSDE), is responsible for implementing long term institutional training to the nation's youth through its network of training institutes and infrastructure.
- . It plays a key role in the execution of vocational training schemes and in making 'Digital India' dream become a reality.

### **YUKTI 2.0**

The Ministry of Human Resource Development launched an initiative 'YUKTI 2.0' to help systematically assimilate technologies having commercial potential and information related to incubated startups in our higher education institutions.

YUKTI 2.0 is logical extension of earlier version of 'YUKTI', an initiative of MHRD, to identify ideas relevant in COVID pandemic.

#### **YUKTI**

- . Earlier, the Minister had launched the YUKTI (Young India combating COVID with Knowledge, Technology and Innovation) web portal on 11 April, 2020.
- . Ministry of HRD prepared the portal in view of coronavirus.
- . The portal intends to cover the different dimensions of COVID-19 challenges in a very holistic and comprehensive way.
- . Through this portal, the Ministry of Human Resource Development will endeavor to ensure that students, teachers and researchers in higher educational institutions are getting appropriate support to meet the requirements needed to advance their technologies and innovations.

### **WORLD'S FIRST YOGA UNIVERSITY NAMED AFTER SWAMI VIVEKANANDA**

Plus, IBM volunteers will serve as mentors to some of the 30,000 SkillsBuild users in 100 communities in at least five major regions worldwide to help reinvigorate local communities.

- œ As part of the 6<sup>th</sup> International Yoga Day commemorations, the **world's first yoga university** outside India has been launched in Los Angeles, offering programmes that combine scientific principles and modern research approaches to the ancient Indian practice.
- œ The Vivekananda Yoga University (VaYU) would produce best modern day yoga practitioners who would not only spread peace but make planet Earth a better place to live.
- œ Eminent Indian yoga guru Dr. H R Nagendra, Chancellor of Swami Vivekananda Yoga Anusandhana Samsthana (SVYASA) is the first Chairman of VaYU.

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## CURRENT AFFAIRS ANALYST

WEEK- 2 (JULY, 2020)

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**SECTION: A**  
**(MAINS)**  
**CURRENT AFFAIRS**

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## **IMPACT OF COVID-19 PANDEMIC ON GLOBALISATION**

- œ Globalization refers to international trade and investment flows among economies often enabled by technological developments. But today the globalization stands at a crossroads.
- œ From Brexit to protectionist policies by the USA, from western against immigrants to new snags in the world's path to free trade, this era of world politics is being called de-globalization today.
- œ The global order is regularly facing a challenge as we've never seen before. All multilateral institutions in the world are today collapsing from the burden of their contradictions.
- œ The shock of the coronavirus to the global economy, which was already struggling, has also eroded the possibility of increased inflows of money, goods, and people around the world.

### **De-Globalization Trend**

- œ Since the global economic crisis of 2008-09, the world was constantly moving in this direction and stood at the turn of the current global economic turmoil. This can be understood through the following data:

Category	Before Globalization	After Globalization (1991)	After the global economic crisis of 2008-09
Trade as a percentage of global GDP	39%	61%	59% (in 2018)
Net Foreign Direct Investment inflows	Under 1% of global GDP	4%	1.4%
Net international energy trade	1.5 billion tonnes of oil equivalent	2.5 billion	2.8 billion

Similarly, personal remittance flows, previously on the rise, flattened to around 0.75% of global GDP.

- œ There are several causes for the great stagnation in the globalization of goods and capital. It became increasingly apparent that not all countries, societies, and people were benefitting equally from globalization, and that soon began to be reflected in national and international politics.

### **COVID19 Pandemic and Globalization**

#### **Disrupting global supply chains and international trade**

- > According to an analysis by the United Nations Department of Economic and Social Affairs (UN DESA), the Coronavirus (COVID-19) epidemic is disrupting global supply chains and international trade. The World Trade Organization (WTO) has estimated that in a worst-case scenario, global trade could dip as much as 32%.

#### **Restricted movement of people and the pace of tourism**

- > During the past month, about 100 countries have closed their national border, which has completely stopped the movement of people and the pace of tourism, which has hampered global growth. Developed countries as well as many in the Asia Pacific economies that are highly dependent on tourism and commodities trading will shrink.

#### **Job crisis and stimulus packages**

- > According to DESA, "millions of workers in almost all countries of the world are facing a job crisis. Besides, various governments are considering large stimulus packages to deal with the outbreak of coronavirus, which may further affect the global economy."

#### **Import substitution**

- > Countries are facing difficulties in getting medical supplies; some find their manufacturing can't run as value chains are linked with China.
- > Countries will reconfigure their economies to look at import substitution with greater clarity now, as the perils and pitfalls of overdependence on foreign supplies become clear.

#### **Disillusion with the role of multilateral institutions**

- > Trade rules have worked best when the global economy is booming and isn't facing a crisis. Position of Multilateral Institutions like WTO is

going to get worse because if countries need to bring their domestic industries back, they would need space for policy flexibility and WTO will be redundant there — for instance, on the issue of subsidies for small industries, no country will like the WTO to be telling them what to do or what not to do.

### . Indian Context

- > The world is becoming fragmented every day, the challenge of reviving support for globalisation will be bigger. This is a major problem for countries like India, which have benefited greatly from the vigor of globalisation. Because of the free flow of information, ideas, jobs, and people has given Indian citizens an unprecedented opportunity to prosper.
- > But, now that the world scenario is changing rapidly, India's policy-makers will have to find a way to make the most of the new emerging opportunities in India. Because today the old global supply chains are being disrupted and replaced by a new system of trade and investment.

### Way Forward

- œ The impact of the severity of coronavirus (COVID-19) on the global economy will depend primarily on two factors: a period of restriction on people's movement and economic activity in major economies; and the real size and effectiveness of fiscal measures for the crisis.
- œ According to analysts, there is a need for a properly designed fiscal stimulus package to mitigate the impact of the virus on the global economy, which includes prioritizing health expenditure to prevent the spread of the virus and providing financial assistance to families affected by the epidemic.
- œ According to the Secretary-General for Economic and Social Affairs, all nations need some immediate policy measures that not only work towards preventing epidemics and saving lives but also help protect the weakest person in society from the economic crisis and maintain economic growth and financial stability.

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## DHAMMACHAKKA PRAVATAN

### CONTEXT

Recently, the Dalai Lama addressed the Dhammachakka Pravartan celebration hosted by the Culture Ministry at the Rashtrapati Bhavan via video call, to celebrate his birthday. The event saw Buddhist monks from 52 countries including a significant number from Japan and Taiwan.

#### Dhammacakkappavattana Sutta

œ It is considered to be a **record of the first teaching given by the Buddha after he attained enlightenment**. According to the Buddhist tradition, the Buddha gave this teaching in Sarnath, to the five ascetics (his former companions with whom he had spent six years practicing austerities).

#### The Dalai Lamas in Tibetan Buddhism

- œ All of the Dalai Lamas are thought to be **Manifestations of the Bodhisattva of Compassion, Avalokitesvara**.
- œ For Buddhists, the **ultimate goal is enlightenment, or "nirvana"** – liberation from the cycle of birth and death. East Asian and Tibetan Buddhists, as part of the Mahayana sect, believe bodhisattvas have reached this highest realization.
- œ Furthermore, Mahayana Buddhists believe bodhisattvas choose to be reborn, to experience the pain and suffering of the world, to help other beings attain enlightenment.
- œ **Tibetan Buddhism** has developed this idea of the bodhisattva further into **identified lineages of rebirths called "tulku."** Any person, who is believed to be a rebirth of a previous teacher, master, or leader, is considered a tulku. Tibetan Buddhism has hundreds, if not thousands of such lineages, but the most respected and well-known is the **Dalai Lama**.

#### Dalai Lama

- . It is the title given by the Tibetan people for the foremost spiritual leader of the **Gelugpa or "Yellow Hat" school of Tibetan Buddhism**.
- . The name Dalai Lama, meaning **Ocean of Wisdom**, was not conferred until the third reincarnation in the form of Sonam Gyatso in 1578.
- . The first and second Dalai Lamas were given the title posthumously. Buddhists believe that the first tulku in this reincarnation was Gedun Drub, who lived from 1391-1474 and the second was Gendun Gyatso.
- . The Dalai Lama is a highly influential figure. The 14<sup>th</sup> and current Dalai Lama is Tenzin Gyatso.

#### The 14<sup>th</sup> Dalai Lama, Tenzin Gyatso

- . He was born on 6 July 1935, to a farming family, in northeastern Tibet.
- . At the age of two, the child, then named Lhamo Dhondup, was recognized as the reincarnation of the previous **13<sup>th</sup> Dalai Lama, Thubten Gyatso**.
- . In 1989 he was awarded the **Nobel Peace Prize** for his non-violent struggle for the liberation of Tibet.

#### Tibetan Buddhism

- œ Tibetan Buddhism combines the essential teachings of **Mahayana Buddhism with Tantric and Shamanic, and material from an ancient Tibetan religion called Bon**.
- œ Although Tibetan Buddhism is often thought to be identical with Vajrayana Buddhism, they are not identical - Vajrayana is taught in Tibetan Buddhism together with the other vehicles.

#### œ Groups within Tibetan Buddhism

- > **Nyingmapa:** Founded by Padmasambhava, this is the oldest sect, noted in the West for the teachings of the Tibetan Book of the Dead.
- > **Kagyupa:** Founded by Tilopa (988-1069), it is headed by the Karmapa Lama. Important Kagyupa teachers include Naropa, Marpa, and Milarepa.
- > **Sakyapa:** Created by Gonchok Gyelpo (1034-1102) and his son Gunga Nyingpo (1092-1158).
- > **Gelugpa:** (The Virtuous School) Founded by Tsong Khapa Lobsang Drakpa (also called Je Rinpoche) (1357 - 1419), this tradition is headed by the Dalai Lama.
- > **New Kadampa Tradition:** One of the major Buddhist schools in the UK, founded by the Tibetan-born Geshe Kelsang Gyatso. Some Buddhists and non-Buddhists regard it as outside the mainstream tradition.

#### . Special features of Tibetan Buddhism

- > The status of the teacher or "Lama"
- > Pre-occupation with the relationship between life and death

- > An important role of rituals and initiations
- > Rich visual symbolism
- > Elements of earlier Tibetan faiths
- > Mantras and meditation practice

### **China, India and Dalai Lama**

- œ China views the Dalai Lama as a separatist, while Dalai Lama says that his fight is for the autonomy of Tibetans.
- œ Chinese communist government under Mao Zedong carried out the invasion of Tibet in 1950.
- œ Evading the People's Liberation Army of China, the Dalai Lama fled to India in 1959.
- œ Prime Minister Jawaharlal Nehru permitted him to form **The Tibetan Government in Exile in Dharamsala in India**. This has been a major irritant for China.
- œ China in 2017 objected to Dalai Lama's visit to Arunachal Pradesh's Tawang district. It was seen by China as a "provocation" by India.
- œ The successor to the Dalai Lama is traditionally located by senior monastic disciples, based on spiritual signs and visions. In 2011, however, the Chinese Foreign Ministry declared that only the government in Beijing can appoint the next Dalai Lama and no recognition should be given to any other succession candidate.
- œ Because of the threat from China, the 14<sup>th</sup> Dalai Lama has made many statements that would make it difficult for a Chinese appointed 15<sup>th</sup> Dalai Lama to be seen as legitimate.
  - > For example, he has stated that the institution of the Dalai Lama might not be needed anymore. However, he has also said it was up to the people if they wanted to preserve this aspect of Tibetan Buddhism and continue the Dalai Lama lineage.
  - > Another option the Dalai Lama has proposed would be for him to appoint his reincarnation before he dies. In this scenario, the Dalai Lama would transfer his spiritual realization to the successor.
  - > A third alternative Tenzin Gyatso has stated is that if he dies outside of Tibet, his reincarnation would be located abroad, most likely India.
  - > Lastly, he has mentioned the possibility of being reborn as a woman but added that he would have to be a very beautiful woman. He believes that appearance is important in transmitting Buddhist teachings.

### **Buddhism**

- œ It was founded by Gautama Buddha. He was born as **Prince Siddhartha at Lumbini near Kapilavastu** (in present Nepal) in 566 BC.
- œ His parents were Suddhodhana and Mahamaya. Suddhodhana was the chief of the **Sakya clan**. Due to this, Buddha was also known as '**Sakyamuni**'.

- œ He was married to Yashodhara and had a son, Rahula.
- œ He left his home at the age of 29 to become an ascetic. This event is called **Mahabhishkramana**.
- œ Gautama attained **Bodhi (enlightenment)** under a pipal tree at **Bodhgaya a village in Bihar**.
- œ Buddha gave **his first sermon in the village of Sarnath in Banaras**. This event is known as **Dharmachakra Pravartana/Dharmachakkappavattana** (turning of the wheel of law).
- œ He died in 483 BCE at **Kushinagar**. The event is known as **Mahaparinibban**.

### **. Teachings**

- > Gautama taught that a person should avoid the excess of both luxury and austerity. He prescribed the middle path (Madhyam Marg). The Buddha also laid down a code of conduct for his followers on the same lines as was done by the Jaina teachers. The main items of this social conduct are
  - . Do not covet the property of others,
  - . Do not commit violence,
  - . Do not use intoxicants,
  - . Do not speak a lie,
  - . Do not indulge in corrupt practices.
- > The Four Noble Truths:
  - . The world is full of sorrow
  - . People suffer on account of desires.
  - . If desires are conquered, nirvana will be attained, that is, man will be free from the cycle of birth and death.
  - . Desire can be conquered by following the **eight-fold paths (Ashtangika Marga)**.
- > Buddhism does not recognize the existence of God and the soul (atman).

### **Eight-fold paths-Ashtangika Marga**

- . Right Understanding
- . Right Intent
- . Right Speech
- . Right Action
- . Right Livelihood
- . Right Effort
- . Right Mindfulness
- . Right Concentration

### **Three Jewels/Tri-Ratnas**

- . These are the Buddha, the Dharma which is the teaching of the Buddha, and the Sangha, which is the community who follow the teaching.

# WMO CERTIFIES MEGAFLASH LIGHTNING EXTREMES

## CONTEXT

A World Meteorological Organization (WMO) committee of experts has established two new world records for the longest reported distance and the longest reported duration for a single lightning flash in, respectively, Brazil and Argentina.

### ◎ BACKGROUND

- œ The first megaflash event, which set the record for longest-distance flash, was more than seven times larger than the minimum criteria for a megaflash and was twice as large as the previous record-holder.
- œ The flash developed in spring 2018 in southern Brazil north of Porto Alegre, then spread both east and west simultaneously, stretching more than 440 miles from west to east as the crow flies.
- œ The previous record for the longest recorded distance for a single megaflash event was just under 200 miles across, set in Oklahoma in June 2007.

### ◎ ANALYSIS

#### The mechanism behind lightning

- œ Lightning is an electrical discharge caused by imbalances between storm clouds and the ground, or within the clouds themselves. Most lightning occurs within the clouds.
- œ "Sheet lightning" describes a distant bolt that lights up an entire cloud base. Other visible bolts may appear as bead, ribbon, or rocket lightning.
- œ During a storm, colliding particles of rain, ice, or snow inside storm clouds increase the imbalance between storm clouds and the ground, and often negatively charge the lower reaches of storm clouds.
- œ There are three categories of lightning-
  - > **intracloud (IC)**, which is flashes within a cloud
  - > **cloud to cloud (CC)**, where lightning jumps from one cloud to another
  - > **cloud to ground (CG)**, where lightning strikes from the ground. This is the most well understood kind of strike and the riskiest to life.
- œ Lightning is extremely hot—a flash can heat the air around it to temperatures five times hotter than the sun's surface.

œ **Thunder:** This heat causes surrounding air to rapidly expand and vibrate, which creates the pealing thunder we hear a short time after seeing a lightning flash.

#### How does this current reach the Earth from the cloud?

- œ While the Earth is a good conductor of electricity, it is electrically neutral. However, in comparison to the middle layer of the cloud, it becomes positively charged.
- œ As a result, about 15%-20% of the current gets directed towards the Earth as well. It is this flow of current that results in damage to life and property on Earth.
- œ There is a greater probability of lightning striking tall objects such as trees, towers or buildings. Once it is about 80-100 m from the surface, lightning tends to change course towards these taller objects.
- œ This happens because air is a poor conductor of electricity, and electrons that are travelling through air seek both a better conductor and the shortest route to the relatively positively charged Earth's surface.

#### The new records

- œ The new records for "megaflashes", verified with new satellite lightning imagery technology, more than double the previous values measured in the United States of America and France.
- œ The findings were published by the American Geophysical Union's Geophysical Research Letters ahead of International Lightning Safety Day on 28 June.
- œ WMO's Committee on Weather and Climate Extremes, found that:
  - > World's greatest extent for a single lightning flash is now 440.6 miles. The world's greatest extent for a single lightning flash is a single flash that covered a horizontal distance of  $709 \pm 8$  km ( $440.6 \pm 5$  mi) across parts of southern Brazil on 31 October 2018.

- > The greatest duration for a single lightning flash is 16.73 seconds from a flash that developed continuously over northern Argentina on 4 March 2019.

### **Megaflashes**

- . Megaflashes, refers to a name given to lightning discharges that reach hundreds of kilometers in length.
- . Ideal conditions for a megaflash occurrence involve large electrified clouds with low flash rates that are attached to more active thunderstorm cells.

### **Lightning around the world**

- œ At any given time, there are about 2,000 thunderstorms raging across the globe and 100 lightning strikes to earth per second.
- œ Lightning is more common at higher altitudes and near the equator.
- œ Brazil recorded a lightning strike that travelled a distance of 709 kilometres, while Argentina recorded a strike that lasted for 16.73 seconds.

### **Lightning strikes in India**

- œ Lightning strikes during the June-September annual monsoon are fairly common in India.
- œ As a whole, India sees 2,000-2,500 lightning deaths every year on average. Lightning is the biggest contributor to accidental deaths due to natural causes.
- œ More than 2,300 people were killed by lightning in India in 2018, according to the National Crime Records Bureau and at least 2,000 people have died in lightning strikes every year since 2005.
- œ One of the reasons cited for the high number of deaths is the large number of people working outdoors in India compared to other parts of the world, which makes them more vulnerable.

### **Tracking of lightning events in India**

- œ Lightning remains among the least studied atmospheric phenomena in the country. Just one group of scientists, at the Indian Institute of Tropical Management (IITM) in Pune, works full-time on thunderstorms and lightning.
- œ Occurrences of lightning are not tracked in India, and there is simply not enough data for scientists to work with.

- œ Often, safety measures and precautions against lightning strikes do not receive as much publicity as other natural disasters such as earthquakes.

### **Monitoring of lightning across the world**

- œ Historically, lightning has been monitored on ground-based networks, which are limited in coverage in much of the world.
- œ Lightning monitoring changed drastically in 2016 and 2017 when GOES-16 was launched into space and became operational and offered a new tool, the Global Lightning Mapper (or GLM).
  - > The GLM monitors flashes of light emitted by lightning day and night and over much of the Western Hemisphere.
  - > It detects flashes from both cloud-to-cloud lightning and cloud-to-ground flashes.

### **Listing of weather extremes**

- œ The WMO Archive of Weather and Climate Extremes maintains official records of the world, hemispheric and regional extreme records associated with a number of specific types of weather.
- œ Presently, the Archive lists extremes for temperature, pressure, rainfall, hail, wind, and lightning as well as two specific types of storms, tornadoes and tropical cyclones.

### **World Meteorological Organization (WMO)**

- . It is an intergovernmental organization with a membership of 193 Member States and Territories.
- . The organization is headquartered in Geneva, Switzerland.
- . As a specialized agency of the United Nations, WMO is dedicated to international cooperation and coordination on the state and behaviour of the Earth's atmosphere, its interaction with the land and oceans, the weather and climate it produces, and the resulting distribution of water resources.

### **CONCLUSION**

Lightning is a major hazard that claims many lives every year. The findings highlight important public lightning safety concerns for electrified clouds where flashes can travel extremely large distances

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# INDIA MUST WAKE UP TO THE DIRE NEED FOR POLICE REFORMS

## CONTEXT

Given the current situation in India and most importantly with the newest episode of sensational brutality, it is more than time that India, woke up to the crying need for ‘police reform’ in our country.

### ◎ BACKGROUND

- œ The deaths of Jayaraj and Bennix in Sathankulam town near Thoothukudi in Tamil Nadu triggered massive outrage across the country and renewed a debate about police brutality.
- œ On June 19, the Thoothukudi Police took Jayaraj and his son Bennix into custody for interrogation as they had kept their mobile accessories shop open during the coronavirus-induced lockdown.
- œ A case was filed against them for not following the curfew under lockdown. They were later sent to the Kovilpatti sub-jail.
- œ Relatives of the two victims accused the police of assaulting them in custody.
- œ On June 22, Bennix complained of breathing problems and was admitted to a local government-run hospital. He later died at the facility. Jayaraj, who had also been admitted due to an illness, died the next day.

#### Custodial deaths

- . Between April 2017 and February 2018, India recorded a staggering 1,674 custodial deaths, a rate of five custodial deaths per day, according to statistics placed by the Home Ministry before the Rajya Sabha.
- . Uttar Pradesh topped the list, with 374 deaths reported in this period of under a year.

### ◎ ANALYSIS

#### Understanding the structure

- œ The Police force in the country is entrusted with the responsibility of maintenance of public order and prevention and detection of crimes.
- œ Each state and union territory of India has its own separate police force.
- œ **Article 246 of the Constitution of India** designates the police as a **state subject**, which means that the state governments frame the rules and regulations that govern each police force.

> These rules and regulations are contained in the police manuals of each state force.

- œ The Police force in the state is headed by the **Director General of Police/Inspector General of Police**.
- œ **Ranges:** Each State is divided into convenient territorial divisions called **ranges**. Each police range is under the administrative control of a **Deputy Inspector General of Police**.
- œ A number of districts constitute the range. District police is further sub-divided into police divisions, circles and police-stations.
- œ Besides the civil police, states also maintain their own armed police and have separate intelligence branches, crime branches, etc.
- œ Police set-up in big cities like Delhi, Kolkata, Mumbai, Chennai, Bangalore, Hyderabad, Ahmedabad, Nagpur, Pune, Bhubaneswar-Cuttack etc. is directly under a **Commissioner of Police** who enjoys magisterial powers.
- œ All senior police posts in various states are manned by the Indian Police Services (IPS) cadres, recruitment to which is made on all-India basis.
- œ The Central Government maintains Central Police forces, Intelligence Bureau (IB), Central Bureau of Investigation (CBI), Institutions for training of police officers and forensic science institutions to assist the state in gathering intelligence, in maintaining law and order, in investigating special crime cases and in providing training to the senior police officers of the state governments.

#### Analysing the myriad deficiencies in the existing system

- œ **Inappropriate control & direction:** The superintendence and control of the police is a debatable issue. As per the police laws, both the Central and State police forces come under the superintendence and control of political executives. This has resulted in the lack of democratic functioning and appropriate direction.
- œ **Political influence:** Police priorities are frequently altered based on the will of political executives. It seems that the police force has become a puppet in the hands of its political masters.
- œ **No check on police misconduct:** There is no mechanism for registering a complaint

against erring police officials. Both the **Second Administrative Reform Commission** and the **Supreme Court** have accepted the need for having an independent complaint authority to inquire into the cases of police misconduct.

- œ **Weak investigation:** Over 50% of cases filed by the police (nearly 80% in rape cases) end up in acquittals. While there could be many reasons for this, a weak investigation by the police frequently recurs as the cause for cases being thrown out of court limiting the ability of citizens to get justice.
- œ **Rising of unlawful power:** Unwarranted arrests, unlawful searches, torture and custodial rapes are becoming the normal things of the system.

### Other side of the coin

- œ **Overburdened & underpaid:** There is no denying in the fact that the police force is overburdened and underpaid.
- œ **Lack of manpower:** India had (in 2017) 131 police officers per 1,00,000 people; that is lower than the sanctioned number (181), and much lower than the number recommended by the UN (222).
- œ **More workload, less efficiency:** Clearly, “an average policeman ends up having an enormous workload and long working hours, which negatively affects his efficiency and performance”.
- œ **Dying motivation:** Add to this poor working conditions and compensation, and it is, in fact, creditable that our police are as motivated as they are.
- œ **Medieval recruitment process:** The Indian policing system also suffers from its century-old recruitment process. The recruitment process of police personnel, especially from lowest constabulary level to Sub-Inspector level, is medieval.
- œ **No growth:** 86% of the police force are constables, who have no growth path other than a single promotion (to Head Constable) before they retire.
- œ **Obsolete and outdated weapons:** Similarly, when it comes to weaponry, the police machinery is still using obsolete and outdated weapons. **The Comptroller and Auditor General (CAG) in its report also highlighted that the force continues to depend on outdated and unserviceable weapons.**
- œ **Police mobility:** Police mobility is another issue, which has been hampered by the shortage of police vehicles.
- œ **Poor communication network:** Another problematic area relates to the communication networks. In an era of ICT, the police system is still struggling to get proper communication network.

- œ **Lack of funding:** Police infrastructure is perennially underfunded, and, with some notable exceptions, there are few efforts to build public/police relations.

### Supreme Court’s view on the issue

- œ The Supreme Court has observed that there is a need to have an **independent complaints authority** to inquire into complaints of police misconduct
- œ The Model Police Act, 2006 requires each state to set up an authority (akin to the Civilian Complaint Review Board in New York City) with five members:
  - > a retired High Court Judge, a retired police officer of the rank of DGP from another state cadre
  - > a retired officer with public administration experience from another state
  - > a civil society member
  - > a person with at least 10 years of experience as a judicial officer or lawyer or legal academic.

In 2018, the Supreme Court passed a slew of directions on police reforms in the country.

- > The court had recommended separation of police functions of investigation and maintaining law and order. It had ordered setting up of a **Police Establishment Board** to decide and make recommendations on transfers, postings, promotions and other service-related matters of police officers of and below the rank of DSPs.
- > It had also ordered setting up of a **Police Complaints Authority** in each state to look into complaints against officers of and above the rank of SP in cases of serious misconduct, including custodial death, grievous hurt or rape in police custody.
- > A **National Security Commission** needed to be set up at the Union level to prepare a panel for selection and placement of chiefs of the Central Police Organisations with a minimum tenure of two years, the apex court had ordered.

### Major Committees for Police reforms

- œ From time to time, several commissions have looked into the reform processes.
- œ Till now, the following committees, including the National Police Commission, have been set up by the government. These committees made recommendations in favour of major police reforms. These include-
  - > the Gore Committee on Police Training (1971-73)

Committee	Year	Notes
<b>National Police Commission (NPC)</b>	1977-81	Established after the Emergency, the NPC produced 8 reports suggesting major reforms across a range of police issues.
<b>Ribeiro Committee</b>	1998	Established by the Supreme Court to review the lack of action taken to implement NPC recommendations and to re-frame a new police act
<b>Padmanabhaiah Committee</b>	2000	Dealt with the issues of politicization and criminalization of the police and police accountability.
<b>Malimath Committee</b>	2002-03	Suggested changes to the Indian Penal Code and outlined ways of improving judicial proceedings
<b>Police Act Drafting Committee 1</b>	2005	Drafted a new model Police Act to replace the 1861 Police Act.
<b>Supreme Court</b>	2006	SC issued seven directives to state police forces including setting up State Security Commissions, Police Establishment Boards and a Police Complaints Authority
<b>Second Administrative Reforms</b>	2007	Noted that police-public relations were unsatisfactory and suggested a range of reforms to change this
<b>Justice Thomas Committee</b>	2010	Highlighted the total indifference of state governments to police reforms
<b>Supreme Court Directives</b>	2018	New directives on police reforms and reviewed states progress in the implementation of the 2006 directives

- > the Ribeiro Committee on Police Reforms (1998)
- > the Padmanabhaiah Committee on Police Reforms (2000)
- > the Group of Ministers on National Security (2000-01)
- > the Malimath Committee on Reforms of Criminal Justice System (2001-03)

œ Despite recommendations from these committees, no substantial changes have been seen.

### The panacea to the problems

- œ **Addressing prejudice:** Though addressing prejudice is a long and painstaking road—each of us needs to confront our own prejudices, address them as best we can, and continuously put the word out in our families and wherever we have any influence that there is really no fundamental difference between people, and that we are all citizens and one under the law. This effort can never stop.
- œ **Strengthening institution:** In parallel, the government needs to work on the institutional side. The **Model Police Act of 2006** was circulated to all the states; that very year, 17 states passed new laws or amended their existing laws in light of this new model law. There have been further evolutions since then, but many of its fundamental

principles remain unfulfilled.

œ **Specialised team:** The police need to have specialised teams for each type of activity.

œ **Important areas:** The area which needs urgent attention include

- > police accountability
- > the need to separate law and order from investigation
- > poor working conditions and an overburdened police force
- > constabulary related issues
- > police infrastructure
- > public-police relations

### ◎ CONCLUSION

No doubt the situation is worse in India, but it can be corrected with strict measures. The country should now adopt few safeguards, such as accountability of the police to the political executive, internal accountability to senior police officers, and independent police oversight authorities. Increased accountability to the political executive can theoretically constrain **operational freedom and flexibility**, which, in the Indian context, is a serious concern. The time has come to transform the Police from 'Ruler's Police' to 'People's Police'.

## SAMPARK: REACHING OUT THROUGH SCHOOL STUDENT HELPLINE IN ODISHA

Sampark was started by the **Department of School and Mass Education in Odisha**. The helpline service was initiated to provide relief to the students in distress through timely action. It allows any individual or students (**between the classes of I and IX**) to call up the toll-free number 1800 345 6722 to seek information or voice concerns, views, and ideas on school education. The project **is innovative as it covers almost all issues ranging from sexual abuse to education and the management system. Importantly, the identity of the caller is kept confidential.**

### The Need for such a Project

Avenues of redressal were limited to increased cases of dropouts, cases of negligence and violation of rules, or the non-availability of entitlements as per the mandate of the RTE Act. Similarly, issues related to the needs of special and disadvantaged children, complaints of corporal punishment, and incidents of sexual abuse of students needed redressal. It was primarily because no direct contact mechanism existed between the officials and citizens to address their complaints that issues seldom reached higher authorities, and suitable action was rarely taken.

### Objectives of the Project

- œ The specific objectives of the helpline are
  - > To listen to the concerns of students
  - > Ensure a safe and child-friendly environment that is free from punishment and exploitation
  - > To understand the perspective of students on the school education and management system.
- œ Besides, the helpline has also been sensitising parents, students, and teachers about their

rights and duties under the RTE Act. This has also resulted in highlighting issues of concern in schooling and education that require urgent attention of the state.

### Key Stakeholders

#### • Implementation Agency

- > The school student's helpline is operated by the Grievance Redressal Cell of School and Mass Education Department, at Odisha Primary Education Programme Authority, Bhubaneswar.

#### • Funding Agency

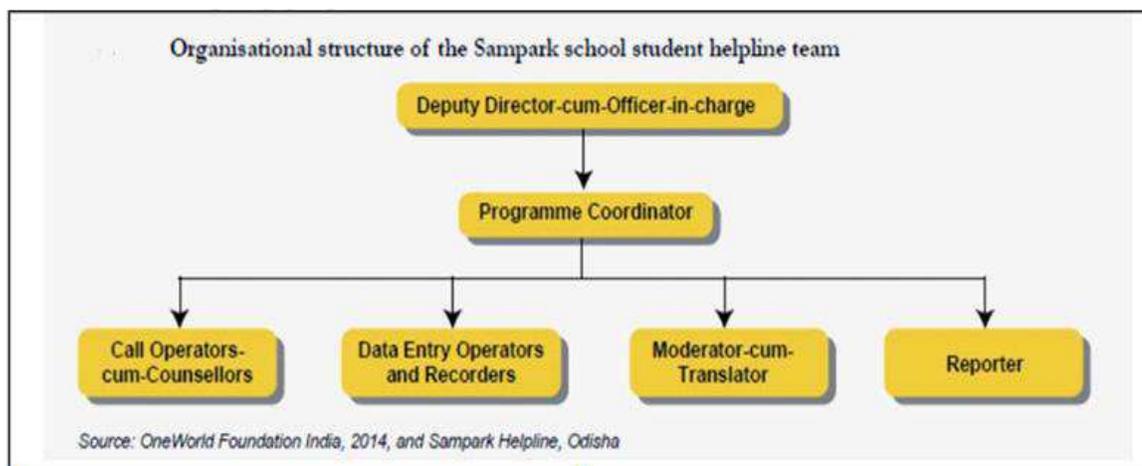
- > The programme is funded by the School and Mass Education Department, Government of Odisha under the Sarva Shiksha Abhiyan (SSA).

#### • Beneficiaries

- > The programme covers all the students going to school of age 6-16 years; (classes I – X) and who are in or out of school, parents, guardians, community members, and teachers.

### Implementation Strategy

- œ The student helpline is based on the **principle of freedom of expression** where any student whose right to education is violated or who wants to share a suggestion or lodge a complaint can dial the toll-free number. Students can also send an e-mail to place their concerns before the authorities.
- œ The helpline has a well-defined functioning grievance redressal mechanism. The cell has a



designated person who listens to phone calls and enters call details in a register. **The identity of the caller is kept confidential.** The information obtained is written down in a register for record-keeping. The information is then entered into the computerised database under a suitable category. Letters received through the helpline are also scanned and sent through an e-mail to the concerned authority for further investigation and verification within a deadline.

- œ The case is then investigated by the concerned officer or Headmaster, Block Resource Person, or District Project Coordinator, depending upon the nature of the case. Cases that need urgent attention are given priority and are presented to the Commissioner-cum-Secretary for immediate redressal and action.

### Impact

- œ The Sampark student helpline is the only helpline in Odisha to help children in distress by counseling and by providing accurate information over telephone about their rights and entitlements. The helpline has:

- > Brought accountability in the education system
- > Reduced teacher absenteeism
- > Sensitised school authorities to issues concerning children's rights
- > Facilitated the provision of solutions to children in distress
- > Increased mobilisation among field officers
- > Established an effective redressal and feedback mechanism

- œ The school student helpline has been able to open a channel of communication between the students and education authorities. The helpline has proved effective in reducing the incidence of corporal punishment.

- œ Special provisions have been made for complaints relating to sexual harassment by employing women employees to address grievances from girl students and help them out with other concerns.

- œ After the installation of the helpline, significant improvement in the teacher-student relationship has been observed in schools.

### Key Challenges

- œ The project implementers faced challenges during the initial stage, but with time they overcame

these to enhance the effectiveness of the helpline. Some of the challenges that the helpline faced include the:

- > Use of unparliamentary language by callers
- > Misuse of the helpline by people making false calls and arguing with call attendants.
- > Scores of cases have been found to be false after verification, resulting in loss of government resources.
- > Due to the growing number of cases, field-level officers are overburdened with the inquiry and reporting of cases.
- > Some of the callers expect higher authorities, such as state-level officers, to resolve their matters which may not be possible in each case.

- œ On the other hand, some challenges have to be dealt with care such as cases of sexual abuse or corporal punishment. At the same time, collecting accurate details and verification from people is difficult as officials face resentment and opposition in such situations.

- œ A lot of the above challenges were dealt with through training and capacity building of teachers and counselors who have to attend the calls and resolve cases. They are trained to be patient and deal with complainants in a very friendly manner, and assure them of a speedy and appropriate resolution of cases.

### ● CONCLUSION

The Sampark helpline provides a unique service as it provides children with a mechanism to express their concerns over email and through telephone in anonymity. In Odisha, the helpline has managed to create a positive impact on students and parents by restoring their faith in the school education system. Active feedback and redressal mechanisms by government officials have played an important role in this. The helpline has made a mark beyond the education system as well, by raising the issues of students for open discussion in the community. The helpline has been introduced across the state, in all schools including private and government run schools. Other states can also adopt this approach of providing help to students and their parents as well as providing them with a chance to participate in improving the school education system.

## PLASMA BANK

### CONTEXT

Delhi gets its first plasma bank for Covid-19 treatment.

#### ● BACKGROUND:

- œ Delhi Chief Minister Arvind Kejriwal has inaugurated India's first plasma bank at the Institute of Liver and Biliary Sciences (ILBS) to ease access to plasma that is being used as a trial to treat Covid-19 patients.
- œ A healthy person between the age group of 18-60 years with no co-morbidities could be a donor.
- œ The reason for setting a plasma bank is that people were finding it difficult to get plasma and the situation in Delhi was turning chaotic.
- œ The therapy is still at a trial stage and only seven hospitals, like Lok Nayak Hospital and Max Super Specialty, Saket, have permission to administer it.

#### Similar trends

- œ Maharashtra has launched 'Project Platina' for plasma therapy trials.
- œ Similarly, states like Kerala and Punjab have similar plans to set up a plasma bank.
- œ Countries such as China, South Korea, the US, and the UK have been trying Convalescent Plasma Therapy (CPT).

#### Significance of Plasma Therapy

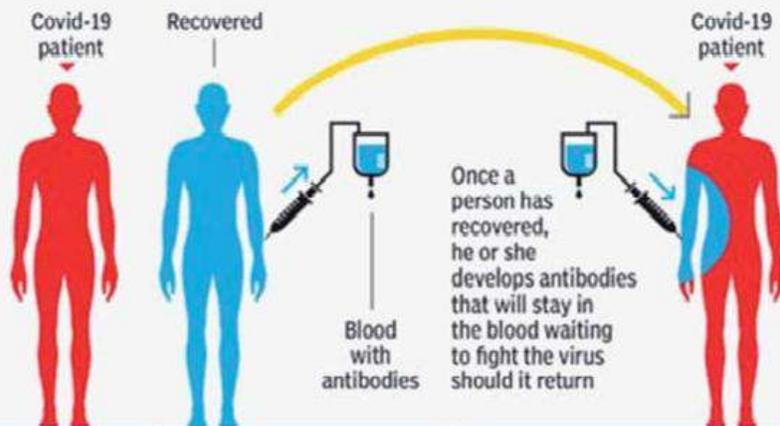
- œ Convalescent Plasma Therapy may be helpful for people with COVID-19 who are not helped by other treatments. Some people with COVID-19 become very sick and do not respond to other treatments or drugs. These people often develop Acute Respiratory Distress Syndrome (ARDS) — a severe lung condition. They often require mechanical assistance, such as a ventilator, to breathe. These people also are in danger of developing organ failure.
- œ It could also help other people who may have a higher risk of serious illness, such as people with chronic medical conditions, for example, heart disease or diabetes, or those who have weakened immune systems. Convalescent plasma could help these people from getting sicker if they get COVID-19.
- œ Convalescent plasma might also be considered for family members or health care workers who have been exposed to someone with COVID-19 to potentially prevent them from getting COVID-19..
- œ Plasma donation does not cause any weakness in an individual. A person can donate plasma again in a gap of 10 days.

### WHAT IS CONVALESCENT PLASMA THERAPY?

It involves transfusing plasma retrieved from the blood of people who have recovered from Covid-19 into people suffering from the disease

#### How does it work?

As people fight the Covid-19 virus, they produce antibodies that attack the virus. These antibodies are secreted by immune cells known as B lymphocytes, found in plasma or liquid part of blood, which helps the blood clot when needed and supports immunity



- œ Trials with Plasma Therapy conducted to date have shown positive results. The patients suffering from the virus at the second stage have either a decline in oxygen levels or the respiration levels have increased.

### **Risks associated with Plasma Therapy**

- œ Blood and plasma have been used to treat many other conditions, and they're usually very safe. The risk of contracting COVID-19 infection from receiving convalescent plasma therapy has not been tested yet.
- œ The risk of these infections is very low because donated blood must meet certain requirements outlined by the health authority. Before donated blood can be used, it must be tested for safety. It then goes through a process to separate blood cells so that all that's left is plasma with antibodies. However, convalescent plasma therapy carries the risk of:
  - > Allergic reactions
  - > Lung damage and difficulty breathing
  - > Transmission of infections, including HIV and Hepatitis B and C

#### **What Is Plasma?**

- . Blood plasma is a 'yellowish liquid' component of blood that holds the blood cells of whole blood in suspension. It is the liquid part of the blood that carries cells and proteins throughout the body.
- . Plasma is the largest part of blood. It makes up more than half (about 55%) of its overall content. When separated from the rest of the blood, plasma is a light yellow liquid. Plasma carries water, salts, and enzymes.

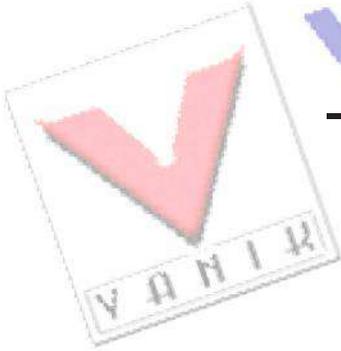
#### **How does plasma keep a person healthy?**

- . Plasma is a critical part of the treatment for many serious health problems. This is why there are blood drives asking people to donate blood plasma.
- . Along with water, salt, and enzymes, plasma also contains important components. These include antibodies, clotting factors, and the proteins albumin and fibrinogen. When a person donates blood, healthcare providers can separate these vital parts from plasma. These parts can then be concentrated into various products. These products are then used as treatments that can help save the lives of people suffering from burns, shock, trauma, and other medical emergencies.
- . The proteins and antibodies in plasma are also used in therapies for rare chronic conditions. These include autoimmune disorders and hemophilia. People with these conditions can live long and productive lives because of the treatments. Some health organizations call plasma "the gift of life."

**SECTION: B**  
**(PRELIMS)**

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**CURRENT AFFAIRS**



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## **NEW FUNGI SPECIES DISCOVERED IN CHINA**

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- **CONTEXT:** A subterranean expedition by a group of researchers in China has led to the discovery of new novel fungal species on bat carcasses.
- **ABOUT:**
  - In total, seven species were found across two carcasses.
  - The four new species are
    - œ Mortierella rhinolophicola
    - œ M multisporea
    - œ M yunnanensis
    - œ Neocosmospora pallidimors.
  - > Neocosmospora pallidimors is particularly important as the Neocosmospora genus is known to contain numerous aggressive pathogens that can infect mammals.
  - Three out of the four new species belong to Mortierella, a genus of well-known saprophytic fungi (meaning they obtain nutrients through dissolving organic matter).
  - Fusarium incarnatum, Mucor hiemalis and Trichoderma harzanium comprised the final three species.

### **Why Bats are important for research?**

- One bat can host many different viruses without getting sick. They are the natural reservoir for the Marburg virus, and Nipah and Hendra viruses, which have caused human disease and outbreaks across different countries.
- Their tolerance of viruses, which surpasses that of other mammals, is one of their many distinctive qualities.
- They are the only flying mammals, they devour disease-carrying insects by the ton, and they are essential in the pollination of many fruits, like bananas, avocados and mangoes.
- They are also an incredibly diverse group, making up about a quarter of all mammalian species.
- But their ability to coexist with viruses that can spill over to other animals, in particular humans, can have devastating consequences when we eat them, trade them in livestock markets and invade their territory.

### **Significance of the study**

- The study highlighted the importance of understanding relationships between fungal species and other cave organisms, for they may have serious ecological and economic implications.
- Greater research into the interactions of these fungal species is required. Currently, there is renewed urgency to understand cave ecosystems as reservoirs of biological diversity and frontiers of scientific exploration.
- It is hoped that the discovery could trigger a wave of research on fungal species in bats as it did in the case of the White-nose syndrome.

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## **BIO FUEL**

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- **CONTEXT:** Researchers at the Indian Institute of Technology Hyderabad are using computational methods to understand the factors and impediments in incorporating biofuels into the fuel sector in India.

◎ **ABOUT:**

- Bioenergy is energy derived from biofuels. Biofuels are fuels produced directly or indirectly from organic material – biomass – including plant materials and animal waste.
- **Making of biofuels:** Biofuels is derived from
  - œ agricultural crops, including conventional food plants or from special energy crops
  - œ forestry, agricultural or fishery products or municipal wastes
  - œ agro-industry, food industry and food service by-products and wastes
- **Advantages:**
  - œ Unlike fossil fuels, biofuels are produced from renewable resources.
  - œ There are less pollutant emissions from biofuels. Ethanol reduces carbon monoxide emissions as it ensures complete combustion.
  - œ Biofuels do not contribute to global warming as carbon dioxide released, is taken up by their feedstocks.
  - œ Biofuels are cost-effective when compared to fossil fuels.
  - œ Unlike other alternative energy sources like wind and solar energy, a relatively small amount of biofuels can produce a significant amount of energy, which is best suited for transport applications.

**The current target**

- India's Ethanol Blended Petrol program, launched in 2013, has been growing over the years.
- It is now mandatory in India to blend fuel grade bioethanol with petrol (gasoline) to reduce the burden of crude oil import.
- The current target is to blend bioethanol to levels close to 20 per cent with gasoline. In a move towards green energy, the government also hopes to replace 20 per cent of fossil-fuel derived diesel by biodiesel.

**ACCELERATE VIGYAN**

◎ **CONTEXT:**

To provide a single platform for research internships, capacity building programs, and workshops across the country, the Science and Engineering Research Board (SERB) has launched a new scheme called 'Accelerate Vigyan' (AV).

◎ **ABOUT:**

- The primary objective of this inter-ministerial scheme is to give more thrust on encouraging high-end scientific research and preparing scientific manpower, which can lead to research careers and knowledge-based economy.
- The vision is to expand the research base, with three broad goals, namely-
  - œ consolidation/aggregation of all scientific programs
  - œ initiating high-end orientation workshops
  - œ creating opportunities for research internships for those who do not have access to such resources/facilities

**How will it work?**

- The AV will work on mission mode, particularly with respect to its component dealing with consolidation/aggregation of all major scientific events in the country.
- Thus, an Inter-Ministerial Overseeing Committee (IMOC) involving all the scientific ministries/departments and a few others have been constituted for the purpose of supporting SERB in implementing the AV scheme in a successful manner.

- . The database of skilled manpower developed across different disciplines so generated and the final outcomes captured in the process through all the sub-components of the AV will serve the cause of all stakeholders in respect of capacity building in the country.
- . The scheme also seeks to garner the social responsibility of the scientific community in the country.

### Major Components under the Scheme

#### . 'ABHYAAS' programme

œ As for the 'ABHYAAS' programme, it is an attempt to boost research and development in the country by enabling and grooming potential PG/PhD students by means of developing their research skills in selected areas across different disciplines or fields.

œ It has two components:

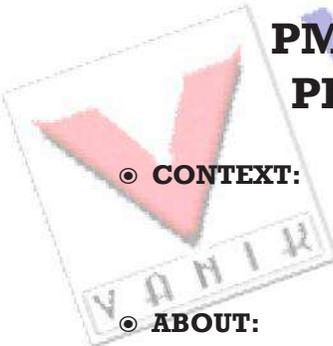
- > High-End Workshops ('KARYASHALA')
- > Research Internships ('VRITIKA')

#### . SAMMOHAN

œ Another new component under AV is 'SAMMOHAN' that has been sub-divided into 'SAYONJIKA' and 'SANGOSHTI'.

- > SAYONJIKA is an open-ended program to catalogue the capacity building activities in science and technology supported by all government funding agencies in the country.
- > SANGOSHTI is a pre-existing program of SERB.

## PM FORMALIZATION OF MICRO FOOD PROCESSING ENTERPRISES (PM FME)



### ◎ CONTEXT:

The Government has launched the 'PM Formalization of Micro Food Processing Enterprises (PM FME) scheme' as a part of "Atmanirbhar Bharat Abhiyan" to provide financial, technical and business support for upgradation of existing micro food processing enterprises.

### ◎ ABOUT:

#### • Details of the PM FME scheme

œ The Centrally Sponsored PM Formalisation of Micro Food Processing Enterprises (PM FME) scheme will be implemented over a period of five years from 2020-21 to 2024-25 with an outlay of Rs 10,000 crore.

œ The scheme aims to bring in new technology, apart from affordable credit to help small entrepreneurs penetrate new markets.

œ It will generate investment of Rs 35,000 crore, generate 900,000 jobs and help 800,000 units.

œ The expenditure under the scheme would to be shared

- > in 60:40 ratio between Central and state governments
- > in 90:10 ratio with North Eastern and Himalayan states
- > in 60:40 ratio with UTs with legislature and 100% by Centre for other UTs.

- . The scheme would directly benefit farmers and micro-entrepreneurs who contribute significantly to the Indian economy.

**One District One Product (ODODP)**

- . The scheme adopts ODODP approach to reap benefit of scale in terms of procurement of inputs, availing common services and marketing of products.
- . The states would identify food product for a district keeping in view the existing clusters and availability of raw material.
- . The ODOP product could be a perishable produce based product or cereal based products or a food product widely produced in a district and their allied sectors.
- . Illustrative list of such products includes mango, potato, litchi, tomato, tapioca, kinnow, bhujia, petha, papad, pickle, millet based products, fisheries, poultry, meat as well as animal feed among others. Preference would be given to those producing ODOP products. However, units producing other products would also be supported.

**'Extended Operation Greens'**

- . The government has also extended Operation Green from tomatoes, onions, and potatoes (TOP) to all fruits and vegetables (TOTAL).
- . Under the 'Extended Operation Greens' scheme, all varieties of fruits and vegetables have been included now.
- . This scheme would help in price stability and fair returns to the farmers.
- . 50% subsidy for transportation of fruits and vegetables would be provided under this scheme.

**PROJECT STARS****CONTEXT:**

The World Bank has approved a new project worth \$500 million to improve learning outcome and governance of government schools in six Indian states.

**ABOUT:**

- The project, named **STARS (Strengthening Teaching-Learning and Results for States Program)**, will be implemented through the **Samagra Shiksha Abhiyan**, the flagship central scheme, in partnership with-
  - œ Himachal Pradesh
  - œ Kerala
  - œ Madhya Pradesh
  - œ Maharashtra
  - œ Odisha
  - œ Rajasthan
- . The STARS program builds on the long partnership between India and the World Bank, since 1994, for strengthening public school education and to support the country's goal of providing '**Education for All**'.
- . Among other things, the World Bank initiative will focus directly on the delivery of education services at the state, district and sub district levels by providing customized local-level solutions towards school improvement.
- . Prior to STARS, the Bank had provided a total assistance of more than \$3 billion towards this goal.

**Samagra Shiksha Abhiyan**

- . Samagra Shiksha - an Integrated Scheme for School Education has been launched throughout the country as a Centrally Sponsored Scheme with effect from the year 2018-19.
- . This programme subsumes the three erstwhile Centrally Sponsored Schemes of
  - > Sarva Shiksha Abhiyan (SSA)
  - > Rashtriya Madhyamik Shiksha Abhiyan (RMSA)
  - > Teacher Education (TE)
- . It is an overarching programme for the school education sector extending from pre-school to class XII and aims to ensure inclusive and equitable quality education at all levels of school education.
- . It envisages the 'school' as a continuum from pre-school, primary, upper primary, secondary to senior secondary levels.

**The need of such initiative**

- . India has, over the years, made significant strides in improving access to education across the country; between 2004-05 and 2018-19, the number of children going to school increased from 219 million to 248 million, according to the multilateral agency.
- . However, learning outcomes across age groups remain below par.
- . In a recent report, UNESCO had said that countries including India need to focus on inclusion of students from underprivileged background in crisis times like the current covid-19 pandemic.
- . India's human capital needs to be strengthened via foundational learning for children.
- . STARS will support India's renewed focus on addressing the 'learning outcome' challenge and help students better prepare for the jobs of the future – through a series of reform initiatives.

**NEW MAPS REVEAL DETAILS OF THE LOST CONTINENT OF ZEALANDIA****◎ CONTEXT:**

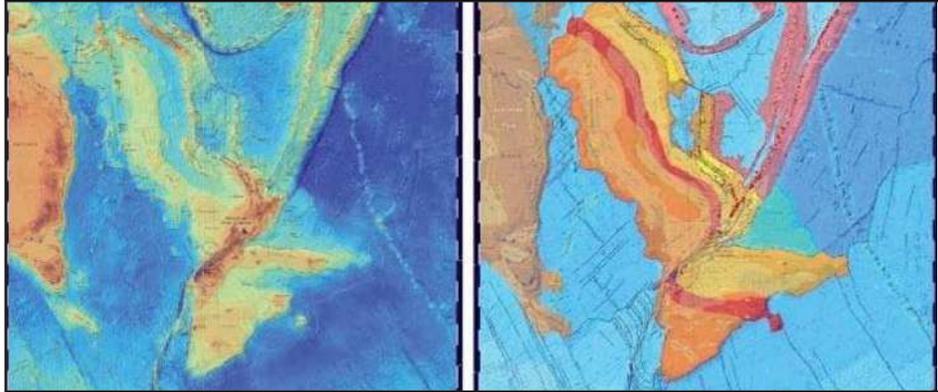
New Zealand recently published two new maps which cover the shape of the ocean floor and Zealandia's tectonic profile, which collectively help tell the story of the continent's origins.

**◎ ABOUT:**

- Considered to be a lost 'eighth continent' that got submerged underwater millions of years ago, the land mass is called Zealandia.
- . Researchers from GNS Science in New Zealand have now mapped the shape and size of the continent with utmost detail.
- . For the mapping, the researchers analysed the bathymetry — the shape and depth of the ocean floor — around Zealandia.
- . In addition, they studied its tectonic profile to accurately locate Zealandia across tectonic-plate boundaries.
- . The newly created maps bring to light previously unknown information about the formation of Zealandia.

**Lost eighth continent of earth**

- . Till 2017, Zealandia was classified as a "microcontinent," much like the island of Madagascar.



- . The landmass has “clearly defined boundaries, occupies an area greater than 386,000 square miles (1 million square kilometers), is elevated above the surrounding ocean crust, and has a continental crust thicker than that oceanic crust
- . Zealandia’s total area has been mapped to be nearly 2 million square miles (5 million square kilometers).
- . At this measure, Zealandia is about half the size of Australia, however, only 6% of the continent is above sea level.

#### **How did the continent sink?**

- . The idea of a potential continent in this area has been around for some time, and the name “Zealandia” was first coined by geophysicist Bruce Luyendyk in 1995.
- . The dedicated study of this area, stretching about 5 million square kilometers (about 1.93 million square miles), has since determined it is not just a group of continental islands and fragments, but a continental crust large and separate enough to be officially declared a separate continent.
- . Zealandia used to be part of Gondwana, the supercontinent that once held many of the continents such as Africa and South America.
- . About 85 million years ago, Zealandia split off from Gondwana. The drifting, shifting land mass, about half the size of Australia, was home to dinosaurs and lush rainforest.
- . Then, millions of years later, the world’s tectonic plates pieces of the Earth’s crust began reorganizing themselves, in a period of dramatic geological change that also created the Pacific “Ring of Fire,” a belt in the Pacific where the world’s most active volcanoes are located.
- . During this time, the Pacific Plate the world’s largest tectonic plate is believed to have sank below the continental crust of Zealandia.
- . This process, called subduction, caused the root of the continent to break off and sink as well

#### **The present scenario**

- . About 94% of Zealandia is now submerged underwater -- but some parts of the continent are still above land, making up New Zealand and other small islands.
- . The highest point of Zealandia is Aoraki--Mount Cook at 3,724 meters (12,218 feet).
- . There is still much unknown about the continent and whether the discovery of Zealandia could change historical climate models.
- . As more research emerges, the interactive website and maps will be updated to reflect what we know.



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## **SC REFUSES TO REVIEW ITS JUDGMENT WHICH DECRIMINALISED ADULTERY**

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◎ **CONTEXT:**

In a recent development, the Supreme Court refused to review its 2018 judgment which decriminalised adultery.

### **What is 'Review Petition'?**

- . A judgment of the Supreme Court becomes the law of the land, according to the Constitution. It is final because it provides certainty for deciding future cases.
- . However, the Constitution itself gives, under Article 137, the Supreme Court the power to review any of its judgments or orders.
- . This departure from the Supreme Court's final authority is entertained under specific, narrow grounds.
- . So, when a review takes place, the law is that it is allowed not to take fresh stock of the case but to correct grave errors that have resulted in the miscarriage of justice.
- . The court has the power to review its rulings to correct a "patent error" and not "minor mistakes of inconsequential import".
- . In a 1975 ruling, Justice Krishna Iyer said a review can be accepted "only where a glaring omission or patent mistake or like grave error has crept in earlier by judicial fallibility".

### **Grounds for seeking review of an SC verdict**

- . In a 2013 ruling, the Supreme Court itself laid down three grounds for seeking a review of a verdict it has delivered —
  - œ the discovery of new and important matter or evidence which, after the exercise of due diligence, was not within the knowledge of the petitioner or could not be produced by him
  - œ mistake or error apparent on the face of the record
  - œ or any other sufficient reason
- > In subsequent rulings, the court specified that "any sufficient reason" means a reason that is analogous to the other two grounds.

### **SC's 2018 Judgement**

- . A five-judge Review Bench led by Chief Justice of India Sharad A. Bobde upheld a September 2018 Constitution Bench which had struck adultery out of the penal statute book.
- . The original judgment was by a Constitution Bench led by then chief justice Dipak Misra who found that Section 497 (adultery) of the Indian Penal Code cannot "command" married couples to remain loyal to each other for the fear of penal punishment.
- . Two individuals may part if one cheats, but to attach criminality to infidelity is going too far, Justice Misra had observed in his separate opinion.
- . The court had reasoned that there was no data whatsoever to support claims that abolition of adultery as a crime would result in "chaos in sexual morality" or an increase of divorce.
- . Section 497 treats a married woman as the commodity of her husband, the Bench had held. The provision is a reflection of the social dominance of men prevalent 150 years ago.
- . Adultery is not a crime if the cuckolded husband connives or consents to his wife's extra-marital affair.
- . The Bench had also held that Section 198 (2) of the CrPC, which gave the cuckolded husband the exclusive right to prosecute his wife's lover, was manifestly arbitrary.
- . Adultery can however be a ground for civil remedy like dissolution of marriage



### What if a review petition fails?

- . As the court of last resort, the Supreme Court's verdict cannot result in a miscarriage of justice.
- . In *Roopa Hurra v Ashok Hurra* (2002), the concept of a curative petition was evolved
- . Curative petition can be heard after a review is dismissed to prevent abuse of its process.
- . A curative petition is also entertained on very narrow grounds like a review petition, and is generally not granted an oral hearing.

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## SCIENTISTS IDENTIFIES NEW 'RE-ASSORTED' INFLUENZA VIRUS WITH PANDEMIC POTENTIAL

### ◎ CONTEXT:

Scientists have identified a new 're-assorted' influenza virus from pigs in China that has pandemic potential. The virus has shown 'increased human infectivity' in swine industry workers.

### Key-highlights of the Study

- . The study was based on extensive surveillance done among pig populations in 10 provinces of China from 2011-2018.
- . The serological exercise showed that the new gene of the H1N1 virus has efficient infectivity and transmissibility in ferret models.
- . The viruses fell into six different genotypes, with the G4 strain becoming predominant since 2016.
- . They found that the G4 strain is a blend of three lineages-
  - œ one similar to those found in European and Asian birds
  - œ one linked to the 2009 H1N1 pandemic virus
  - œ a North American H1N1 triple-reassortant virus that has genes from avian, human, and swine sources
- . When they tested the G4 virus in the lab, they found that it had features similar to the 2009 H1N1 virus.

### About the new flu strain

- . The virus, which the researchers call **G4 EA H1N1**, can grow and multiply in the cells that line the human airways.
- . Tests also showed that any immunity humans gain from exposure to seasonal flu does not provide protection from G4.
- . It possesses "all the essential hallmarks of being highly adapted to infect humans".
- . Current flu vaccines do not appear to protect against it, although they could be adapted to do so if needed.
- . The new flu strain that has been identified in China is similar to 2009 swine flu, but with some new changes.

### 2009 swine flu

- . The last pandemic flu the world encountered - the swine flu outbreak of 2009 - was less deadly than initially feared, largely because many older people had some immunity to it, probably because of its similarity to other flu viruses that had circulated years before.
- . That virus, called A/H1N1pdm09, is now covered by the annual flu vaccine to make sure people are protected.

- . The bad new strain of influenza is among the top disease threats that experts are watching for, even as the world attempts to bring to an end the current coronavirus pandemic.
- . So far, it hasn't posed a big threat, but it is one to keep an eye on.

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## **INDIA DECLARES KHALISTANI TERRORISTS IN DESIGNATED TERROR LIST UNDER UAPA ACT**

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● **CONTEXT:**

**India has declared nine Khalistani terrorists in designated terror list under the provisions of the Unlawful Activities Prevention, UAPA Act to strengthen national security.**

● **ABOUT:**

- The Unlawful Activities (Prevention) Act, 1967 aims at the effective prevention of unlawful activities across India and abroad.
- . Its main objective was to provide powers to central agencies and states to deal with terrorist activities.
- . Unlawful activity "refers any action taken by individual or association whether by committing an act or by words, either spoken or written, or by signs to questions, disclaims, disrupts or is intended to disrupt the territorial integrity and sovereignty of India."
- . The UAPA has been amended on multiple occasions to incorporate the changing techniques of terrorism, from shifting the burden of proof to making extra-territorial arrests.
- . The most recent amendment that came was the Unlawful Activities (Prevention) Amendment Act, 2019 (UAPA, 2019) which dealt with expanding the definition of "terrorist" to include individuals under Section 35 and 36 of Chapter VI of the Act.
  - œ It allows the DG of NIA seizure of property from proceeds of terrorism under Section 25 and the powers of officers with the rank of inspectors and above to investigate cases under UAPA Section 43.
  - œ A Review Committee to 'denotify' the individual notified as a terrorist is also constituted by the Central Government thus removing all the chances of any institutional mechanism for judicial review.

### **Extent and Application of this Act**

- . It is applicable across the entire country.
- . Any Indian or foreign national charged under UAPA is liable for punishment under this Act, irrespective of the location of crime / offense committed.
- . UAPA will be applicable to the offenders in the same manner, even if crime is committed on a foreign land, outside India.
- . The provisions of this Act apply also to citizens of India and abroad.
- . Persons on ships and aircrafts, registered in India, wherever they may be are also under the ambit of this act.

### **Does the Act check on Fundamental Rights?**

- . The National Integration Council, the **Constitution (16th Amendment) Act, 1963**, has empowered Parliament to impose (by law) reasonable restrictions in the interests of sovereignty and integrity of India, on the;
  - œ Freedom of Speech and Expression.
  - œ Right to Form Associations or Unions.
  - œ Right to assemble peaceably and without arms.

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# MISCELLANEOUS CURRENT AFFAIRS



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## **COVAXIN: INDIA'S FIRST CORONAVIRUS VACCINE**

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- œ The country's 'first' indigenous COVID-19 vaccine COVAXIN, developed by city-based Bharat Biotech in collaboration with ICMR and NIV, has got the nod for human clinical trials from the Drug Controller General of India
- œ The indigenous and inactivated vaccine has been developed at Bharat Biotech's BSL-3 (Bio-Safety Level 3) high containment facility.
- œ The Drug Controller General of India CDSCO (The Central Drugs Standard Control Organisation), Ministry of Health & Family Welfare granted permission to initiate Phase I & II Human clinical trials after the company submitted results generated from pre-clinical studies, demonstrating safety and immune response.
- œ Human clinical trials are scheduled to start across India in July 2020.
- œ The vaccine is planned to be launched by August 15, 2020.

## **GOVERNMENT RECONSTITUTES CENTRAL ZOO AUTHORITY**

The Environment Ministry has reconstituted the Central Zoo Authority (CZA) to include an expert from the School of Planning and Architecture, Delhi, and a molecular biologist.

### **About Central Zoo Authority (CZA)**

- œ The CZA is a statutory body chaired by the Environment Minister and tasked with regulating zoos across the country.
- œ It is created under the provisions of the Wildlife (Protection) Act, 1972
- œ Apart from the chairman, it consists of 10 members and a member-secretary. Almost all of them are officials in the Environment Ministry and non-government experts are those who are wildlife conservationists or retired forest officers.
- œ The authority lays down guidelines and prescribes rules under which animals may be transferred among zoos nationally and internationally.
- œ It regulates the exchange of animals of endangered category Listed under **Schedule-I and II of the Wildlife Protection Act** among zoos.

## **GLOBAL E-WASTE IS ON INCREASE: UNITED NATIONS UNIVERSITY (UNU) REPORT**

- Global e-waste — discarded electrical and electronic equipment — will increase by 38 per cent in the decade between 2020 and 2030, according to a new United Nations University (UNU) report.
- œ There was 53.6 million tonnes (MT) e-waste in 2019. That is a nearly 21 per cent increase in just five years.
  - > Asia generated the greatest volume of e-waste in 2019 — some 24.9 MT, followed by the Americas (13.1 MT) and Europe (12 MT).
  - > Africa and Oceania generated 2.9 MT and 0.7 MT respectively.

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## **GYNANDROMORPHS**

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- œ In 2019, a peculiar dragonfly, the Scarlet Skimmer (*Crocothemis servilia*), in the Puzhakkal area of the Kole wetlands in Thrissur was discovered.

- œ During the discovery, researchers did not know that they were documenting a very rare biological phenomenon.
- œ But now, a rare biological phenomenon i.e. Gynandromorphism has been spotted in the Scarlet Skimmer (*Crocothemis servilia*).

### **What is Gynandromorphs?**

- œ Gynandromorphs are chimeric individuals having both male and female tissues, and are viewed by the scientific community as a genetic aberration.
- œ Even though common in some arthropod taxa such as Crustacea and Arachnida, it is very rare in Odonates and only 30 individuals from seven families have been reported with the condition worldwide.
- œ The spotted individual showed bilateral gynandromorphism of only the thorax, half of which showed blood red colouration as in males, and the other half had the pale yellow characteristic of females.
- œ The base of the wing of the red half was marked with rich amber, in contrast with the other wing base, which was paler.
- œ The head, legs and abdomen showed typical female morphology.
- œ The individual had a mix of male and female external characters, ranging from almost entirely female to about equally divided.

### **HUL DIVAS**

- œ Hul Divas is observed annually on June 30 in memory of tribals — Sidho and Kanhu Murmu — who led the Santhal hul (rebellion) on June 30, 1855, at Bhognadih in Sahebganj district.
- œ While people, mostly Santhals from Jharkhand and neighbouring states, gather large number to celebrate what they think was the first people's action against the British, the leaders such as the chief minister also attend the function to pay tribute to the tribal leaders and also to woo the Santhals whose vote matter a lot in the state politics.

#### **Santhal Hul Rebellion**

- . Just two years before the revolt of 1857, there was another revolt in North India against the British
- . The Santhal rebellion of 1855 CE was called Hul, which in the local language means a movement for liberation.
- . On one side were Santhals tribes and on the other were Britishers and their agents, the Zamindars.
- . The Santhals are a tribal community inhabiting large parts of Jharkhand, West Bengal, Bihar and Odisha.

### **INDIAN NAVY TO BE EQUIPPED WITH 'MAREECH' ATDS**

- œ 'Mareech,' the Advanced Torpedo Defence System (ATDS) has been included in the Indian naval ships and submarines, to locate and destroy the torpedoes fired at them.
- œ This system developed by the Defence Research and Development Organisation (DRDO) will prove vital for the Indian Navy.
- œ The inclusion of Mareech, in the Indian Navy, when the activities of the Chinese submarines are on the rise in the Indian Ocean, is entirely relevant.
- œ Mareech ATDS is an entirely indigenous system developed by Indian Navy and DRDO in collaboration.
- œ DRDO has been working on the development of the Mareech ATDS since 2016, given the increasing threat to Indian warships.

## **INDIA'S TRADE DEFICIT WITH CHINA FELL TO \$48.66 BILLION IN 2019-20**

- œ India's trade deficit with China fell to \$48.66 billion in 2019-20 on account of the decline in imports from the neighbouring country
- œ The trade deficit stood at \$53.56 billion in 2018-19 and \$63 billion in 2017-18.
- œ China accounts for about 14 per cent of India's imports and is a major supplier for sectors like mobile phones, telecom, power, plastic toys, and critical pharma ingredients.
- œ Foreign Direct Investment (FDI) from China in India has dipped to \$163.78 million in 2019-20 from \$229 million in the previous fiscal, according to the data.

### **What is a trade deficit?**

- . A trade deficit is an amount by which the cost of a country's imports exceeds its exports.
- . It is one way of measuring international trade, and it's also called a negative balance of trade.
- . This deficit occurs when a country does not produce everything it needs and borrows from foreign states to pay for the imports. That's called the current account deficit.

## **P.C. MAHALANOBIS LIFETIME ACHIEVEMENT AWARD**

- œ Former Reserve Bank of India Governor C. Rangarajan has been conferred the P.C. Mahalanobis Lifetime Achievement Award in recognition of his contribution to official statistics on the Statistics Day on June 29.
- œ In 2019, the Ministry of Statistics and Programme Implementation instituted a new award, namely, the **Prof. P.C. Mahalanobis National Award** in Official Statistics for recognizing outstanding achievement of official statisticians in Central Government, State Governments and Institutions.

### **Professor P.C. Mahalanobis (1893-1972)**

- . Professor P.C. Mahalanobis was a highly distinguished statistician who made extensive contributions to methodology, applications, statistical development, and public policy.
- . He founded the Indian Statistical Institute and served as an advisor to the Government of India.

## **PRADHAN MANTRI GARIB KALYAN YOJANA (PMGKY)**

- œ The Government has declared the extension of Pradhan Mantri Garib Kalyan Yojana (PMGKY) till November.
- œ This extension means, that citizens in poorer sections of the society will continue to receive relief, in the form of foodgrains and more for the next five months.
- œ For the next five months, citizens will be able to avail 5 kg rice or wheat over what they were getting on ration. In addition to this, 1 Kg Chana will be made available for each family per month.

### **What Is PM Garib Kalyan Anna Yojana?**

- œ In the wake of the ongoing economic and social crisis due to the coronavirus pandemic, the government rolled out a special economic relief package worth Rs 20 lakh crore to help the industry, middle class, micro, small and medium enterprises and the large industries.
- œ The package focusses on land, labour, liquidity and law, while helping small business, labourers, and farmers.
- œ The scheme has benefited as many as 80 crore people to get free rations during the crucial lockdown months.
- œ This scheme entails the distribution of 5 kg of wheat or rice to each family every month.

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## **PROPOSAL TO DECLARE SHIVALIK FOREST INTO A TIGER RESERVE**

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- œ The Uttar Pradesh government is actively considering the proposal to declare the **Shivalik forest** in the Saharanpur circle into a tiger reserve to reduce the increasing man-animal conflict.
- œ If accepted, it would be the fourth tiger reserve in Uttar Pradesh after Amangarh in Bijnor, Pilibhit and Dudhwa in Lakhimpur-Kheri.
- œ The forest constitutes the northern tip of the State and the 33,220-hectare-long corridor, located at the foothills of the Shivalik range, connects four States — Himachal Pradesh, Uttarakhand, Haryana and Uttar Pradesh.

### **What is Tiger Reserves?**

- œ A protected area statutorily designated for the conservation of the striped big cats is referred to as **Tiger Reserve**.
- œ However, a tiger reserve may also be a national park or wildlife sanctuary.
- œ **Typical zonation:** A Tiger Reserve consists of a
  - > 'Core' or 'Critical Tiger Habitat', which is to be managed as an inviolate area
  - > 'Buffer' or Peripheral area immediately abutting a Core area, which may be accorded a lesser degree of habitat protection

## **STRIPED HAIRSTREAK AND ELUSIVE PRINCE DISCOVERED IN ARUNACHAL PRADESH**

- œ Lepidopterists in Arunachal Pradesh have helped add two species to India's expanding list of butterflies.
  - > **Striped Hairstreak:** One of them, the **Striped Hairstreak**, was first recorded by Japanese entomologists in Hainan province of China.
    - The Striped Hairstreak (*Yamamotozephyrus kwangtungensis*) was located in Vijaynagar bordering Myanmar
  - > **Elusive Prince:** The other, Elusive Prince (*Rohana tonkiniana*), has a Vietnamese connection and was thought to be the more familiar Black Prince found in the Eastern Himalayas.
    - The Elusive Prince was found in Miao on the periphery of the Namdapha National Park.
- œ India now has 1,327 species, up from 1,318 in 2015

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## **WORLD BANK APPROVES FRESH FUNDS FOR GANGA CLEANING MISSION**

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The World Bank has approved a five-year loan to the Namami Gange project worth ` 3,000 crore (\$400 million) to develop and improve infrastructure projects to abate pollution in the river basin.

### **Funding**

- œ The Namami Ganga or the National Mission for Clean Ganga (NMCG) has already received ` 4,535 crore (\$600 million) from the World Bank until December 2021 as part of the first phase of the National Ganga River Basin project.
- œ So far, 313 projects worth ` 25,000 crore have been sanctioned under the mission.

**What is Namami Ganga Project?**

- œ Initiatives to clean the Ganga began with the Ganga Action Plan I in 1986. Till 2014, over Rs 4,000 crore had been spent. But the river has remained dirty.
- œ So the Namami Gange was launched in mid-May 2015. It was the biggest-ever initiative—over Rs 20,000 crore was allotted.
- œ Namami Gange is being implemented by the National Mission for Clean Ganga (NMCG), and its state counterparts—State Programme Management Groups.
  - > NMCG would establish field offices wherever necessary. The National Ganga Council (NGC) was created.
  - > And to give it utmost importance the Prime Minister was made the head of it. This council replaced the National Ganga River Basin Authority (NGRBA).
  - > NGC would have on board the chief ministers of five Ganga basin states—Uttarakhand, Uttar Pradesh (UP), Bihar, Jharkhand and West Bengal—besides several Union ministers and it was supposed to meet once every year.

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## CURRENT AFFAIRS ANALYST

WEEK- 3 (JULY, 2020)

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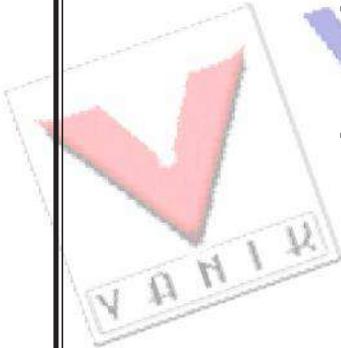
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**SECTION: A**  
**(MAINS)**

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**CURRENT AFFAIRS**

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## AGREEMENT FOR MSME EMERGENCY RESPONSE PROGRAMME

### CONTEXT

The World Bank and the Government of India signed the \$750 million agreement for the MSME Emergency Response Programme to support the increased flow of finance into the hands of micro, small, and medium enterprises (MSMEs), severely impacted by the COVID-19 crisis.

#### ● ABOUT

- œ The World Bank's MSME Emergency Response Programme will address the immediate liquidity and credit needs of some 1.5 million viable MSMEs to help them withstand the impact of the current shock and protect millions of jobs.
- œ This is the first step among a broader set of reforms that are needed to propel the MSME sector over time.
- œ The COVID-19 pandemic has severely impacted the MSME sector leading to loss of livelihoods and jobs. The Government of India is focused on ensuring that the abundant financial sector liquidity available flow to NBFCs, and that banks which have turned extremely risk-averse, continue taking exposures in the economy by lending to NBFCs.
- œ This project will support the Government in providing targeted guarantees to incentivize NBFCs and banks to continue lending to viable MSMEs to help sustain them through the crisis.
- œ The World Bank Group, including its private sector arm – the International Finance Corporation (IFC), will support the government's initiatives to protect the MSME sector by:
  - > **Unlocking liquidity:** This program will support the government's efforts to channel that liquidity to the MSME sector by de-risking lending from banks and Non-Banking Financial Companies (NBFCs) to MSMEs through a range of instruments, including credit guarantees.
  - > **Strengthening NBFCs and SFBs:** This will include supporting the government's refinance facility for NBFCs. In parallel, the IFC is also providing direct support to SFBs through loans and equity.
  - > **Enabling financial innovations:** Today, only about 8 percent of MSMEs are served by formal credit channels. The program will incentivize and mainstream the use of fintech and digital financial services in MSME lending and payments.



### Potential of MSME

#### Trend of SMEs in other countries

- œ China in the last 20 years has created more SMEs than the total number of SMEs in Europe and the US combined. There SMEs contribute to over 68% of the exports.
- œ In Japan, SMEs contribute 55% of the value-added and employ 70% of the wage earners
- œ In Thailand, SMEs contributes to 38 % to the GDP and employ 60.7% of the population

#### Challenges to MSME

- œ Despite the importance of MSMEs in Indian economic growth, the sector is facing challenges. The list of the problems that are faced by existing/new companies in the SME sector are:
  - > Absence of adequate and timely banking finance
  - > Limited capital and knowledge
  - > Non-availability of suitable technology
  - > Low production capacity
  - > Ineffective marketing strategy
  - > Constraints on modernization & expansions
  - > Non-availability of skilled labor at affordable cost
  - > Follow up with various government agencies to resolve problems due to lack of man-power and knowledge etc.

#### Some of the steps taken by the government to develop MSME

- œ The government has announced to revive the Indian economy amid the Covid-19 pandemic, an economic package under Atmanirbhar Bharat Abhiyan. The main thrust of the announcements has been a massive ` 3-lakh crores collateral-free assistance or sovereign credit guarantee to the Micro, small and medium enterprises (MSMEs).
- œ Trade-Related Entrepreneurship Assistance and Development (TREAD) was launched by the MSME ministry to promote women entrepreneurs by providing loans/credit.
- œ Zero Defect-Zero Effect (ZED) Scheme was launched to rate and handhold all MSMEs for

producing top quality products by utilizing clean technology.

- œ Prime Minister Employment Generation Programme and Other Credit Support Schemes
  - > Credit Guarantee Trust Fund for Micro & Small Enterprises (CGTMSE)
  - > Interest Subsidy Eligibility Certificate (ISEC)
- œ Development of Khadi, Village and Coir Industries
  - > Science and Technology Scheme
  - > Market Promotion & Development Scheme (MPDA)
  - > Revamped Scheme Of Fund for Regeneration Of Traditional Industries (SFURTI)
  - > Coir Vikas Yojana (CVY)

#### ○ WAY FORWARD

- œ It is very important to empower the SME sector to utilize the limited resources (human & economic) they have in an optimum manner.
- œ SMEs need to be educated and informed of the latest developments taking place globally and help to acquire skills necessary to keep pace with global developments.
- œ Status and concessions are to be provided to emerging entrepreneurs so that they feel that they are on the right track.
- œ The potential women entrepreneurs should be identified and steps should be taken to commence viable units by female entrepreneurs.
- œ The registration procedure for MSME units may be simplified.
- œ Technology up-gradation should be periodically done in MSME units. Governments, MSME Department, Department of Industries and Commerce, District Industries Centre, Chamber of Industries and Commerce, etc. should help the MSMEs units to go in for up-gradation of technology in their units.
- œ Labor problems can be solved to the maximum extent by providing suitable training facilities and proper working conditions. Workers' participation in decision making will also reduce the problems in the MSME units.

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## ZOONOTIC DISEASES

### CONTEXT

According to a new report published by the United Nations Environment Programme (UNEP) and the International Livestock Research Institute (ILRI), about 60 percent of known infectious diseases in humans and 75 percent of all emerging infectious diseases are zoonotic.

#### ◎ ABOUT

##### Insights of the Report

- œ **Report Name:** Preventing the Next Pandemic: Zoonotic diseases and how to break the chain of transmission.
- œ **Released on:** 'World Zoonoses Day' (July 6).
- œ The report discussed the context and nature of potential future zoonotic disease outbreaks, during the COVID-19 pandemic.
- œ It identified **seven anthropogenic driving factors** leading to the emergence of zoonotic diseases:
  - > Increased demand for animal protein
  - > Rise in intense and unsustainable farming
  - > The increased use and exploitation of wildlife
  - > Unsustainable utilization of natural resources
  - > Travel and transportation
  - > Changes in food supply chains
  - > The climate change crisis.

##### Zoonoses or Zoonotic Disease

- . It is a disease that has passed into the human population from an animal source directly or through an intermediary species.
- . Zoonotic infections can be bacterial, viral, or parasitic in nature, with animals playing a vital role in maintaining such infections.
- . Examples of zoonoses include HIV-AIDS, Ebola, Lyme disease, malaria, rabies, West Nile fever, and the current novel coronavirus disease (COVID-19) disease.

##### World Zoonoses Day

- . It is held every year to commemorate the first vaccination against a zoonotic disease that was successfully administered by **Louis Pasteur, a French biologist, on July 6, 1885.**
- . The day is also marked to raise awareness about the risk of zoonotic diseases.

##### Analysis of the factors

- œ **Increased demand for animal-derived food:** It has encouraged the intensification and

industrialization of animal production (a large number of genetically similar animals are bred in for higher productivity and disease resistance).

- œ **Intensive farm settings** cause animals to be raised close to each other, in less ideal conditions characterized by limited biosecurity and animal husbandry, poor waste management, and use of antimicrobials as a substitute for these conditions.

> High use of antimicrobials in such farm settings is also contributing to the burden of antimicrobial resistance (AMR), which itself is a chronic pandemic of high cumulative damage threatening public global public health.

- œ **The loss of forest cover for agricultural purposes** is influencing the emergence of zoonotic diseases by increasing human access to wildlife.

- œ **Environment-Wildlife Interface:** The **increased use and exploitation of wildlife** can bring humans in closer contact with wild animals.

- œ **Utilization of natural resources** owing to urbanization, **changes in land-use patterns**, and **growing industrialization** can also cause destruction and fragmentation of wildlife habitats and increase contact between humans and wildlife.

##### Recommendations suggested by the report

- œ The UNEP and ILRI emphasized on the importance of a **'One-Health' approach** to manage and prevent zoonotic disease outbreaks and pandemics. The report made ten recommendations based on the One Health approach which includes:

- > Raising awareness of zoonotic diseases;
- > Investing in interdisciplinary approaches, including One Health;
- > Expanding scientific inquiry into zoonotic diseases;
- > Improving cost-benefit analyses of interventions to include full-cost accounting of societal impacts of disease;
- > Strengthening monitoring and regulation practices associated with zoonotic diseases, including food systems;

- > Incentivizing sustainable land management practices and developing alternatives for food security and livelihoods that do not rely on the destruction of habitats and biodiversity;
- > Improving biosecurity and control, identifying key drivers of emerging diseases in animal husbandry and encouraging proven management and zoonotic disease control measures;
- > Supporting the sustainable management of landscapes and seascapes that enhance sustainable co-existence of agriculture and wildlife;
- > Strengthening capacities among health stakeholders in all countries;
- > Operationalising the One Health approach in land-use and sustainable development planning, implementation, and monitoring, among other fields.

#### ◎ **WAY FORWARD**

- œ There is an immediate need to invest in an in-depth understanding of environmental linkages with zoonotic diseases, monitoring of such diseases in

human-dominated environments, investigating how environmental change or degradation is impacting zoonotic disease emergence.

- œ We must follow sustainable methods of food production and reduce dependence on intensive systems to preserve health and ecosystems.

#### **United Nations Environment Programme (UNEP)**

- . **Established:** 5 June, 1972
- . **Headquarters:** Nairobi, Kenya
- . **Reports:** Global Environment Outlook, Actions on Air Quality, Emission Gap Report, Rise of Environmental Crime (by UNEP & Interpol).

#### **International Livestock Research Institute (ILRI)**

- . **Established:** 21 September, 1994
- . **Headquarters:** Nairobi, Kenya
- . ILRI's mission is to improve food and nutritional security and to reduce poverty in developing countries through research for efficient, safe and sustainable use of livestock—ensuring better lives through livestock.



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## ISRAEL – PALESTINE CONFLICT

### CONTEXT

**Egypt, France, Germany, Jordan warn Israel that annexing settlements in the occupied West Bank could have ‘consequences’ for relations.**

◎ **ABOUT:**

- œ The government of Israel had set July 1 as the date when it could begin to annex Jewish settlements in the occupied West Bank, as well as in the strategic Jordan Valley.
- œ The move was endorsed by a Middle East plan unveiled by US President Donald Trump in January.
- œ After the joint video conference, the foreign ministers of four countries said in a statement that any annexation of Palestinian lands occupied by Israeli forces in 1967 would imperil the foundation of peace talks and a violation of international law.
- œ The statement further added that the countries would not recognize any changes to the 1967 borders. It also warned that the Israeli plans would have serious consequences for the stability and security of the region.
- œ The EU has also mounted a diplomatic campaign against the annexation, highlighted by a visit to Jerusalem by German Foreign Minister Heiko Maas to raise concerns about the prospective plans.

Palestine-Israel Conflict	
<b>1945</b>	World War 2 ends. 6mn Jews killed and millions displaced. Many Jewish people seeking a safe land of their own
<b>1947</b>	UN recommends splitting Palestine into separate Jewish and Arab States.
<b>1948-49</b>	Israel declares independence. This leads to the first Arab-Israeli war. Israel seizes more land than agreed in armistices leaving 750k Palestinian Arabs displaced. The Gaza strip is created.
<b>1949-60s</b>	More than 1mn Jews including 250k Holocaust survivors arrive in Israel to settle
<b>1967</b>	6-day war. Israel takes control of many places including Gaza.

<b>1993</b>	Palestine and Israeli leaders sign a Declaration of Principles in Washington. Here the Palestinian Liberation Organisation (PLO) is recognized by Israel and given some powers in Gaza. The PLO recognizes Israel's right to exist. Violence is stopped.
<b>2002</b>	After a string of suicide bombings, Israel starts building the controversial West Bank barriers- a 440-mile wall separating it from Palestinian territories.
<b>2005</b>	Israel agrees to withdraw from Gaza but maintains control of airspace and some imports/exports while restricting some travel
<b>2008</b>	Israel invades Gaza in Operation Cast Lead after rockets were fired over the wall. The conflict lasts 1 month. 1391 Palestinians and 30 Israelis are killed.
<b>2014</b>	There is a 50-day conflict over the summer in Operation Protective Edge after more rockets are launched at Israel. Israel invades Gaza again. 2,014 Palestinians and 73 Israelis are killed.
<b>2017</b>	U.S. President Donald J. Trump announces his decision to relocate the U.S. embassy to Jerusalem, recognizing the city as Israel's capital.
<b>2018</b>	The United States slashes bilateral aid to the Palestinians and the UN Relief and Works Agency for Palestine Refugees (UNRWA), closes the PLO office in Washington, DC, and opens its embassy in Jerusalem.

### Two-state Solution

- œ It is a proposed framework for resolving the Israeli-Palestinian conflict by establishing two states for two people: Israel for the Jewish people and Palestine for the Palestinian people.

œ In 1993 the Israeli government and the Palestine Liberation Organization (PLO) agreed on a plan to implement a two-state solution as part of the Oslo Accords, leading to the establishment of the Palestinian Authority (PA).

### **India's stand on Palestine-Israel conflict**

- œ India has consistently supported the legitimate right of the Palestinian people to a State and the consequent imperative need for a just, comprehensive and lasting peace in the region based on United Nations Security Council resolution 242, 338 and 425, as well as the principle of "Land for Peace." India has also supported the Madrid Conference of October 1991.
- œ India favored UNHRC's resolution in 2014 to probe Israel's human rights violations in Gaza. Despite

supporting probe, India abstained from voting against Israel in UNHRC in 2015.

- œ India has de-hyphenated its relationship with Israel and Palestine in 2018 as part of its West Asia policy to treat both the countries mutually independent and exclusive.

### **☉ WAY FORWARD**

The Middle East has gone through dramatic shifts since the beginning of this conflict. In confronting common threats and in pursuing common interests, previously unimaginable opportunities and alliances are emerging. If peace can be achieved, the economic and security cooperation between the State of Israel and its Arab neighbors can create the prosperous Middle East that is connected by a common desire for security and economic opportunity.

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## SOUTH CHINA SEA DISPUTE

### CONTEXT

While the world is distracted by the coronavirus pandemic, China has been quietly taking paramilitary and political-legal actions in the South China Sea that could be game-changing for the region.

#### ● ABOUT

- œ Philippines decided not to suspend a defense pact with the U.S., avoiding a major blow to one of America's oldest alliances in Asia.
- œ The alliance is seen as having deterred aggressive Chinese actions in the disputed South China Sea, including the possible construction of structures in Scarborough Shoal, a disputed fishing area off the northwestern Philippines that China effectively seized after a tense standoff in 2012.
- œ Also, Beijing has been raising the stakes over the past year by threatening major offshore oil and gas projects inside Malaysia's and Vietnam's internationally recognized exclusive economic zones (EEZs).
- œ Recently, a Chinese survey ship escorted by the China Coast Guard harassed an exploration vessel operated by the Malaysian energy giant Petronas inside Malaysia's EEZ. The intimidation of the drillship followed similar standoffs last year.
- œ Before reaching Malaysia, the survey ship sailed through Vietnam's EEZ near the site of a previous incident.
- œ In 2019, Chinese and Vietnamese ships tried to block each other's exploration of five offshore oil blocs inside Vietnam's EEZ.
- œ This has raised worries in the region that China is trying to disrupt and gradually strangle Malaysian and Vietnamese oil and gas operations in the area and erase their territorial claims.



- œ The cost to Malaysia will be severe if Petronas has to pull the plug on important projects. Similarly, Hanoi fears that ExxonMobil and Rosneft might abandon projects in Vietnamese waters if Chinese harassment continues.

**Significance of the South China Sea**

- œ The sea carries tremendous strategic importance; one-third of the world’s shipping passes through it, carrying over \$3 trillion in trade each year, it contains lucrative fisheries, which are crucial for the food security of millions in Southeast Asia. Huge oil and gas reserves are believed to lie beneath its seabed.
- œ 80 percent of China’s energy imports and 39.5 percent of China’s total trade passes through the South China Sea.

**The Dispute**

- œ Territorial disputes in the South China Sea involve both island and maritime claims among several sovereign states within the region, namely Brunei, the People’s Republic of China, Malaysia, the Philippines, and Vietnam.
- œ The disputes include the islands, reefs, banks, and other features of the South China Sea, including the Spratly Islands, Paracel Islands, Scarborough Shoal, and various boundaries in the Gulf of Tonkin.
- œ China claims almost the entire South China Sea, reflected in a map created with a 9-dash line to show them as a part of China.

**The Permanent Court of Arbitration (PCA) verdict**

- œ The PCA award undermined the Chinese claim. It held that none of the features of the Spratly’s qualified them like islands, and there was no legal basis for China to claim historic rights and to the resources within the ‘nine-dash line’.
- œ The UNCLOS provides that islands must sustain habitation and the capacity for non-extractive economic activity. Reefs and shoals that are unable to do so are considered low-tide elevations.

**India’s interest in the region**

- œ India is seen as a vital player in the region, and Southeast Asian countries are keen to partner with India both economically and strategically.

- œ With India’s maritime discourse expanding and 55% of India’s trade passing through this region, India must pursue its interest in the region.
- œ India’s “legitimate interests” are reflected in the energy contracts that its public sector giant Oil and Natural Gas Commission’s Videshi Limited (OVL) had acquired through legal and global norms in the South China Sea.
- œ India has, on several occasions, called upon all parties to avoid unilateral action that leads to tensions in the region and called for peaceful resolution of disputes without the threat of use of force.

**Importance of the South China Sea for the USA**

- œ America’s concern with the South China Sea is a result of China’s effort to secure control over the maritime territory and the resources it contains.
- œ Washington argues that UNCLOS permits nations to exercise “high seas freedoms,” which include, inter alia, peaceful military operations, in the Exclusive Economic Zones (EEZs) of coastal states. China disagrees.
- œ For America, then, the future of the current regional order and the security of its allies are at stake. To maintain its geopolitical position in the western Pacific, the US is obliged to defend the regional alliance system and reassure local powers who are concerned about China’s intentions.

**© WAY FORWARD**

- œ Preventing the Western Pacific from turning into a China-owned lake requires working together to defend partners and international law.
- œ Maritime states like the Philippines, Vietnam, Indonesia, Malaysia, and Brunei should enhance cooperation by coordinating their coast guard operations, increasing their sharing of intelligence, and reaching an accord on how their overlapping South China Sea maritime boundaries should be demarcated.
- œ India must continue to actively pursue its defense diplomacy outreach in the Indo-Pacific region: increase military training and conduct exercises and exchanges at a higher level of complexity, extend Humanitarian Assistance and Disaster Relief activities, share patrolling of the Malacca Strait with the littoral countries, etc.

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## **POSTAL BALLOT SYSTEM CONTEXT**

**In response to the COVID-19 pandemic, the Election Commission of India (ECI) has made it possible for senior citizens above the age of 65 to vote by postal ballot. Hitherto, this option was available only to disabled citizens and those above 80 years.**

### ◎ **BACKGROUND**

- œ The **Representation of the People Act, 1951** provides for any person to be given the **postal facility by the ECI in consultation with the government.**
- œ The ECI had recommended that three categories of electors be given the postal ballot facility:
  - > Those 80 years and above
  - > Persons with disabilities
  - > Essential services workers
- œ This was notified by the government on October 22, 2019, and the ECI rolled it out as a pilot in seven constituencies in the Jharkhand Assembly elections last year.
- œ Subsequently, in the NCT of Delhi Legislative Assembly Elections in February 2020, this facility was extended in all 70 ACs.
- œ Due to COVID-19, the country is in lockdown since March 25, those above 65 years are categorized as vulnerable in COVID-19 pandemic, hence the ECI has decided to extend the postal ballot facility to them and those in-home or institutional quarantines to minimize their exposure in public and yet not deprive them of their voting rights.
  - > A new category of "Covid-19 suspect or affected persons" has been added under **Rule 27A of the Conduct of Election Rules, 1961.**

### **Issues related to the recent extension of the Postal Ballot by the ECI**

- œ The move will ensure to expand the voter base and remove obstacles to voters exercising their franchise.
- œ However, postal ballots may not minimize the risk of infection and it may be better instead to provide separate voting booths for senior citizens.
- œ Political parties argue that allowing those aged 65 and above to vote by postal ballot **violates secrecy in voting** as a large segment of the population is uneducated and they might seek assistance from others at numerous stages, ending up disclosing their preferred candidate.
- œ It also exposes a high percentage of voters to organized administrative influence or influence by the Government or the ruling party or their

agents or any number of individuals who shall be able to identify these individuals in advance (with ease) and influence how they vote without the protection of the secret ballot.

- œ It will be doubly endangering not just the voters but those around them vis-à-vis exposure to the Covid-19 virus.
  - > Form 13A along with the Postal Ballot Paper has to be duly attested and notarized for which the voter will have to personally meet an officer.
  - > The voter shall have to utilize the services of a government postal office to send his or her postal ballot and therefore, will yet again risk either contracting or spreading Covid-19 infection.

### **Need of Extension of Postal Ballot for the Migrant Workers**

- œ As per the **Economic Survey 2017, internal migrant workers constitute about 13.9 crores**, which is nearly a third of India's labor force. Often they work hard in exploitative low-wage jobs, lacking identity and proper living conditions, without access to welfare and unable to exercise their voting rights.
- œ Migrant workers become quasi-disenfranchised, forgotten voters because they cannot afford to return home on Election Day to choose their representatives.
- œ Internal migrant workers do not enroll as voters in their place of employment:
  - > Since they find proof of residence hard to provide.
  - > Many are seasonal migrants who would rather vote in their villages if they could afford to return home.
- œ Since they do not have a vote where they work, their concerns are easy to ignore in their host State.

### **Voting Scenario in India**

- œ India currently has over 91.05 crore registered voters and in the 2019 general election, a record 67.4%, i.e., 61.36 crore voters, cast their vote. One-third, a substantial 29.68 crore did not cast their vote.

- œ **As per the National Election Study surveys** about 10% of registered voters refrain from voting due to a lack of interest in politics. That leaves approximately 20 crore voters who want to vote but are unable to do so.
  - > Of these, there are about three crores Non-Resident Indians (NRIs). Only about one lakh NRIs have registered to vote. Of them, about 25,000 voted in the 2019 elections.

### Postal Ballot System

- œ Through this facility, a voter can cast her vote remotely by recording her preference on the ballot paper and sending it back to the election officer before counting.
- œ Currently, only the following voters are allowed to cast their votes through postal ballot:
  - > Service voters (government employees) posted away from home can vote through the Electronically Transmitted Postal Ballot System (ETPBS).
  - > Classified service voters (e.g., military personnel) can do so through their proxies.
  - > Voters under preventive detention can also vote only by post.
- œ Recently, a new category of '**absentee voters**' was introduced; the voters can now also opt for postal voting. These are voters employed in essential

services and unable to cast their votes due to their service conditions.

- > Currently, officials of the Delhi Metro Rail Corporation, Northern Railway (Passenger and Freight) Services, and media persons are notified as absentee voters.

### © WAY FORWARD

- œ The central mission of the ECI should be to ensure that every Indian who is eligible to vote can cast the vote.
- œ The ECI is testing an **Aadhaar-linked voter-ID based** solution to enable electors to cast their votes digitally from anywhere in the country. But, it must be ensured that the linkage with Aadhaar does not result in the exclusion of eligible individuals.
- œ To facilitate voting by migrant workers, the ECI could undertake substantial outreach measures using the network of District Collectorates.
- œ Migrants should be able to physically vote in their city of work based on the address on their existing voter IDs and the duration of their temporary stay.
- œ Voting must be viewed not just as a civic duty **but as a civic right**. We must demonstrate the political will to usher in 'One Nation One Voter ID,' to ensure native ballot portability and empower the forgotten migrant voter.



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# COVID-19 PANDEMIC AND NATIONAL SECURITY

## ◎ BACKGROUND

- œ The past experiences show that pandemics not only destroy immune systems but also undermine the social, economic, and political systems that underpin entire nations and regions.
- œ There has been considerable debate regarding the linkage between the pandemic and the national security. As Coronavirus or the COVID-19 reaches over 200 countries infecting millions of people and killing over 250, 000 (and counting), it is time to examine the threat not just from health or medical point of view but a larger perspective of national security.
- œ Treating the Coronavirus crisis as a national security issue would make the battle against it more organized.

## ◎ ABOUT

### Pandemic and National Security

- œ The growing COVID-19 pandemic and the outbreak of HIV/AIDS, Influenza H1N1 and SARS in recent past are just a few examples of diseases that can profoundly threaten the physical integrity of a state.
- œ The pandemic poses not only a greater level of severity in its threat to the highly afflicted states but also substantially endangers the security of the less affected states.
- œ The pandemic presents a range of challenges to the integrity of a state and may best be tackled by various states through different institutions, diplomatic instruments, economic schemes, and public health strategies.
- œ The inevitable connection of pandemics and security was best explained by the then UN Secretary-General Kofi Annan. He emphasized the increasing need for “**collective security**” and “**biological security.**”
- œ Looking at the present situation, national security needs to be redefined as conventional war is no longer the primary physical threat to a state; rather, the focus must shift to include threats from the disease that challenge the interests of states both internally as well as externally.

### How national security of a state can be threatened by a pandemic?

#### . Strains on Public Health

- > Increased rates of illness and mortality putting huge strains on public health and the nation’s

workforce, leading to political instability, class strife, and economic recession. For example, HIV/AIDS has led to numerous problems in many African countries.

#### . Vulnerability to biological warfare

- > The most direct threat posed by a pandemic to the international community arises from its **vulnerability to biological warfare**. It is important to note that the result of a naturally spreading disease and something **like bioterrorism** is the same.
- > The failure to prevent the biological weapons’ attack results in the same outcome – infection of the population – and requires the same solution. The preparation for the widespread disease should, therefore, be a key focus of national security.

#### . Social, economic, and political stability

- > The pandemics pose more indirect threats to national security which include “the **health of the armed forces** and most significantly, to the social, economic, and political stability of certain key regions.”

### Coronavirus and Human Security

#### . Recession & Unemployment

- > The scope of human security could be expanded to include **not only traditional, political, and military security but also economic, educational, food, and health security** among others. On the economic front, the Corona pandemic has plunged the world economy into a recession with the potential of deep consequences and historical levels of unemployment and deprivation.

#### . Learning and Human Interaction

- > The closure of the education sector due to the spread of Coronavirus is adversely affecting the children and young people. It is **disrupting the process of learning and human interaction** which is essential to social and behavioral growth.

#### . Global Health Security

- > In the absence of specific anti-viral therapy, Coronavirus has seriously **damaged the prospects of global health security**. Despite apparent decisive actions by the governments, it is evident that it has affected people from

all over the world -- rich as well as poor countries.

**Food Security**

- > The food security, another important component of human security, is also seriously threatened because of the global pandemic of COVID-19. COVID-19 will have significant **negative effects on people along the food supply chain** involving producers to processors, marketers, transporters, and consumers.

**Coronavirus and Migration**

- œ The issue of migration and refugees poses a serious security threat to the affected countries. This is because **refugees and Internally Displaced Persons (IDPs)** often don't have fixed places to live, and authorities might not know how to contact them or have the capacity to coordinate a response. Given the condition in which the refugees live in the camps of Syria, Myanmar – Bangladesh border, it would be disastrous if the Coronavirus reaches there. The human rights approach critically comes within the **broad framework of national security as human rights and human security are inseparable components of national security.**

**COVID-19: Violent Extremism**

- œ One of the disturbing features of the ongoing Corona crisis is the **emerging pattern of the relationship between actors of political violence and the pandemic.** Violent extremists probably are seeking to exploit public fears associated

with the spread of COVID-19 to incite violence, intimidate targets, and promote their ideologies.

- œ **Cyber terrorism** has grown into a major security threat in this era of Information and Communication Technology (ICT). Cybercriminals are taking advantage of the situation and already started new techniques to inflict more damages on states and the people. More and more hospitals, research hubs, and medical centers are being targeted for information, intelligence, and system accessibility.

- > **For Example**, a hacker group attacked the computer systems of the UK's Hammersmith Medicines Research (HMR), which is performing trials on COVID-19 vaccines; publishing personal data of thousands of former patients after the company failed to pay the extortion demand.

- œ COVID-19 brings in more challenges for the **Left-Wing or Right-Wing** infested countries. For example, India, where the Maoist Movement is considered to be the greatest internal security problem, faces the daunting task of tackling two invisible enemies (the Coronavirus and the Maoist insurgents) simultaneously.

© **CONCLUSION**

As the Coronavirus pandemic escalates, the task of rethinking the political, economic, diplomatic, and strategic fundamentals of a more coherent approach to national security becomes more urgent than ever. As the battle against COVID-19 is seemingly uncertain, one thing is clear that it is going to alter a whole lot of ethos of national security.

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# **SECTION: B**

## **(PRELIMS)**

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**CURRENT AFFAIRS**



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## MONGOLIAN KANJUR

◎ **CONTEXT:**

The Ministry of Culture has taken up the project of reprinting of 108 volumes of Mongolian Kanjur under the National Mission for Manus, NMM.

◎ **ABOUT:**

- The first set of five volumes of Mongolian Kanjur published under the NMM was presented to President Ram Nath Kovind on the occasion of Guru Purnima, also known as Dharma Chakra Day, on 4<sup>th</sup> July.
- It is expected that all the 108 volumes of the Mongolian Kanjur will be published by March 2022.

### Mongolian Kanjur

- It is a Buddhist canonical text in 108 volumes and it is considered to be the most important religious text in Mongolia.
- In the Mongolian language '**Kanjur**' means '**Concise Orders**'- the words of Lord Buddha in particular. It is held in high esteem by the Mongolian Buddhists and they worship the Kanjur at temples and recite the lines of Kanjur in daily life as a sacred ritual. The Kanjur is kept almost in every monastery in Mongolia.
- Mongolian Kanjur has been translated from Tibetan. The language of the **Kanjur is Classical Mongolian**. The Mongolian Kanjur is a source of providing a cultural identity to Mongolia.

### National Mission for Manuscripts (NMM)

- It was launched in February 2003 by the Government of India, under the Ministry of Tourism and Culture.
- The mandate is documenting, conserving, and disseminating the knowledge preserved in the manuscripts.
- One of the objectives of the mission is to publish rare and unpublished manuscripts so that the knowledge enshrined in them is spread to researchers, scholars, and the general public at large.

### Cultural Relations between India and Mongolia

- Historical interaction between India and Mongolia goes back centuries. Buddhism was carried to Mongolia by Indian cultural and religious ambassadors during the early Christian era. As a result, today, Buddhists form the single largest religious denomination in Mongolia.
- India established formal diplomatic relations with Mongolia in 1955. Since then, the overwhelming relationship between both countries has now reached a new height.
- Now, the publication of Mongolian Kanjur by the Government of India for the Government of Mongolia will act as a **symbol of cultural symphony between India and Mongolia** and will contribute to the furtherance of bilateral relations during the coming years.

### Dharma Chakra Day

- This day commemorates **Gautam Buddha's First Sermon** to his first five ascetic disciples at the Deer Park, Rsiapatana in the present day Sarnath near Varanasi, UP.
- The day is also celebrated by Buddhists all over the world as the day of **Dharma Chakra Parvattana or "Turning of the Wheel of Dharma"**.

## IAF GETS APACHE ATTACK HELICOPTERS FROM BOEING

- ◎ **CONTEXT:** Boeing handed over the last of the five AH-64E Apache attack helicopters to the Indian Air Force (IAF), completing the contract for 22 Apaches.
- ◎ **ABOUT:**
  - India contracted 22 Apache helicopters and 15 Chinook helicopters from Boeing through the Foreign Military Sales programme of the U.S. government in September 2015 under a \$3 billion deal.
  - The IAF inducted the first batch of Apaches in September 2019 and based them at Air Force Station, Pathankot, Punjab.
    - œ While the last five Apaches arrived in India early this year, the handover was slightly delayed due to the COVID-19 lockdown.
  - The Apaches were deployed at the Leh airbase as part of the forward movement of assets, amid the stand-off with China in Ladakh.
  - Earlier, in March, Boeing handed over the last five of the 15 CH-47F (I) Chinook heavy-lift helicopters to the IAF.

### AH-64E Apache Attack Helicopter

- It will replace the Mi-35 fleet.
- Alongside the capability to shoot fire-and-forget anti-tank guided missiles, air-to-air missiles, rockets, and other ammunition, it also has **modern EW [electronic warfare] capabilities** to provide versatility to the helicopter in network-centric aerial warfare.
- The helicopter is capable of delivering a variety of weapons which include air to ground Hellfire missiles, 70 mm Hydra rockets, and air to air Stinger missiles.
- Apache also carries one 30 mm chain gun with 1200 rounds as part of the area weapon subsystem.
- To add to the lethality of the helicopter, it carries **fire control radar**, which has 360° coverage and nose-mounted sensor suite for target acquisition and night vision systems.
- It has an improved **Modernized Target Acquisition Designation System** that provides day, night, and all-weather target information, as well as night vision navigation capability.
- It can be used for multi missions like for reconnaissance, security, peacekeeping operations, apart from attack operations.

### CH-47F (I) Chinook Heavy-lift Helicopters

- It is a **heavy lift, tandem rotor helicopter** that serves armed forces of 19 countries. It will greatly enhance IAF's HADR (humanitarian assistance and disaster relief) capability.
- The Chinook is an advanced multi-mission helicopter that will provide support to the Indian armed forces during disaster relief, medical evacuation, search and rescue missions, aircraft recovery, and parachute drops.
- Each Chinook can carry goods and cargo weighing up to 9.6 tonnes. This includes men and machines—like artillery guns and light armoured vehicles—to high altitudes.
- The Chinook contains a fully integrated, Digital Cockpit Management System, Common Aviation Architecture Cockpit, and advanced cargo-handling capabilities.

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## e-CROPPING

- ◎ **CONTEXT:** For the first time, Agriculture and Revenue Departments of Andhra Pradesh has jointly taken up e-Cropping, which will be useful to farmers.

- It is an Android application launched with a local name called **e-Panta**, which is designed to know the ground reality of the crop details and to analyze the crop pattern across the state and to capture the standing crop in the state.
- Photographs as evidence in the case of crop damage and insurance are also available as the arable land in the state has been captured in latitude and longitude along with subdivision and occupancy.
- All field officers are trained to capture the crop details in the existing agricultural fields using tabs and to upload the crop details to the server for every crop season.
- The features include an online transfer of crop details to **Webland (Land record management website)**, evidence in the case of crop damage for insurance, evidence for crop loans by banks, crop pattern and water tax demand analysis, and GPS location of each land parcel across the state. The mobile app covers land use and the entire Pattadar's history of land cover.

### Objectives of e-cropping:

- Sharing of agricultural information with the farmers through digitalization.
- To eradicate corruption.
- To maintain accuracy through photographs with Geo-tagging
- To create Biometric authentication for genuine users.
- To create a robust MIS system through Data analytics and Powerful Business Intelligence for various analysis reports.

### E-Technology in the Aid of Farmers by the Government of India

- **Small Farmers' Agri-Business Consortium (SFAC):** SFAC is an exclusive Society focused on increasing incomes of small and marginal farmers through aggregation and development of agribusiness. SFAC offers Schemes like Equity Grant and Credit Guarantee Fund Scheme to FPCs to improve the availability of working capital and the development of business activities.
- **Kisan Sabha App:** The primary objective of Kisan Sabha is to connect farmers to the supply chain and freight transportation management system.
- **Kisan Rath Mobile App:** It will facilitate farmers and traders to identify suitable transport facilities for the movement of farm produce during coronavirus lockdown. The App will allow transportation of farm produce from farm gate to mandi and from one to another mandi. It will ensure seamless supply linkages between farmers, FPOs, APMC mandis, and intra-state and inter-state buyers.
- **National Agriculture Market (eNAM):** It is a pan-India electronic trading portal which networks the existing APMC mandis to create a unified national market for agricultural commodities. Small Farmers Agribusiness Consortium (SFAC) is the lead agency for implementing eNAM under the aegis of the Ministry of Agriculture and Farmers' Welfare, Government of India.

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## INDIA'S SECOND VNR REPORT

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◎ **CONTEXT:**

NITI Aayog Presented India's 2nd Voluntary National Review at UN's High-Level Political Forum.

◎ **ABOUT:**

- India presented its VNR along with other second time presenters like Bangladesh, Georgia, Kenya, Morocco, Nepal, Niger, Nigeria, and Uganda.
- India's VNR this year has undertaken a paradigm shift in terms of embodying a "whole-of-society" approach.

- The process of preparation of a country's VNR provides a platform for partnerships, including through the participation of various relevant stakeholders.
- NITI Aayog prepared and presented India's first VNR in 2017.
- The VNRs presented by the Member States at the HLPF are a critical component of the review of the progress and implementation of the 2030 Agenda and the SDGs.

### **High-Level Political Forum (HLPF)**

- The establishment of the United Nations High-level Political Forum on Sustainable Development (HLPF) was mandated in 2012 by the outcome document of the United Nations Conference on Sustainable Development (Rio+20), "The Future We Want".
- The Forum meets annually under the auspices of the Economic and Social Council for eight days, including a three-day ministerial segment and every four years at the level of Heads of State and Government under the auspices of the General Assembly for two days.
- The Forum's first meeting was held on 24 September 2013. It replaced the Commission on Sustainable Development, which had met annually since 1993.
- The HLPF has a central role in the follow-up and review of the 2030 Agenda for Sustainable Development the Sustainable Development Goals (SDGs) at the global level.
- The Forum adopts inter-governmentally negotiated political declarations.
- These national reviews are expected to serve as a basis for the regular reviews by the HLPF.

## **INDIA'S TIGER CENSUS OF 2018 SETS A GUINNESS WORLD RECORD**

### ◎ **CONTEXT:**

The fourth cycle of the All India Tiger Estimation 2018 has entered the Guinness World Record for being the world's largest camera trap wildlife survey.

### ◎ **ABOUT:**

- The citation at the Guinness World Record website says the fourth iteration of the survey - conducted in 2018-19 - was the most comprehensive to date, in terms of both resource and data amassed.
- The All India Tiger Estimation done quadrennially is steered by the National Tiger Conservation Authority with technical backstopping from the Wildlife Institute of India and implemented by State Forest Departments and partners.
- India is home to nearly 75 percent of the global tiger population and has already fulfilled its resolve of doubling tiger numbers; made at St. Petersburg in 2010, well ahead of the target year of 2022.

### **All India Tiger Estimation 2018**

- The tiger numbers stood at **2,967 at last count in 2018, a 33 percent jump** from 2,226 in 2014.
- **Top 5 Performing States:** Madhya Pradesh saw the highest number at 526, followed by Karnataka (524), Uttarakhand (442), Maharashtra (312), and Tamil Nadu (264).
- **States with a decline in tiger population:** Chhattisgarh and Mizoram. While all other States saw a Positive increase.
- **Madhya Pradesh's Pench Sanctuary and Kerala's Periyar sanctuary** emerged as the best-managed tiger reserves in the country.
- **Maximum improvement** in the tiger population since 2014 recorded in **Sathyamangalam Tiger Reserve in Tamil Nadu.**

- No tiger has been found in the Buxa (West Bengal), Palamau (Jharkhand), and Dampa (Mizoram) reserves.

### Project Tiger

- It is a **Centrally Sponsored Scheme** of Government of India which was launched on the 1<sup>st</sup> of April, 1973 for in-situ conservation of wild tigers in designated tiger reserves.
- Strategy:** The strategy involves exclusive tiger agenda in the core/critical tiger habitat, inclusive people-wildlife agenda in the outer buffer, besides fostering the latter agenda in the corridors. This strategy / roadmap are reflected in a tiger reserve specific Tiger Conservation Plan for each reserve prepared under section 38V of the Wildlife (Protection) Act, 1972.

### National Tiger Conservation Authority (NTCA)

- The is a statutory body of the Ministry, with an overarching supervisory / coordination role, performing functions as provided in the Wildlife (Protection) Act, 1972.

## VIRTUAL MINISTERIAL ON CLIMATE ACTION

### ◎ CONTEXT:

Recently the fourth edition of the Virtual Ministerial on Climate Action was held to advance discussions on the full implementation of the Paris Agreement under the United Nations Framework Convention on Climate Change (UNFCCC) and to demonstrate continued political commitment to global climate action.

### ◎ ABOUT:

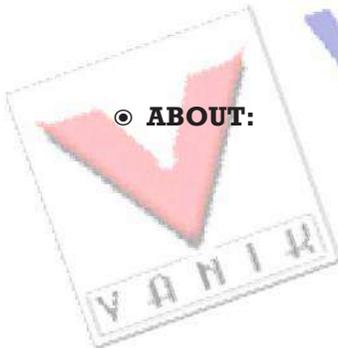
- The meeting was co-chaired by the European Union, China, and Canada.

It witnessed countries exchanging views on how countries are aligning economic recovery plans with the Paris Agreement and the critical enabling conditions to ensure continued climate action.

- India highlighted its steps taken for combating climate change.
- India also called upon developed country parties, once again, to do their part as envisaged under UNFCCC and its Paris Agreement, for extending financial and technological support to developing countries.
  - œ The promise of **USD 1 trillion by 2020** has not been fulfilled so far **by the developed countries.**
  - œ India hopes that the promised amount is mobilized and delivered in the remaining 5 months of 2020, for further strengthening climate actions in developing countries.

### COP 25 to the UNFCCC

- Held in December **2019 in Madrid, Spain.**
- The key deliverables were two-fold:**
  - > Rules under Article 6 of the Paris Agreement, which deals with carbon trading or carbon markets.
  - > The creation of a financial mechanism dedicated to loss and damage.
- CoP 25 failed to deliver on these requirements. Reasons for this were:
  - > No Consensus on Rules on carbon market.
  - > Lack of Clarity on Loss and Damage.
- The **COP 26 is to be held in Glasgow in 2020** to address the gaps that were undermined at COP 25 and also harmed the reputation of COP 25.



### Paris Climate Agreement – COP 21

- . It aims to strengthen the global response to the threat of climate change by keeping a global temperature rise this century well below 2 degrees Celsius above pre-industrial levels and to pursue efforts to limit the temperature increase even further to 1.5 degrees Celsius.
- . It was opened for signature on 22 April 2016 – Earth Day – at UN Headquarters in New York. It entered into force on 4 November 2016. To this date, 189 Parties have ratified of 197 Parties to the Convention.

### India’s Intended Nationally Determined Contribution (INDC)

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

### Steps taken by India for combating Climate Change

- œ The Indian government has provided **80 million LPG connections under the Pradhan Mantri Ujjwala Yojana (PMUY) in rural areas**, providing them with clean cooking fuel and a healthy environment.
- œ More than **360 million LED bulbs have been distributed under Unnat Jyoti by Affordable LEDs for All (UJALA) scheme**, which has led to an energy saving of about 47 billion units of electricity per year and reduction of 38 million tonnes of CO<sub>2</sub> per year.
- œ India has also leapfrogged from **Bharat Stage-IV (BS-IV) to Bharat Stage-VI (BS-VI)** emission norms by **April 1, 2020**, which was earlier to be adopted by 2024.
- œ India had **levied a coal cess of INR 400/-** as part of one of the most explicit green initiatives & this is now **subsumed under Goods and Services Tax (GST)**.
- œ Under **Smart Cities Mission**, first-of-its-kind initiative – **Climate-Smart Cities Assessment Framework 2019** has been launched which intends to provide a clear roadmap for cities and urban India towards combating climate change through the adoption of both mitigation and adaptation measures.

### Achievements of India in combating Climate Change

- . India has achieved a **reduction of 21% in the emission intensity of its GDP between 2005 and 2014**, thereby achieving its pre-2020 voluntary target.
- . India’s **renewable energy installed capacity has increased by 226% in the last 5 years** and stands more than 87 Gigawatt.
  - œ The share of **non-fossil sources in installed capacity of electricity generation** increased from 30.5% in March 2015 to **37.7% in May 2020**.
  - œ The Indian government has also further announced the aspirational target of increasing our renewable energy capacity to 450 GW.
- . India’s total forest and tree cover is 8, 07,276 sq. km. which is 24.56% of the total geographical area of the country.



● **CONTEXT:**

● **ABOUT:**

**Chhattisgarh becomes the first state to start e-Lok Adalats.**

- Chhattisgarh has set a new milestone at the time of ongoing Covid-19 pandemic with the state high court organizing nation's first state-level e-Lok Adalat and disposing nearly of 2270 cases by resolving cases through mutual agreement through video conferencing.
- Chhattisgarh State Legal Services Authority (CGLSA) confirmed that over 5,067 cases were heard in the e-Lok Adalat and a settlement amount of about Rs 43.72 crore was made.
- As many as 195 benches, including two benches of the High Court, were set up in 23 districts to resolve matters in e-Lok Adalat.
- In e-Lok Adalat, the parties and lawyers will be able to sit in their respective homes and connect to the court by video conferencing through the given link. If the parties and lawyers have difficulty in connecting through video conferencing, then they have also been given the facility to present their case by making a WhatsApp video call.

**Lok Adalat**

- NALSA along with other Legal Services Institutions conducts Lok Adalats. Lok Adalat is one of the alternative dispute redressal mechanisms, it is a forum where disputes/cases pending in the court of law or at the pre-litigation stage are settled/ compromised amicably.
- Lok Adalats have been given statutory status under the Legal Services Authorities Act, 1987. Under the said Act, the award (decision) made by the Lok Adalats is deemed to be a decree of a civil court and is final and binding on all parties and no appeal against such an award lies before any court of law.
- If the parties are not satisfied with the award of the Lok Adalat though there is no provision for an appeal against such an award, but they are free to initiate litigation by approaching the court of appropriate jurisdiction by filing a case by following the required procedure, in the exercise of their right to litigate.
- There is no court fee payable when a matter is filed in a Lok Adalat.
- The Lok Adalat shall not decide the matter so referred at its instance, instead the same would be decided based on the compromise or settlement between the parties.
- The members shall assist the parties independently and impartially in their attempt to reach an amicable settlement of their dispute.

**The National Legal Services Authority (NALSA)**

- The National Legal Services Authority (NALSA) has been constituted under the Legal Services Authorities Act, 1987 to monitor and evaluate the implementation of legal aid programmes and to lay down policies and principles for making legal services available under the Act.
- NALSA was formed on 9 November 1995 under the authority of the **Legal Services Authorities Act 1987**.
- Its purpose is to provide free legal services to eligible candidates (defined in Sec. 12 of the Act) and to organize Lok Adalats for the speedy resolution of cases.
- The Chief Justice of India is patron-in-chief of NALSA while the second senior-most judge of the Supreme Court of India is the Executive-Chairman.
- There is a provision for similar mechanisms at state and district levels also headed by



- Chief Justice of High Courts and Chief Judges of District courts respectively.
- . The prime objective of NALSA is speedy disposal of cases and reducing the burden of the judiciary.

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## **GUJARAT GOVT CONSTITUTES A FIVE-MEMBER COMMISSION TO PROTECT THE RIGHTS OF TRIBAL**

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◎ **CONTEXT:** Gujarat government constituted a five-member commission to decide rightful beneficiaries of Rabari, Bharwad, and Charan castes residing in the Ness areas of Gir, Barda, and Aalech forests.

◎ **ABOUT:**

### **Background**

- . The central government had, through a notification dated October 29, 1956, conferred ST status on people from Rabari, Bharvad, and Charan communities living in the nesses of Gir, Barda, and Alech in Gujarat.
- . Many tribal community leaders have been protesting for quite some time alleging that several people who do not live in nesses have managed to get ST certificates and are enjoying undue reservation benefits, mainly in government jobs.
- . To resolve this issue and decide the legitimate beneficiaries of ST status among the members of the three communities, the commission has been formed.

### **Composition:**

- . The Five-member commission would consist of a retired High Court Judge, two retired District Court Judges, a retired Forest Department official, and a retired Additional Collector.

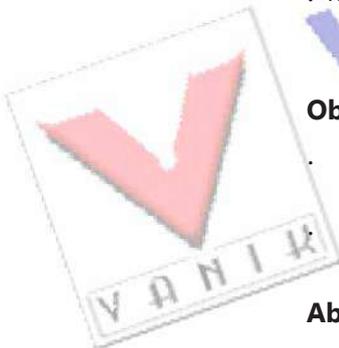
### **Objective:**

- . To resolve the long-pending issue about the Scheduled Tribes Certificate for the tribal living in the region.
- . To protect the Constitutional rights of rightful tribal and to prevent the wrong person from taking benefits of the tribal.

### **About the Tribes**

#### **. Bharwad**

- œ The term Bharwad is reported to be a modified form of the word '**Badawad**' and '**bada**' means sheep and '**Wada**' in Gujarati refer to compound or enclosure.
  - > The person who possesses compounds or pens in this caste of shepherds was known as Badawad which in course of time came to be known as Gadarieas. In Sough Gujarat they are referred to as Ahirs.
- œ They communicate in Gujarati. They use the Gujarati script.
- œ Clan exogamy is the norm. They practice monogamy. Ghargenu (remarriage) is permitted in case of the death of either spouse.
- œ Bharwad women have no right to property inheritance. Bharwad women enjoy low status.
- œ The Bharwads are pastorals who are permitted to graze their sheep and cattle in certain demarcated areas of the reserved forest. Some Bharwads possess dry agricultural land under the Satharnal scheme (1968).
- œ The Bharwads profess Hindusim. **Lord Krishna** is considered the supreme God. Each



### Charan

- œ They are also called **Gadhvi**. The name Charan is derived from the word **char** which means **grazing**.
- œ They speak Gujarati and use Gujarati script. The Charan are strictly vegetarian.
- œ There are four endogamous groups among the Charans known as Prajia, Seva, Agarvacha, and Tumbel. Hierarchical order does exist between these groups
- œ The Charans marry within their community.
- œ The Charans are traditionally cattle breeders. They have also adopted agriculture as their secondary occupation.
- œ They profess Hinduism. The main deity of the Charan is **Pithorai Mata located at Pathrama village in Mendarda taluka of Junagadh**. She is their chief as well as a regional deity.

### Rabari

- œ **Bhopa** is the short name used for a group of Rabaris who are referred to as **Bhopa Rabari**.
- œ They had migrated from Rajasthan via Kutch to Okhamandal and now most of the Bhopa Rabaris are, distributed in the Okhamandal region of Jamnagar district.
- œ They speak a language which is a mixture of Gujarati, Kachchi, and Marwari words and Pharasi; it is popularly known as a language, by the community name, i.e. Bhopa. They use the Gujarati script.
- œ Women do not have the right to parental property.
- œ The main economic activity of the Bhopas is sheep breeding and selling of milk.
- œ The Bhopas profess Hinduism and are **Shiva and Shakti, followers**.

### Constitutional Provisions related to Schedule Tribes

- . **Article 366(25) provides the definition of Scheduled Tribes:** Scheduled Tribes means such tribes or tribal communities or parts of or groups within such tribes or tribal communities as are deemed under Article 342 to be Scheduled Tribes for the purposes of this Constitution;
- . **Article 342 (1):** The President may with respect to any State or Union territory, and where it is a State, after consultation with the Governor thereof, by public notification, specify the tribes or tribal communities or parts of or groups within tribes or tribal communities which shall for the purposes of this Constitution be deemed to be Scheduled Tribes in relation to that State or Union territory, as the case may be.
- . **Article 342 (2):** Parliament may by law include in or exclude from the list of Scheduled Tribes specified in a notification issued under clause (1) any tribe or tribal community or part of or group within any tribe or tribal community, but save as aforesaid a notification issued under the said clause shall not be varied by any subsequent notification Part XVII Official Language Chapter I Language of the Union.

### Educational, Economic and Public Employment-related Safeguards

- . Article 15: Prohibition of discrimination on grounds of religion, race, caste, sex or place of birth.
- . Article 16: Equality of opportunity in matters of public employment

- . Article 19: Protection of certain rights regarding freedom of speech, etc
- . Article 46: Promotion of Educational and Economic interests of Scheduled Castes, Scheduled Tribes and other weaker sections
- . Article 335: Claims of Scheduled Castes and Scheduled Tribes to services and posts

#### **Political Safeguards**

- . Article 243D provides reservation of Seats for Scheduled Tribes in Panchayats.
- . Article 330 provides reservation of seats for Scheduled Tribes in the House of the People.
- . Article 332 provides reservation of seats for Scheduled Tribes in Legislative Assemblies of the States.
- . Article 334 provides that reservation of seats for Scheduled Castes and Scheduled Tribes in the Lok Sabha and the State Vidhan Sabhas the representation of the Ang would continue up to January, 2020.

#### **Agency for Monitoring Safeguards**

- . Article 338 A: National Commission for Scheduled Tribes (NCST).

## **BHUBANESWAR LAND USE INTELLIGENCE SYSTEM (BLUIS)**

### ◎ **CONTEXT:**

**Odisha becomes the first state in India to use Space Technology and Artificial Intelligence for safeguarding government lands.**

### ◎ **ABOUT:**

- The objective behind this launch was the lack of adequate transparency and accountability in the current manual mode of mechanism which was being used for decades for the detection of encroachments in government land.
- BLUIS is a geo-tagged repository of all the government lands in Bhubaneswar, created through high-resolution satellite imagery to detect all changes taking place on government lands.
- A mobile application would alert the enforcement authorities of any new construction on government lands.
- The GPS on the application guides the enforcement staff to the exact location. Evidence of enforcement is uploaded on the application as geo-tagged images and videos.

### **The Litigation Management System**

- It is an online application to record information of legal cases and enables end-to-end communication between government officials and advocates during different stages of a case, was also launched.
- It provides a smart technology solution to monitor court cases from initiation, online appointment scheduling, and allotment of the case to government advocate for preparation and submission of counter-affidavit.

#### **Artificial Intelligence (AI)**

- . AI refers to the simulation of human intelligence in machines that are programmed to think like humans and mimic their actions. The term may also be applied to any machine that exhibits traits associated with a human mind such as learning and problem-solving.

- The ideal characteristic of artificial intelligence is its ability to rationalize and take actions that have the best chance of achieving a specific goal.

## INFANT MORTALITY RATE IN MADHYA PRADESH INCREASES

● **CONTEXT:**

The Sample Registration System (SRS) 2018 released by the office of Registrar General of India (RGI) shows that the Infant Mortality Rate in Madhya Pradesh has increased.

● **ABOUT:**

- The SRS 2018 puts the IMR of Madhya Pradesh at 48 per 1,000 live births, highest in the country and a point higher than the IMR of 2017, which was at 47 per 1,000 live births.
- Assam pulled down the next highest rate of 44 a year before to 41, Odisha by one count to 40 and Kerala by three points to seven, the lowest among the bigger States.
- The **country's average rate** has dropped single-point to **32** but the rate climbed to 43 in Uttar Pradesh, making it the second-highest.
- The country's average stands at 36 deaths for rural and 23 for urban areas.

Infant Mortality Rate	2017	2018
National average	33	32
Madhya Pradesh	47	48
Assam	44	41
Chhattisgarh	38	41
Odisha	41	40
Kerala	10	7

**Madhya Pradesh**

- In rural Madhya Pradesh, 52 children below one died per 1,000 live births (Infant mortality rate) and 36 in urban areas.
- The IMR for boys in the State stood at 51, while for girls it was 46 in 2018.
- As many as 26 infants of 1,000 live births in Madhya Pradesh died within the first seven days constituting more than half the infant deaths.
- In **2015-2017**, Madhya Pradesh registered a Maternal Mortality ratio of 188 per 1 lakh live births, against the country's average of 122.
- Causes:** Increasing premature deliveries, infections, birth asphyxiation, and delay in securing treatment leading to complicated deliveries.

● **Concerns:**

- œ A major concern is birth spacing as in most cases two children were born within one and a half years against the advised gap of around three years. This may result in premature deliveries of low birth weight babies.
- œ High malnutrition levels in pregnant as well as lactating mothers.

**NOTE:**

- Infant Mortality Rate (IMR)** is defined as the 'number of deaths of children under the age of 1 year per 1000 live births for a given year.'
- Neonatal Mortality Rate (NMR):** It is defined as the 'number of deaths during the first 28 completed days of life per 1,000 live births in a given year or period'.
- Maternal Mortality Rate** is the annual number of maternal deaths per 100,000 live births.



- . **Measures:**
  - œ Antenatal and postnatal care is important aspects of bringing down infant mortalities.
    - > Only 11.4% of mothers received full antenatal care, according to the National Family Health Survey -4 (2015-16).
  - œ The primary health system needs to be ramped up.
  - œ To bring down the IMR, more number of pediatric intensive care units should be set up, to take care of the in-born child.
  - œ Enhancement of manpower.
  - œ Encouraging community referrals and ensuring timely treatment:
- . ASHA worker during referral enters details of patients on online software that can be accessed by the facility. If the patient doesn't reach there within 24 hours, it is the facility's responsibility to follow-up.

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**SECTION: C**  
**(GOOD GOVERNANCE)**  
**CURRENT AFFAIRS**



## INTELLIGENT TRANSPORT SYSTEM: IMPROVING URBAN PUBLIC TRANSPORT IN MYSORE

In its effort to support the overall public transport system, Karnataka State Road Transport Corporation (KSRTC) introduced the Intelligent Transport System (ITS) to deliver high-quality services and make the system more passenger-friendly through the appropriate use of Information Communication Technologies (ICTs).

### ◎ OBJECTIVES

- œ It was conceptualized to manage the **entire public transport system in the city to make it safe, more efficient, and environment friendly.**
- œ By introducing real-time data and facilitating commuters with accurate information the project aims **to reduce the commuter's dependence on personal automobiles.**
- œ The initiative also **promotes state-wide use of sustainable urban public transport** by monitoring accidents and traffic congestion through the effective diversion of traffic in case of emergency.

### Key Stakeholders

- œ The major stakeholders are Sustainable Urban Transport Project (SUTP); Karnataka State Road Transport Corporation (KSRTC); Ministry of Urban Development (MoUD); Global Environment Facility (GEF); the World Bank; United Nations Development Programme (UNDP); Ministry of Environment, Forests and Climate Change (MoEF&CC); IBI Group and CMC Limited.

### Implementation Strategy & Components of Mysore ITS

It includes core systems like the Vehicle Tracking System, Real-Time Passenger Information System, and Central Control Station and technologies including Global Positioning System (GPS), Electronic Display Systems, and other ICT tools. A digital display unit is used for displaying details of arrival and departure of buses, in both Kannada and English.

- Location information is updated by the **Vehicle Mounted Unit (VMU)** to the central server via General Packet Radio Service (GPRS). In this manner, the ITS has provided a **sustainable solution to the problem of traffic congestion.**
- Based on the information collected through the VMU, bus stop information on current and forthcoming arrivals is displayed as well as announced inside buses.
- For better operationalization and monitoring of the bus transport system, it is supported by a **two-way communication voice facility for the driver and the Central Control Station** to contact each other in case of emergencies or accidents.

- In the end, daily reports about the number of bus stop skipped, delays in the arrival of buses, performance of the drivers, etc are generated through this system.

#### *Implementation Strategy*

**Online Tracking of KSRTC buses using GIS maps by officials**

**Online tracking of KSRTC buses by the commuters**

**Provision of commuter portal for the commuters**

**Bus announcements and text display in both English and regional language**

**Expected time of arrival of buses**

**SMS and IVRS facility for tracking the bus by commuter**

**Two way communication between driver and central control station**

Source: OnWorld Foundation India, 2014

### Impact of the Project

#### • **Greater safety, convenience, and commuter satisfaction:**

- > It has resulted in safer travel, lesser traffic congestion, and delays leading to greater commuter satisfaction.
- > The display of ETA and ETD helps commuters to calculate the total time that will be taken to travel to any destination and accordingly help them plan their journey.

#### • **Positive environmental impact:**

- > As the initiative does not demand any widening of roads, construction work, or cutting of trees, it has not inconvenienced residents of the city, and not harmed the environment in terms of air/water/noise pollution or vegetation or land degradation.
- > It has resulted in a favourable impact on the city's environment by way of ensuring an efficient flow of traffic and reducing pollution.

• **Increased use of public transport, lesser traffic, and pollution:**

- > It has led to increased use of public transport as it has become more convenient and reliable.
- > The reduction in the use of personal vehicles has also contributed to reduced traffic and pollution.

◎ **KEY CHALLENGES**

- œ **The integration of VMU and the weak connectivity of GPRS** posed a challenge to the technical team at KSRTC during the implementation of the ITS initiative in Mysore.
- œ Since the system works to provide time-bound and real-time delivery of services, it faces challenges in the prediction of the expected time of arrival for all the bus stops **with accuracy**.
- œ As it was not previously implemented anywhere else in the country there was a **lack of in-house domain knowledge and the consequent dependence on consultants** in addition to multi-level monitoring and coordination posed its own set of challenges.
- œ Due to the **funding from various sources**, it has brought along its share of complexities in the system.

- œ Another major obstacle was related to the **taking of the drivers into confidence** as most of them feel this system puts them under scrutiny.
- œ The **large scale of operations and consolidation of information networks** was also found to be challenging. The other key challenge was to address the customer service through this unique technology.
- œ Post-deployment, KSRTC faces the **challenge to ensure security and maintenance of in-bus equipment and display boards and ensure uninterrupted power supply** at bus shelters, which are not owned by KSRTC.

◎ **CONCLUSION**

The Mysore-ITS initiative envisions building citizen-centric urban transport solutions instead of focusing on improving the conditions for private vehicles. Real-time information is the most important application of its implementation in Mysore. A well designed and planned ITS system in buses will make a significant improvement in the urban transport scenario in Indian cities, especially as it puts the needs of the majority who use public transport at the forefront.

**Overview of Indian Urban Transport**

- By 2031, some 600 million people are expected to live in India's cities. However, only about 20 Indian cities with populations over 500,000 have any kind of organized public transport systems.
- In fact, the share of public transport in large Indian cities actually **declined from some 70% in 1994 to almost 40% in 2007**.
- India's public transport systems are largely run by **public sector monopolies**. They typically suffer from poor service, inefficient operations, and deteriorating finances, resulting in dramatically declining mode shares. On the other hand, private transportation is often very expensive, extracting a huge cost from the urban population, especially from the very poor.
- To redress this imbalance, **India's National Urban Transport Policy (NUTP)** emphasizes the development of public transport systems and plans to increase their share to at least 50 percent of all motorized trips.

**Other Initiatives:**

**Ahmedabad Bus Rapid Transit System (BRTS)**

- > Based on the concept of **redesigning the city's infrastructure and making the existing transport system accessible, efficient, and environment friendly**, Ahmedabad's BRTS has deployed the intelligent transport system since 2009.
- > Officially known as '**Janmarg**', aims to dedicate separate lanes to buses, pedestrians, and non-motorized vehicles.
- > **Features:** Automatic Vehicle Tracking System; Electronic Fare Collection and Real-time Passenger Information System
- > **Challenges:** Narrow carriageway, high instances of encroachment, and requirement of additional land acquisition for construction of corridors, stations, etc.
- > This project has been awarded as **the Best Sustainable Transport Award, 2010**, and was adjudged the **Best Mass Rapid Transit System by the Government of India, 2009**.

## CURRENT AFFAIRS ANALYST

WEEK- 4 (JULY, 2020)

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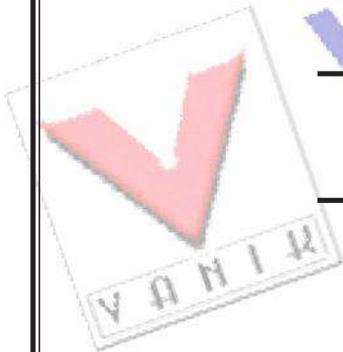
# **SECTION: A**

## **(MAINS)**

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### **CURRENT AFFAIRS**

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# IS IT TIME FOR UNIVERSAL BASIC INCOME (UBI) PROGRAMME IN INDIA?

## CONTEXT

The ongoing crisis is creating changes that could end up dividing society into pre- and post-COVID-19 days. These changes are also likely to exacerbate the novel challenges accompanying the fourth industrial revolution.

### Meaning of Universal Basic Income (UBI)

œ In its purest form, a basic income is an unconditional, periodic cash payment that the government makes to everyone. It is not based on means-testing: A hedge fund manager and a homeless person receive the same amount. It has no strings attached, meaning it carries no requirements to work, attend school, receive vaccines, register for military service, or vote. It is not paid in kind—housing, food—or in vouchers. It is a floor below which no one's cash income can fall.

### Need for UBI at this time

#### . A tool to eradicate poverty

- > UBI is deliberated as an effective poverty-eradication tool. Supporters of this scheme include Economics Nobel Laureates Peter Diamond and Christopher Pissarides, and tech leaders Mark Zuckerberg and Elon Musk.
- > UBI in its true sense would entail the provision of an unconditional fixed amount to every citizen in a country. Nevertheless, countries across the world, including Kenya, Brazil, Finland, and Switzerland, have bought into this concept and have begun controlled UBI pilots to supplement their population.
- > India's huge capacity and infrastructure-building requirements will support plenty of hands in the foreseeable future. Nonetheless, even before the pandemic, India was struggling to find enough opportunities for more than a million job aspirants who were entering the job market each month.
- > The 2016-17 Economic Survey and the International Monetary Fund (IMF) had proposed quasi-basic income schemes that leave out the well-off top quartile of the population as an effective means of alleviating poverty and hunger. The fiscal cost of a UBI pegged at ₹ 7,620, at 75% universality, was 4.9% of the GDP. A UBI on par with the numbers suggested by the Economic Survey could lead to targeted household incomes increasing by almost ₹ 40,000 per annum since the average Indian household size is approximately five.

#### . Different times

- > The times now are very different. IMF has projected global growth in 2020 to be -3.0%, the worst since the Great Depression. India is projected to grow at 1.9%. The U.S. economy is expected to fall by 5.9%.
- > The unemployment rate and unemployment claims in the U.S., since President Donald Trump declared a national emergency, are the highest since the Great Depression. Unfortunately, India does not even have comparable data.
- > Lockdowns in some formats are expected to be the norm till the arrival of a vaccine. With almost 90% of India's workforce in the informal sector without minimum wages or social security, micro-level circumstances will be worse in India than anywhere else.
- > The frequent sight of several thousands of migrant laborers undertaking perilous journeys on foot in inhumane conditions is a disgraceful blight on India. One way to ensure their sustenance throughout these trying times is the introduction of unconditional regular paychecks at maximum universality, at least till the economy normalizes.

### Challenges in implementing UBI in India

- > The biggest issue is that India doesn't have the fiscal capacity to implement Universal Basic Income. For example, the Economic Survey calculations showed that a 75% universality rate with an annual Universal Basic Income of ₹ 7,620 per year at 2016-17 prices will cost about 5% of the GDP.
- > It is often assumed that resources can be raised by rationalizing subsidies and capturing a part of the revenue forgone on account of various tax exemptions, including in the personal income tax. These may not happen.
- > Politically, it will be extremely difficult to roll back subsidies to create fiscal space for Universal Basic Income. It is always advisable for the government to work on reducing non-merit subsidies, but the gains should be used to increase capital spending, which will help boost growth in the medium-to-long term.

- > Universal Basic Income can create distortions in the labor market. A steady, permanent, and guaranteed income without any work is likely to affect labor mobility and participation. It is also likely to increase wages, as has been witnessed after the implementation of the Mahatma Gandhi National Rural Employment Guarantee Act.
- > Higher wages without a commensurate increase in productivity will affect India's competitiveness. This could also have longer-term implications in terms of higher inflation and lower growth. The distortions in the labor market will, of course, depend on the amount of Universal Basic Income.
- > The nature of Indian politics can create complications. It is highly likely that political parties, to improve their chances in elections,

would want to increase the amount of Universal Basic Income or try to bring back subsidies in some form or the other, which will have fiscal implications. To be sure, India still has to prove that it can run balanced budgets for an extended period. The political class always has this temptation to declare premature victories and give away fiscal gains.

◎ **CONCLUSION:**

Despite challenges in implementing UBI many consider a universal basic income (UBI) programme to be a solution that could mitigate the looming crisis caused by dwindling job opportunities. Thus, it can be said that if universal basic income ever had a time, it is now.

Universal Basic Income	
Pros	Cons
<ul style="list-style-type: none"> <li>. Simple and efficient to administer</li> <li>. Avoids poverty trap of means tested benefits.</li> <li>. Reduces Inequality, poverty and homelessness.</li> <li>. Encourages socially beneficial tasks such as old age care.</li> <li>. Encourages individuals to take risk and set up business.</li> </ul>	<ul style="list-style-type: none"> <li>. Could encourage laziness.</li> <li>. Could discourage part-time work.</li> <li>. Cost higher than current benefit system leading to higher taxes.</li> <li>. Higher Income taxes could lead to disincentives to work.</li> <li>. Could lead to welfare support for undesirables like criminals.</li> </ul>

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## UNIFIED GAS PRICE SYSTEM

### CONTEXT

The Petroleum and Natural Gas Regulatory Board (PNGRB) has published a discussion paper on moving from a system where buyers of gas are charged for every pipeline they use in the system to a single charge across a pipeline network.

#### ◎ OBJECTIVE

The proposal is part of a larger effort by the government to boost the **share of natural gas in India's energy basket from around 6 percent currently to 25 percent by 2030.**

#### What is the proposed move?

- œ The government is aiming to cut down the cost of transportation of natural gas by setting a fixed tariff for longer distances to boost consumption.
- œ The government is proposing a unified price system with one price for those transporting gas nearby within 300 km and one price for those transporting gas beyond 300km.
- œ The move would fix tariff prices within an integrated pipeline network such as that of GAIL, which has India's largest gas transportation pipeline network in the country preventing buyers from having to pay charges for the use of multiple pipelines.
- œ Such a move would help connect new markets and would benefit consumers in parts of the country far from the western coast

#### Current Gas Pricing in India and issues associated with it

- œ Multiple pricing regimes are existing in the country for Natural gas supplies. This could be broadly divided into three categories:
  - > Administrative Price Mechanism (APM) Gas
  - > Non-APM Gas
  - > LNG
- œ Further, there is differential pricing existing for different sectors.
  - > Subsidized sectors such as power and fertilizer get relatively fewer prices as compared to other sectors.
  - > Also, region-specific pricing exists in the country with North Eastern states getting gas at relatively cheaper prices as compared to other parts of the country.
- œ Currently, tariffs for transportation of gas are set by the Petroleum and Natural Gas Regulatory

Board (PNGRB) separately for each pipeline based on the assumptions of the volume of gas transported on the pipeline and its operating life aimed at providing the operator a pre-tax return of 18%.

- œ Tariffs for pipeline usage are divided into zones of 300km, with the tariff increasing for zones further away from the point where gas is injected.
- œ Further, if a buyer needs multiple pipelines even from the same operator, that transport tariff would increase. These tariffs increase the cost for buyers of gas further away from the point of injection of natural gas.
- œ All of India's imported natural gas arrives at terminals on the west coast leading to costs for buyers increasing, the further east they are located.
  - > For example- A consumer in Bihar or West Bengal has to use 2-3 pipelines of GAIL to get natural gas from Hazira and the tariff becomes additive.
- œ Transport cost accounts for as much as 10% of the final cost of gas to an industry currently because of low international prices but usually accounts for around 2-3% of the price of natural gas.
  - > This cost would increase significantly for buyers of gas in far-flung areas of the country because of the current gas transport tariffs.
- œ There is no trading hub yet in India, although its creation has been suggested for 2019. The creation of a gas hub would allow transparent price discovery based on buyers and sellers interacting in an open market and has the potential to remove the multiple price regimes in India.
- œ The price of domestic gas is lower than that of (imported) LNG and is defined by indexation to international markets. Since India sources around 50% of its LNG imports via long-term contracts and the other half from spot markets, the price difference between oil-linked and spot gas is very important for Indian buyers. As spot gas has become noticeably cheaper, buyers of oil-indexed gas are likely to seek contractual renegotiations.
- œ Since natural gas does not fall under the GST, gas consumption is taxed at several state and

central government levels, in addition to the gas transport tariffs.

- > Bringing natural gas under the GST and introducing a postage stamp gas transport tariff would reduce these costs and create a level playing field with other fuels.

Some of the deliberations done by the government of India on pricing include

œ **Pooled Pricing of Gas:** As multiple pricing regimes exist in the country, pooling of gas from different sources has been deliberated by the policymakers.

- > A sectoral pool was being considered with separate pools of power and fertilizer customers.
- > Separate pools were considered because of avoiding cross-subsidies between the customer groups and related administrative issues arising.

œ **Rangarajan Committee recommendations on Pricing:** The committee has suggested a uniform gas-pricing, at 'unbiased arms-length'.

- > The formula of domestic gas pricing should be a 12-month trailing average of volume-weighted average at well-head (on the net-back basis) for gas imports and the volume-weighted average of US Henry Hub, UK NBP and Japanese Crude Cocktail prices.
- > Gas prices are expected to increase based on the suggested framework by the Rangarajan committee.

## ◎ CONCLUSION

As the share of natural gas is on the rise, it is advisable to embark on developing a gas security policy based on a well-functioning domestic gas market and robust gas infrastructure. The GoI should, therefore, promote the development of a functioning gas market that can allow supply to meet demand. This includes market-based price discovery, robust gas infrastructure, an independent regulator, third-party access to infrastructure, and competition among multiple buyers and sellers.

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# IRAN DROPS INDIA FROM CHABAHAR RAIL PROJECT

## CONTEXT

The Iranian government has decided to proceed with the construction of the rail line from Chabahar port to Zahedan on its own, citing delays from the Indian side in funding and starting the project.

### ○ ABOUT

- œ Four years after India and Iran signed an agreement to construct a rail line from Chabahar port to Zahedan, along the border with Afghanistan, the Iranian government has decided to proceed with the construction on its own, **citing delays from the Indian side in funding and starting the project.**
- œ The railway project, which was being discussed between the Iranian Railways and the state-owned Indian Railways Construction Ltd (IRCON), was meant to be part of India's commitment to the trilateral agreement between India, Iran, and Afghanistan to build an alternate trade route to Afghanistan and Central Asia.
- œ Despite several site visits by IRCON engineers, and preparations by Iranian railways, India never began the work, ostensibly due to worries that these could attract U.S. sanctions.
- œ The U.S. had provided a sanctions waiver for the Chabahar port and the rail line to Zahedan, but it has been difficult to find equipment suppliers and partners due to worries they could be targeted by the U.S. India has already "zeroed out" its oil imports from Iran due to U.S. sanctions.

### Iran-China deal connection

- œ The development comes at a time when Iran is seeking to finalize a 25-year economic and security partnership with China. The deal is worth \$400 billion.
- œ The deal between Iran and China — if finalized — could result in a vast expansion of Chinese presence in various sectors of Iran including banking, telecommunications, ports, railways, and numerous other projects.
- œ In return, China will receive a heavily discounted supply of Iranian oil regularly for the next 25 years. An 18-page document listing the proposed agreement also talks about deeper military cooperation.

### Concerns for India

- œ Considering that Iran has been an important strategic ally for New Delhi, the deal could hurt India's prospects in the region, especially at a time when its relations with China have soured further in the aftermath of the recent border standoff.
- œ The development of Chabahar and the future of the India-Afghanistan-Iran Trilateral Agreement for the development of Chabahar has also not seen anticipated progress. Similarly, China-backed Pakistan-Iran-Taliban alignment emerging in India's immediate neighborhood is also a reason for Indian concern.
- œ India's relations with Iran cooled off substantially after India agreed to reduce its trade relations with Iran after the imposition of sanctions. The visit of President Trump and increasing Indo-US economic and strategic partnership seems to have been the last straw. It is unlikely that relations with Iran would improve in the near term.
- œ From the Indian perspective growing Iran -China relationship is a reason for worry and changing strategic landscape. It points to growing Chinese dominance in alignment with Pakistan which threatens our relationship with not only Iran but also on Afghanistan and Central Asian nations.

### Chabahar Project

- œ In May 2016, India signed a series of twelve memorandums of understandings that centered upon the Port of Chabahar.
- œ **The trilateral transit agreement** signed by India, Iran, and Afghanistan allows Indian goods to reach Afghanistan through Iran. It links ports on the western coast of India to the Chabahar port and covers **the road and rail links** between Chabahar and the Afghan border.
- œ The bilateral agreement between India and Iran gives India the right to develop two berths of the Chabahar port as agreed in 2015 and allows them to be operated for 10 years by India Ports Global, a joint venture between Jawaharlal Nehru Port Trust and Kandla Port Trust, in partnership with Iran's Aria Banad.



- œ India has already built a 240-km road connecting Afghanistan with Iran. Also in planning was a rail route connecting Chabahar with the India-promoted \$11-billion Hajigak iron and steel mining project in central Afghanistan, as seven Indian companies in 2011 acquired rights to mine central Afghanistan's Hajigak region, which contain Asia's largest deposit of iron ore.

**Reasons why the Chabahar port is crucial for India:**

- œ The first and foremost significance of the Chabahar port is the fact that India can bypass Pakistan in transporting goods to Afghanistan. Chabahar port will boost India's access to Iran, the key gateway to the International North-South Transport Corridor that has sea, rail and road routes between India, Russia, Iran, Europe, and Central Asia.
- œ Chabahar Port provides direct access to India's Farkhor Air Base in Tajikistan. Chabahar route will result in a 60% reduction in shipment costs and a 50% reduction in shipment time from India to Central Asia.
- œ Chabahar port will be beneficial to India in countering Chinese presence in the Arabian Sea which China is trying to ensure by helping Pakistan develop the Gwadar port. Gwadar port is less than 400 km from Chabahar by road and 100 km by sea.
- œ With Chabahar port being developed and operated by India, Iran also becomes a military ally to India.

Chabahar could be used in case China decides to flex its navy muscles by stationing ships in Gwadar port to reckon its upper hand in the Indian Ocean, the Persian Gulf, and the Middle East.

- œ With Chabahar port becoming functional, there will be a significant boost in the import of iron ore, sugar, and rice to India.
- œ Chabahar port will ensure the establishment of politically sustainable connectivity between India and Afghanistan. This is will, in turn, lead to better economic ties between the two countries.
- œ From a diplomatic perspective, Chabahar port could be used as a point from where humanitarian operations could be coordinated.

**○ CONCLUSION:**

Regardless of the reasons for India's inability to join the railway project, the decision can only be seen as an opportunity lost. The impression that India wavered due to U.S. pressure, especially after India canceled oil imports from Iran, also questions New Delhi's commitment to strategic autonomy. While Iran claims it will fund the railway using its resources, it seems to have embarked on the Chabahar-Zahedan project with a confidence borne from an imminent deal with China for a 25-year, \$400 billion strategic partnership on infrastructure, connectivity and energy projects. In a world where connectivity is seen as the new currency, India's loss could well become China's gain, and New Delhi must watch this space, created by its exit, closely.

## **ISSUE OF CATTLE SMUGGLING ALONG INDIA-BANGLADESH BORDER**

### **CONTEXT**

**In first such official articulation on cattle smuggling, the Border Security Force (BSF) has said the Border Guard Bangladesh (BGB) supports the “inhuman, merciless and seditious” activity.**

#### **The cattle trade between India and Bangladesh**

- œ The US\$500 million worth cattle trade between India and Bangladesh is mostly illegal.
- œ The demand for meat in Bangladesh and the hide for the country's leather industries keep the trade running.
- œ Moreover, the unofficial ban on cow slaughter in many Indian states could be adding to the availability of cattle for smuggling into Bangladesh.
- œ Notwithstanding the efforts of the border guarding forces, the trade goes on almost in full public spectacle and knowledge.

#### **How the cattle smuggling takes place?**

- œ Cattle traverse hundreds of kilometres from states like Rajasthan, Haryana, Punjab, Uttar Pradesh, Bihar, and Jharkhand to reach the Bangladeshi cattle markets, called the '**khattals**'.
- œ They are transported in trucks to their border destinations in West Bengal and Assam. Chilies are stuffed into the eyes of the animals to keep them standing and save space on the trucks in which they are transported.
- œ From these border points, smugglers use either the porous land route or the waterways through the rivers Kalindi, Ichhamati, Raimangal, and Hariabhanga of Bangladesh to finally enter the country.
- œ There have also been instances of secret tunnels dug up, by the miscreants, between Bangladesh and India. The man-made tunnel uses fitted drain pipes and to stay hidden, the cover of the dense forest.
- œ Apart from these innovative ways of trafficking the animal, may smugglers also attach heavy wood logs to the animal's legs and raft them across the river to reach the shore of the neighbouring country.

#### **Steps taken by India**

- œ The BSF guards the Indo-Bangladesh border. Its 45 battalions have been deployed in 725 BOPs

along the border. The task of the BSF along the Indo-Bangladesh border toughens as the density of the population rises. BSF was instructed to bring the trade to a halt.

- œ The government has adopted the use of a non-lethal strategy to deal with the smuggling issue. The troops operate with non-lethal weapons like pump action guns, stun grenades, and chili grenades. On at least two occasions, this has resulted in casualties in the BSF. There have been casualties amongst the cattle smugglers too.
- œ The BSF who patrols the area in groups of three or four are often outnumbered by hundreds of cattle smugglers who are armed with self-made weapons like dah, a long thick dagger, crude bombs; and even homemade pistols.
- œ A similar scenario plays out at the fenced border where the smugglers cut the fences without much resistance from the outnumbered BSF personnel. The BSF has taken proactive steps to address this problem.

#### **The Impacts of the steps taken by India**

- œ The government has sanctioned new attack motorboats and larger troop strength at the border. This has proved itself useful, at least according to the official figures regarding the number of figures seized.
  - > 1, 01, 751 heads of cattle were seized in 2014, 1, 53, 602 in the year 215 and 1, 68, 801 heads during 2016.
  - > In the first few months of 2017 around 30,99,744 cattle, heads were seized along the border with the number rising to 1.3-1.5 lakh heads towards the end of the year.
- œ The operations carried out by the BSF, have somewhat obviated the cattle smuggling regimes occurring via land routes. This has forced the cattle smugglers to improvise and come up with new routes of smuggling using pipe culverts in the Karimganj district. These pipes facilitate water supply in the region and allow the smugglers to take advantage of the gaps in the riverine regions of the border.

- œ The locals try and employ 'Ghat Maliks' who acts as a musclemen and a form of contact with the BSF, trying to bribe the guards. The BSF has also aimed at improving the local community relations to aid their vigil and this has proven fruitful.
- œ Preventing cross border smuggling is especially difficult during the winter months along the riverine stretches, where the fog hampers the vision of the patrolling guards and the poor infrastructure doesn't abet any surveillance difficulties.
- œ With the withdrawal of the monsoon season, the water level remains low in the rivers; this coupled with the fog allows the most felicitous environment that the smugglers could hope for.
- œ Moreover, for the BSF the winter months also mean deserted villages and low temperatures leading to neglectful vigilance on behalf of the villagers too.

### **Bangladeshi Narrative**

- œ Bangladesh has traditionally been dependent on the supply of cattle from India and other countries. Both the meat and the hide are in great demand.
- œ According to an estimate Bangladeshi traders associated with cattle auctions, thus providing cattle legally to slaughter-houses, bone-crushing

industries, etc. contributed 3 percent to the entire nation's GDP of US\$19 billion. The illegal trade is much larger and unaccounted for.

- œ Unlike the illegal migration of Bangladeshi nationals into India, which Dhaka disputes, Bangladesh appears to have extended its cooperation in stopping the illegal cattle trade.
  - > The Bangladesh Rifles (BDR) guards the Bangladesh side of the Indo-Bangladesh border. They have deployed around 30 battalions in roughly 650 BOPs.
- œ The BSF and BGB hold two 'coordination conferences' each year, which are organized alternatively in Bangladesh and India. The BGB officials are on record saying that the illegal cattle trade harms Bangladesh's economy.
- œ The Bangladeshi government, along with their enhanced security, is also promoting local cattle rearing amongst the residents to discourage or dissipate the need for illegal cattle exchange.

### **CONCLUSION**

Despite the BSF's intervention which has reportedly resulted in the reduction in the scale of the illegal cattle trade, it is a huge challenge to completely halt the cattle smuggling from India into Bangladesh.



# GRANTS-IN-AID TO RURAL LOCAL BODIES IN 28 STATES

## CONTEXT

An amount of Rs.15187.50 crore, as grants-in-aid, in respect of 2.63 lakh Rural Local Bodies (RLBs) spread in 28 States of the country has been released by the Ministry of Finance.

### ● ABOUT

- œ The amount was released upon the recommendations of the Ministry of Panchayati Raj and the Department of Drinking Water and Sanitation, Ministry of Jal Shakti.
- œ This grant-in-aid forms part of the Tied Grant as recommended by Fifteenth Finance Commission (XV-FC) for the period FY 2020-21.

### Panchayati Raj Institutions

- œ In India, the Panchayati Raj system is identified as the prime instrument of decentralization through which democracy becomes truly representative and responsive.
- œ The Panchayati Raj institutions are considered as local self-government meant for providing basic infrastructure facilities, empowering weaker sections of the society, and initiate the development process at the grass-roots level of rural India, where the sole of India lives.
- œ India has created history in fiscal federalism in the world through the landmark 73<sup>rd</sup> and 74<sup>th</sup> Amendments to its Constitution in 1992 which adds a three-tier of local self-government to its federal structure.
  - > The three-tier system of panchayats at the village, intermediate block/taluk/Mandal, and district levels except in States with the population is below 20 lakhs (Article 243B).
- œ The 73<sup>rd</sup> Amendment established a Finance Commission in each State to determine the principles based on which adequate financial resources would be ensured for panchayats and municipalities (Article 243I).
- œ The Constitution (73<sup>rd</sup> Amendment) Act, 1992 that came into force with effect from 24<sup>th</sup> April 1993 has vested constitutional status on Panchayati Raj institutions.

### Finance Commission (FC)

- œ It is a constitutional body for the allocation of certain revenue resources between the Union and the State Governments.

- œ It was established under Article 280 of the Indian Constitution by the Indian President. It was formed in 1951.
- œ **The 15<sup>th</sup> FC headed by N.K. Singh** was constituted by the President of India on 27<sup>th</sup> November 2017, against the backdrop of the abolition of the Planning Commission and the introduction of the Goods and Services Tax (GST).
- œ It shall be the duty of the Finance Commission to make recommendations to the President to the:
  - > The distribution between the Union and the States of the net proceeds of taxes which are to be, or maybe, divided between them and the allocation between the States of the respective shares of such proceeds.
  - > Principles which should govern the grants in aid of the revenues of the States out of the Consolidated Fund of India.
  - > Any other matter referred to the Commission by the President in the interests of sound finance.
  - > The Commission shall determine their procedure and shall have such powers in the performance of their functions as Parliament may by law confer on them.

### Fifteenth Finance Commission (XV FC)

- œ It submitted its interim report for the period FY 2020-21 and the Government of India accepted its recommendations in respect of the Local Bodies.
- œ The Commission has worked out the total size of the grant to be Rs.60, 750 crores for the period FY 2020-21 for the Rural Local Bodies (RLBs) which is the **highest ever allocation made by the Finance Commission in any single year**.
- œ The Commission has recommended Grants-in-aid to all tiers of the Panchayati Raj including the Traditional Bodies of Fifth and Sixth Schedule areas, in 28 States, in two parts, namely, (i) a Basic Grant and (ii) a Tied Grant.
  - > Fifty percent of the grant will be Basic Grant and fifty percent will be the Tied Grant.

- œ **The basic grants** are untied and can be used by RLBs for location-specific felt needs, except for salary or other establishment expenditure.
  - œ **The Tied Grants** are to be used for the basic services of sanitation and maintenance of open-defecation free (ODF) status and supply of drinking water, rainwater harvesting, and water recycling.
    - > The RLBs shall, as far as possible, earmark one-half of these Tied Grants each to these two critical services.
    - > However, if any RLB has fully saturated the needs of one category it can utilize the funds for the other category.
  - œ The State Governments will be distributing the XV FC Grants to all the tiers of panchayats – village, block and district and the traditional bodies of Fifth and Sixth Schedule areas based on the accepted recommendations of the latest State Finance Commission (SFC) and in conformity of the following bands recommended by XV FC.
    - > 70-85 % for village/gram panchayats
    - > 10-25 % for block/intermediate panchayats
    - > 5-15 % for district/Zilla panchayats
  - œ In states having a two-tier system with the only village and district panchayats, the distribution will be in the bands of 70-85 % for village/gram panchayats and 15-30% for district/Zilla panchayats
  - œ The intra-tier distribution among the relevant entities in a tier across the State (including Fifth and Sixth Schedule areas) will be based on population and area in the ratio of 90:10 or as per the accepted recommendations of the latest SFC.
  - œ The Ministry of Panchayati Raj would actively support the States in effective utilization of the XV FC Grants by providing Web/IT-enabled platforms for planning, monitoring, accounting/auditing of the works and funds flow at the level of each of the RLBs.
- © **SIGNIFICANCE**
- œ The amount is to be used by RLBs to facilitate taking up of various developmental work concerning supply of drinking water, rain water harvesting, water recycling, sanitation and maintenance of ODF status, which are national priorities.
  - œ Availability of this fund with the RLBs will boost their effectiveness in delivery of basic services to the rural citizens and would also empower them in providing gainful employment to migrant laborers who have returned to their native places owing to Covid-19 pandemic situation as well as in augmenting rural infrastructure in a constructive way.

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## HOW IMMUNITY IS DEVELOPED?

### CONTEXT

A longitudinal study by the researchers from King's College London has suggested that immunity to Covid-19 might be lost in months. The suggestion is based on a steep drop in patients' antibody levels three months after the infection..

#### ◎ ABOUT

- œ The researchers analysed the immune response of 90 recovered Covid-19 patients and healthcare workers. In their study, they found that antibodies that specifically help in neutralising the coronavirus SARS-CoV-2 decreased 2-23-fold during an 18-65 day follow-up period. This is similar to the decrease in antibodies seen in seasonal coronaviruses associated with the common cold.
- œ The researchers suggested that immunity developed by the formation of antibodies against SARS-CoV-2 lasts only a few months, and recovered Covid-19 patients are likely to remain susceptible and could get re-infected.
- œ The analysis found "a potent" level of antibodies produced in 60% of participants during the peak of their infection; and that only 16.7% retained that level of potency 65 days later.
  - > While the level of antibodies was at a higher level in patients with severe symptoms, the researchers said it is not clear why antibody response correlates with disease severity.
  - > The researchers noted that asymptomatic individuals also generate antibodies against the virus.

#### Does a decrease in antibodies result in losing immunity against the virus?

- œ Not necessarily. Antibodies are like fingerprints that give us evidence that a pathogen has caused an infection and that the immune system has responded.
- œ The antibodies usually remain in the blood for some time and quickly activate the immune system when the body is exposed to the pathogen again.
  - > Some antibodies not only recognise when the pathogen returns, but also protect the body for a lifetime from re-infection, as in the case of measles.
  - > However, in the case of seasonal flu, the antibodies give protection for a very small period.
  - > In the case of the novel coronavirus, it is not yet clear how long the antibodies provide recovered person protection.

- œ Further studies are needed to determine the longevity of the antibody response and what level of antibodies is required to protect against re-infection.
- œ The researchers flagged the fact that antibodies are just one of the ways in which the body can fight a virus such as SARS-CoV-2.

#### Other Methods

- œ T cells are a key component of the immune response against a virus. A human body has two mechanisms of immunity response within the adaptive immune system.
  - > First is the humeral immune, which is also called antibody-mediated immunity (as discussed above).
  - > When a virus enters a cell and can no longer be detected by antibody-mediated immunity, a cell-mediated immune response can take over to kill the virus.
- œ Cellular immunity occurs inside the infected cell and is mediated by cells called T lymphocytes. These are the T cells, which recognise the infected cell. Before that, these cells have to be activated by interacting with an antigen (virus)-presenting cell. Once the T cells are activated, they clone themselves generating numerous T cells, and destroy the infected cells.
- œ During the process of activation, some of the T cells remain inactive as memory cells. These produce more T cells if the infection returns. Therefore, memory plays a crucial role in providing cell-mediated immunity.
  - > There are also helper T cells, which function indirectly by communicating with other immune cells about potential pathogens.

#### ◎ CONCLUSION

- œ More research is required to answer questions like what is the contribution of T cells to initial virus control and tissue damage in the context of Covid-19; and how do memory T cells established thereafter contribute to protective immunity upon reinfection.
- œ While the induction of robust T cell immunity is likely essential for efficient virus control, dysregulated T cell responses may cause immunopathology and contribute to disease severity in Covid-19.

## CONTEMPORARY ISSUES

# MORE DECENTRALIZED FORM OF GOVERNANCE MODEL IN INDIA

### CONTEXT

Governance systems at all levels, i.e. Global, national, and local, have experienced stress as a fallout of the COVID19 pandemic. Architectural flaws have been revealed in their design. The complexities of handling several subsystems at the same time have overwhelmed governance. A solution for one subsystem backfired on other subsystems. For example, lockdowns to make it easier to manage the health crisis have made it harder to manage economic distress simultaneously. The diversion of resources to focus on the threat to life posed by COVID19 has increased vulnerabilities to death from other diseases, and even from malnutrition in many parts of India.

### ◎ BACKGROUND

- œ Human civilization advances with the evolution of better institutions to manage public affairs. For example:
  - > Institutions of parliamentary democracy, and the limited liability business corporation, did not exist 400 years ago.
  - > Institutions of global governance, such as the United Nations and the World Trade Organization, did not exist even 100 years ago.
- œ These institutions were invented to enable human societies to produce better outcomes for their citizens. They have been put through a severe stress test now by the global health and economic crises.
- œ There is a mismatch in the design of governance institutions at the global level (and also in India) with the challenges they are required to manage.

### Interconnectedness of Issues

- œ The global challenges listed in the 17 Sustainable Development Goals (SDGs) of the United Nations, are systemic. All these systemic problems are interconnected with each other.
- œ Environmental, economic, and social issues cannot be separated from each other and solved by experts in silos or by agencies focused only on their problems.
  - > For example, solutions for environmental sustainability along with sustainable livelihoods cannot be the same in Kerala and Ladakh, or Wisconsin, and Tokyo.
- œ **Solutions must be local.** And the support from local people can be achieved only when the local people believe that the solution is the right one

for them and not a solution thrust upon them by an outside expert.

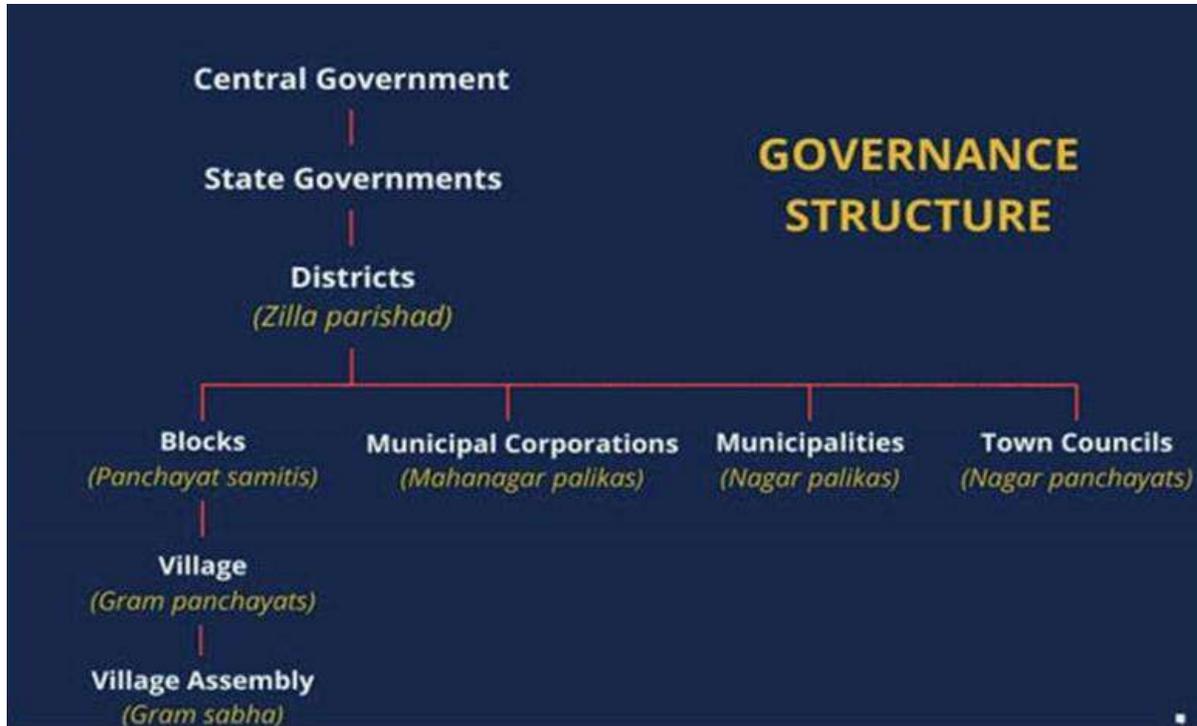
- œ Therefore a decentralized form of government ensures better policy formulations which can be more effective.
  - > Governance of the people must be not only for the people. It must be by the people too.

### Associated Work

- œ Gandhiji and his economic advisers, J.C. Kumarappa and others developed their solutions of local enterprises through observations and experiments on the ground.
- œ E.F. Schumacher had pointed out by the 1970s, the flaws in the economic theories that were driving public policy in capitalist as well as communist countries.
  - > He had proposed new economics, founded on local enterprise, very consistent with Gandhiji's ideas.
- œ Elinor Ostrom, the first woman to win the Nobel Prize in Economics, in 2009, had developed the principles for self-governing communities from research on the ground in many countries, including India.

### Constitutional Provisions of Local Governance in India

- œ Though traditional forms of local governance have existed in India for centuries.
- œ In 1992, India amended its Constitution with the intent to strengthen grassroots-level democracy by decentralising governance and empowering local administrative bodies.
- œ The objective was to create local institutions that were democratic, autonomous, financially strong,



and capable of formulating and implementing plans for their respective areas and providing decentralised administration to the people.

- > It is based on the notion that people need to have a say in decisions that affect their lives and local problems are best solved by local solutions.
- œ The passing of the 73<sup>rd</sup> and 74<sup>th</sup> Constitutional Amendments made it mandatory for each state to constitute rural and urban local governments, to establish mechanisms to fund them, and to carry out local elections every five years.
- > The creation of this new three-tier system of local governance provided constitutional status to rural and urban local bodies, ensuring a degree of uniformity in their structure and functioning across the country.
- > It also has promoted inclusivity through the establishment of community-based public health and the self-help group movements.
- > Ensure availability and accessibility of the resources to everyone especially to the poor section.

### Few emerging examples of States for better performances due to local governance

- œ The pandemic has not passed yet, but the evidence is emerging that some States in India, such as Kerala, have weathered the storm better than others.
- œ Some countries, such as Vietnam and Taiwan, are better than others during this ongoing pandemic.
- œ A hypothesis is that those States and countries in which local governance was stronger have done much better than others. This needs further research by social and political scientists looking for insights into design principles for good governance systems that can solve problems faced by human society.

### © CONCLUSION

The government has to support and enable people to govern themselves, to realise the vision of 'government of the people, for the people, by the people'. It is also the only way humanity will be able to meet the ecological and humanitarian challenges looming over it in the 21<sup>st</sup> century. Administrative officers should see their role as 'enablers of governance' rather than as 'deliverers of good government'.

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## THE INDIA-NEPAL DISPUTE: WHAT, AND WHY?

- œ The Indo-Nepal territorial dispute around the Kalpani-Limpahua-Lipulekh trijunction region stems from the ambiguity around the original border.
- œ The current tension is the result of a combination of factors: India's strategic concerns; declined India- Nepal relations; Beijing's stable stance in Nepal; and worsening India-China relations.

### A brief overview of Indo-Nepal border issues

- œ The Indo-Nepal border was originally delineated by the 1816 Sugauli Treaty, which established the Kali River (Sharda, Mahakali) as a border, with the area east of the river going to Nepal.
- œ Kalapani, Limpiyhura, Lipulekh Triangle Territorial Dispute Centre at the origin of Kalipani River.
- œ Nepal's stance is that the river originates from a stream northwest of Lipulekh, which brings Kalapani, limpiyaxle, and lipulekh to its territory.
- œ India's stance is that the river originates in springs beneath Lipulekh, and hence this area falls within Pithoragarh district in the state of Uttarakhand, India.
- œ Both sides have maps of the British period to claim their position.



### Recent Dispute

- œ India recently inaugurated the Darchula-Lipulekh pass link road, cutting across the disputed Kalapani area, which is used by Indian pilgrims traveling to Kailash Mansarovar.
- œ The Nepalese government protested this move, pointing out that the construction of the road amounted to territorial encroachment.
- œ Nepal granted constitutional validity to its stance through the introduction of a constitutional amendment and began tightening border security measures.

### China Factor

- œ The tension over this territorial dispute stems from the fact that it is a strategic trijunction between India, China, and Nepal. The Kalapani area is under India's control.
- œ Control of the Kalapani trijunction enables India to position itself at a physically strategic elevation, allowing Indian posts to monitor the Tibetan highland passes, which could prove crucial in the event of a Sino-Indian conflict.
- œ This consideration was vindicated in the 2017 India-China military standoff in Doklam, during which Chinese officials stated that China's People's Liberation Army (PLA) could enter India with ease through other border trijunctions like Kalapani or Kashmir.

œ Recent political developments in Nepal, with the National Communist Party (NCP) coming to power, have increased China's influence in Kathmandu.

œ Increasing Chinese investment in physical infrastructure like the trans-Himalayan railways, and Nepal joining the Belt and Road Initiative (BRI), etc. point to Beijing's growing economic influence as well.

œ On the other hand, despite the long history of bilateral relations, the India-Nepal relationship has often run into problems in the past decade. For example, being a landlocked country, Nepal depends considerably on India for access to essential goods.

œ The alleged 'unofficial blockade' of 2015, which led to the disruption of essential fuel supplies during the Madhesi protests in Nepal, further dented bilateral trust. This incident spurred Kathmandu to strengthen its alternative to India, thereby intensifying its tilt towards China.

### **Big Picture**

- œ In the big picture of deteriorating China-US relations, Beijing is increasing pressure along borders to deter India's alignment with the US and to assert itself as an ascendant power in the post-COVID-19 world order.
- œ The possibility of Chinese influence over the Nepalese government to exhibit hostility towards India also fits into the wider pattern of Beijing's aggressive posturing vis-à-vis Hong Kong, Taiwan, and the South China Sea.
- œ The spike in India-Nepal tensions coincides with India's rising border tensions with China in Ladakh and Sikkim. Overall, clear indications

are suggesting that Beijing is leveraging its relationship with Nepal to put indirect pressure on India.

### **◉ WAY FORWARD**

The two countries had established a Joint Technical Level Boundary Committee to delineate their common borders and resolve territorial disputes. By 2007, this joint initiative led to 98 percent of the 1850-km border being delineated. The two sides have also used high-level bilateral channels to keep border disputes from flaring up in the past. Both countries should use that channel again to resolve the current dispute.

Centuries of social, cultural, political, strategic, and economic ties can only remain strong if they can remain relevant to changing times. The governments of India and Nepal must reset the narrative, modernize their policies, and get out of the way so that the ties between people thrive again.

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**SECTION: B**  
**(PRELIMS)**

**CURRENT AFFAIRS**



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## SPIKE-LR ANTI-TANK GUIDED MISSILES

◎ **CONTEXT:** The Army is set to place a repeat order for Spike-LR (Long Range) Anti-Tank Guided Missiles (ATGM) from Israel as part of emergency procurement. The emergency procurement comes in the backdrop of continuing tensions on LAC with China.

- ◎ **ABOUT:**
- The decision comes days after the Army's decision to place a repeat order for 72,400 Sig Sauer assault rifles from the U.S.
  - The Spike order will be a repeat order for 12 launchers and around 250 missiles under emergency procurement.
  - Last year, the Army procured 12 launchers and around 250 missiles from Israel under the new financial powers for emergency procurements sanctioned by the Defence Ministry after the Balakot airstrike.
  - Under the new emergency powers, armed forces were given a free hand to procure equipment worth up to ` 300 crores on a priority basis with deliveries stipulated to be completed in three months but extendable up to six months. Entirely new systems not in use were also allowed to be procured under the new powers.
  - The Army has a much larger requirement for ATGMs which will be met through indigenous Man-Portable ATGM under development by the Defence Research and Development Organisation (DRDO).

### Spike-LR long-range Anti-Armour Missile

- Rafael, based in Haifa, Israel, manufactures the Spike family of anti-armor weapons.
- The Spike family includes:
  - œ Spike-SR with a range of 800m
  - œ Spike-MR (Gill) with a range of 2,500m
  - œ Spike-LR with 4,000m range
  - œ Spike-ER (formerly known as NTD Dandy) with a range of 8,000m.
- Spike-LR is **the 4<sup>th</sup> generation Anti-Tank Missile**.
- It is a portable anti-armor weapon system with a **range of up to 4km**, which can be operated in fire-and-forget mode and the fire, observe and update mode using the fibre-optic data link.
- Spike-LR is equipped with a **fibre-optic data link guidance system**, which sends commands to the missile from the launch system and receives, into the gunner's field of view, images from the seeker. The gunner can update his aim point while the missile is in flight using the fibre-optic link. As well as update target information, the datalink allows the gunner to switch targets and also receive real-time intelligence and perform battle damage assessment.
- The Spike system can work in **non-line-of-sight (NLOS) mode** allowing the gunner to operate from a covered position.
- Spike-LR, which can also be installed on light combat vehicles, can be used to engage tanks, armored vehicles, hardened shelters, and low flying slow targets such as helicopters.

### Sig Sauer SIG716

- Amid the ongoing dispute with China over boundary issues, the Indian Army decided to place another order of 72,000 Sig 716 assault rifles from the United States.
- It will replace the existing Indian Small Arms System (Insas) 5.56x45mm rifles used by the forces and manufactured locally by the Ordnance Factories Board.



- . India had acquired the first slot of the rifles under the fast-track procurement (FTP) programme.
- . Around 1.5 lakh imported rifles will be used by the troops in the counter-terrorism operations and frontline duties on the Line of Control (LoC), the remaining forces would be provided with the AK-203 rifles, which are to be produced jointly by India and Russia at Amethi ordnance factory.

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## DECREASE IN DOLPHIN NUMBER

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◎ **CONTEXT:**

According to the latest census report prepared by the Madhya Pradesh forest department dolphins' number in Chambal River has been reduced by 13 percent in four years.

◎ **ABOUT:**

- According to the latest census report of the Madhya Pradesh forest department, there are just 68 dolphins left in 435-kilometer-long Chambal river sanctuary which passes through three states (Madhya Pradesh, Uttar Pradesh, and Rajasthan).

. According to the census report, dolphins' number in Chambal River has been reduced by 13 percent in four years. The decreasing trend is continuing from 2016 when there were 78 dolphins.

. The maximum carrying capacity of dolphins in Chambal is 125.

. The dolphins were spotted for the first time in 1985 in Chambal River near Etawah. That time, the number was more than 110 but poaching reduced the number.

. The Forest Department of MP has collaborated with the scientists of Wildlife Institute of India (WII) to research safeguarding and increasing the population of dolphins in Chambal.

• **Reasons for Decline:**

œ Unfavorable habitat

œ Illegal extraction of sand from the river bed.

> In 2006, the Supreme Court's Central Empowered Committee (CEC) ordered a ban on mining in the sanctuary area to save the flora and fauna of the river.

œ Water withdrawal projects in Morena, Dholpur, and Kota are disturbing the whole ecosystem of the river and decreasing the water level and flow.

• **Gangetic Dolphin**

. **Scientific Name:** Platanista gangetica.

. It is India's national aquatic animal and is popularly known as 'Susu'.

. **Habitat:** It is found in parts of the Ganges-Meghna-Brahmaputra and Karnaphuli-Sangu river systems in India, Nepal, and Bangladesh.

œ They are distributed across seven states in India: Assam, Uttar Pradesh, Madhya Pradesh, Rajasthan, Bihar, Jharkhand, and West Bengal.

œ It requires at least 3 metre depth and 266.42-289.67 m<sup>3</sup> per sec flow of water for sustainable habitat.

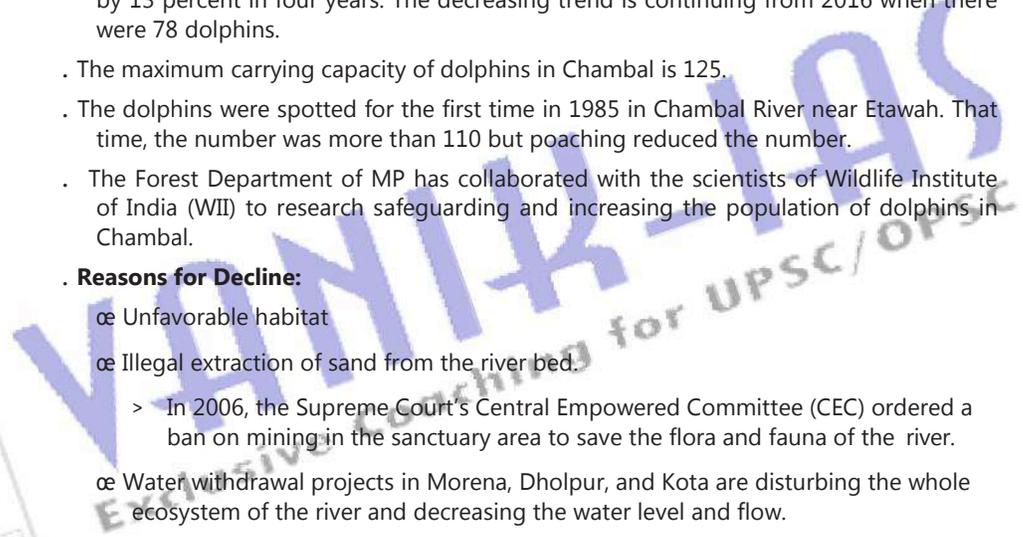
. **Characteristics:** It has rudimentary eyes and uses echolocation (through ultrasonic sound) to navigate and hunt.

. **Protection Status:**

œ **IUCN Status:** Endangered

œ **Wildlife (Protection) Act, 1972:** Schedule 1

œ **Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES):** Appendix-I.



### Chambal River

- . It is a major tributary of Yamuna which is 960 km long.
- . It is the chief tributary of the Yamuna River and rises in the Vindhya Range just south of Mhow, western Madhya Pradesh state.
- . Flow: Madhya Pradesh, Rajasthan, and Uttar Pradesh.
- . **Right Bank Tributaries:** Parbati, Kali Sindh, Shipra.
- . **Left Bank Tributaries:** Banas, Mej.
- . **Main Power Projects/ Dam:** Gandhi Sagar Dam, Rana Pratap Sagar Dam, Jawahar Sagar Dam, and Kota Barrage.
- . **The National Chambal Sanctuary** is located along river Chambal on the tri-junction of Rajasthan, Madhya Pradesh and Uttar Pradesh.
  - > It is known for critically endangered gharial, the red-crowned roof turtle, and the endangered Ganges river dolphin.

## RETAIL INFLATION

◎ **CONTEXT:**

According to the latest data released by the Ministry of Statistics & Programme Implementation (MoSPI), India's retail inflation grew **6.09 percent in June**.

◎ **ABOUT:**

- India's retail inflation is measured by the Consumer Price Index (CPI). It grew at 6.09% in June.
- . The government had not released the headline retail inflation data in April and May.
  - œ However, in April, it had revised the CPI data for March to 5.84 percent from 5.91 percent.
- . The retail inflation has grown beyond the Reserve Bank of India's (RBI) upper margin of 6 percent.
  - œ The government has mandated the Indian central bank to keep inflation within the range of 4 percent with a margin of 2 percent on either side.
- . The Consumer Food Price Index (CFPI) or the inflation in the food basket eased to 7.87 percent in June as the supply related issues because of the nationwide lockdown eased.
  - œ The CFPI for May was revised to 9.20 percent.
- . The retail inflation growth was due to:
  - œ A rise in **pulses and products** prices that saw a **16.68 percent** on-year rise in June.
  - œ The **meat and fish** segment saw a rise of **16.22 percent**.
  - œ **Oils and fats** rose **12.27 percent** and **spices** prices gained **11.74 percent**.

### Inflation

- . It is the rate at which the general level of prices for goods and services is rising and, consequently, the purchasing power of currency is falling.
- . Inflation is classified into three types: Demand-Pull inflation, Cost-Push inflation, and Built-In inflation.
- . The most commonly used inflation indexes are the Consumer Price Index (CPI) and the Wholesale Price Index (WPI).
- . In India, the NSO under the Ministry of Statistics and Programme Implementation (MOSPI) measures inflation.

### Consumer Price Index (CPI)

- . It is an index measuring retail inflation in the economy by collecting the change in prices of most common goods and services used by consumers.
- . The CPI is used to calculate the inflation levels in an economy.
- . In India, there are four consumer price index numbers, which are calculated, and these are as follows:
  - > CPI for Industrial Workers (IW)
  - > CPI for Agricultural Labourers (AL)
  - > CPI for Rural Labourers (RL) and
  - > CPI for Urban Non-Manual Employees (UNME).
- . While the Ministry of Statistics and Program Implementation collects CPI (UNME) data and compiles it, the remaining three are collected by the Labour Bureau in the Ministry of Labour.
- .  $CPI = (\text{Cost of basket divided by Cost of basket in the base year}) \text{ multiplied by } 100.$
- . The base year for CPI is 2012.

## MIZORAM QUAKE ZONE CAUGHT BETWEEN TWO GEOLOGICAL FAULTS

### ◎ CONTEXT:

A geologist assigned to make a preliminary study on the frequent tremors in Mizoram has said that Mizoram's zone of "scary" earthquakes is caught between two subterranean faults.

### ◎ ABOUT

- . Mizoram experienced at least eight moderate earthquakes between June 21 and July 9. The tremors ranged from 4.2 to 5.5 on the Richter scale.
- . The epicenter of most of these quakes was beneath the Champhai district bordering Myanmar, including the last one of magnitude 4.3 and about 10 kilometres deep. A few were beneath the adjoining Saitual and Serchhip districts.
- . The tremors after the strongest of these earthquakes on June 22 have been aftershocks that can happen for a long time. But as long they are below the intensity of 5, there's nothing to worry about.
- . An aftershock of 5 or more on the Richter could be a sign of a major earthquake waiting to happen.

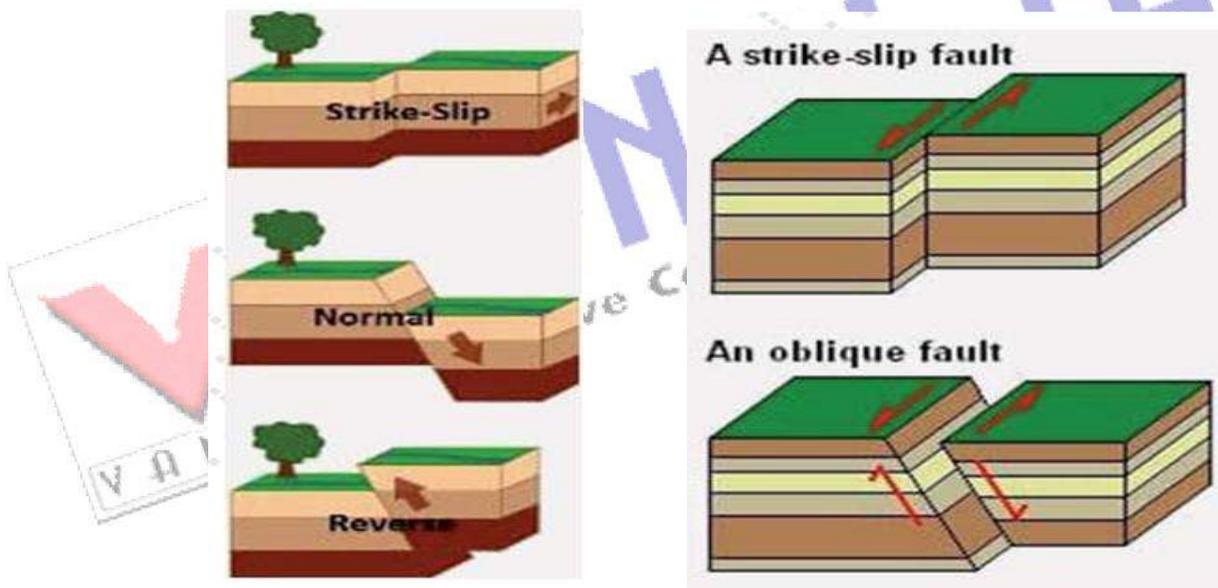
### Recent Findings

- . As per the study, earthquakes have happened and will happen in that part of Mizoram because it is caught between two geological faults. These are the **Churachandpur Mao Fault and the Mat Fault**.
- . The **Churachandpur Mao Fault** is named after two places in Manipur and runs north-south into Myanmar along the border of Champhai.
- . The **Mat Fault** runs northwest-southeast across Mizoram, beneath the river Mat near Serchhip.
- . There are several shallower transverse or minor faults in between these two major faults that are deeper.



### Faults

- . A fault is a fracture in the crustal rocks wherein the rocks are displaced along a plane called 'fault plane'. In other words, when the crustal rocks are displaced due to tensional forces caused by the endogenous movements along a plane, the resultant structure is called a fault.
- . In fact, 'faulting involves differential movement of strata on either side of fault-plane (involving a single plane of shearing) or fault-zone (involving several closely spaced fault-planes) as a result of either compressional or tensional forces in the earth's crust.
- . The differential movement may be upwards, downwards, horizontal, oblique, or even rotatory'.
- . The study of fault geomorphology involves 3 aspects of faulting:
  - œ Types of displacement of rock blocks and thus resultant fault types
  - œ Tectonic expressions of faulting
  - œ Geomorphic expressions of faulting.
- . Based on different types of movements, as referred to above, different types of faults are created in the crustal rocks viz. normal and reverse faults, lateral or strike-slip faults (also known as transverse, tear or transcurrent faults) divided into two subtypes-right lateral or dextral fault and left lateral or sinistral fault, step faults



## PRAGYATA - GUIDELINES ON DIGITAL EDUCATION

- ◎ **CONTEXT:** Recently the Ministry of Human Resource Development has released PRAGYATA - Guidelines on Digital Education through online medium.
- ◎ **ABOUT:**
  - The guidelines have been prepared by the **National Council of Educational Research and Training (NCERT)**.

- . These are **only advisory in nature** and state governments can formulate their own rules, based on local needs.
- . It will help in mitigating the CoVID -19 pandemic impact that has led to the closure of schools and has impacted the learning of over 240 million children of the country who are enrolled in schools.
- . The guidelines have been developed from the perspective of learners, with a focus on online/blended/digital education for students who are presently at home due to lockdown.
- . These guidelines on Digital/ Online Education will provide a roadmap or pointers for carrying forward online education to enhance the quality of education.
- . The guidelines stress upon the use of an alternative academic calendar of NCERT, for both, learners having access to digital devices and learners having limited or no access.
- . The PRAGYATA guidelines include eight steps of online/ digital learning that is, Plan- Review- Arrange- Guide- Yak(talk)- Assign- Track- Appreciate. These steps guide the planning and implementation of digital education step by step with examples.
- . The guidelines outline suggestions for administrators, school heads, teachers, parents, and students in the following areas:
  - œ Need assessment
  - œ Concerns while planning online and digital education like duration, screen time, inclusiveness, balanced online and offline activities, etc., level-wise
  - œ Modalities of intervention including resource curation, level-wise delivery, etc.
  - œ Physical, mental health, and wellbeing during digital education
  - œ Cyber safety and ethical practices including precautions and measures for maintaining cyber safety
  - œ Collaboration and convergence with various initiatives



**MHRD** | Government of India  
 Ministry of Human Resource Development

'PRAGYATA'

GUIDELINES ON  
DIGITAL EDUCATION

to assist school heads,  
teachers, parents & students  
in e-learning

## LANGUAGE OF THE TANGAMS

© **CONTEXT:**

Recently, the Arunachal Pradesh Chief Minister released a book titled “Tangams: An Ethnolinguistic Study Of The Critically Endangered Group of Arunachal Pradesh”.

## ◎ ABOUT:

**Tangams Community**

- . The Tangams is a little-known community within the larger **Adi tribe of Arunachal Pradesh** and reside in the hamlet of **Kugging in Upper Siang district's Painedem circle**.
- . For long, the only account of the Tangams could be found in bureaucrat **Tarun Kumar Bhattacharjee's book, Tangams (1975)** where the community's population was pegged at 2,000 spread across 25 villages.
- . From 2016 to 2020, a team from the Centre for Endangered Languages (CFEL) of Rajiv Gandhi University (RGU), carried out extensive field research and documented the community.
  - œ The survey revealed that Tangams were now concentrated in only one village (Kugging), with 253 reported speakers.

**Tangam Language**

- . As per the **UNESCO World Atlas of Endangered Languages (2009)**, Tangam — an oral language that belongs to the Tani group, under the greater Tibeto-Burman language family — is marked '**critically endangered**'.
- . **Reasons for its decline:**
  - œ Multilingualism: Kugging is surrounded by several villages inhabited by Adi subgroups. To communicate with their neighbours over the years, the Tangams have become multilingual, speaking not just Tangam, but other tongues.
  - œ They rarely speak their language now since their population is restricted to a single village.
  - œ The Tangams are relatively unknown, even within Arunachal Pradesh. The village lacks proper infrastructure in all basic sectors of education, health, drinking water facilities, road, and electricity. Roads have reached Kugging only in 2018. Not a single person from the community has gone to university.

**Other languages in Arunachal Pradesh**

- . The languages of Arunachal Pradesh have been classified under the Sino-Tibetan language family, and more specifically under the Tibeto-Burman and Tai group of languages, such as Lolo-Burmish, Bodhic, Sal, Tani, Mishmi, Hruishh and Tai.
- . While the education system has introduced Devanagari, Assamese, and Roman scripts for most tribal languages, new scripts such as Tani Lipi and Wancho Script have been developed by native scholars.
- . There has been no systematic, scientific or official survey on the number of languages in Arunachal Pradesh till recently.
  - œ An official linguistic survey by the state government began only in 2018, which is currently underway.
  - œ Before that, the People's Linguistic Survey of India was published in 2017.
- . Experts peg the number of languages at 32-34, with a disclaimer that it is not a conclusive figure. If various linguistic varieties or dialects embedded within these languages are enlisted then the numbers can go up to 90.
- . According to the UNESCO Atlas of the World's Languages in Danger (2009), more than 26 languages of Arunachal Pradesh have been identified as endangered. The degrees range from 'unsafe', 'definitely endangered' to 'critically endangered'.

**Why are the languages at risk?**

- . The diversity of languages has led various communities to depend on English, Assamese, and the colloquial variety of Hindi called Arunachalee Hindi as the link languages.

- . The younger generations of these tribes especially in the urban areas have mostly discarded the use of their mother tongue.

<b>Levels of language endangerment defined by UNESCO</b>	
<b>Degree of endangerment</b>	<b>Intergenerational Language Transmission</b>
Safe	Language is spoken by all generations; intergenerational transmission is uninterrupted
Vulnerable	Most children speak the language, but it may be restricted to certain domains (e.g., home)
Definitely endangered	Children no longer learn the language as mother tongue in the home
Severely endangered	Language is spoken by grandparents and older generations; while the parent generation may understand it, they do not speak it to children or among themselves
Critically endangered	The youngest speakers are grandparents and older, and they speak the language partially and infrequently
Extinct	There are no speakers left >> included in the Atlas if presumably extinct since the 1950s

## **DISABLED ARE ENTITLED TO THE SAME BENEFITS OF SC/ST QUOTA: SUPREME COURT**

### ◎ **CONTEXT:**

Recently, the Supreme Court, in a significant decision, confirmed that persons suffering from disabilities are also socially backward and entitled to the same benefits of relaxation as Scheduled Caste/Scheduled Tribe candidates in public employment and education.

### ◎ **BACKGROUND:**

- The decision came on a petition filed by Aryan Raj, a special needs against a Punjab and Haryana High Court order.
- . Mr. Raj was denied relaxation in minimum qualifying marks in the Painting and Applied Art course in the Government College of Arts, Chandigarh.
- . The college insisted that disabled persons too, need to meet the general qualifying standard of 40% in the aptitude test, whereas SC/ST candidates were given relaxation to 35%.

### **Supreme Court upheld the Delhi High Court Judgment**

- . The three-judge bench of the Supreme Court upheld a **2012 judgment of the Delhi High Court in Anamol Bhandari (minor) through his father/Natural Guardian v. Delhi Technological University in a significant decision.**
- . The High Court held that people suffering from disabilities are also socially backward, and are, therefore, at the very least, entitled to the same benefits as given to the Scheduled Caste/ Scheduled Tribe candidates.
- . Setting aside the college decision, the Supreme Court noted that Scheduled Caste/ Scheduled Tribe candidates require 35% to pass in the aptitude test, the same shall apply so far as the disabled are concerned in the future.
- . The apex court allowed Mr. Raj to apply afresh for the current year.

- . The Supreme Court also highlighted the Delhi High Court's words in the Anmol Bhandari case that new academic courses should be crafted to specifically cater to the needs of intellectually disabled persons.
  - œ The court observed that intellectually/mentally challenged persons have certain limitations, which are not there in physically challenged persons.

### **Some important Constitutional Provisions related to the SC/ST people**

- . **Article 15 (4)** empowers the State to make special provision for the advancement of the SCs and the STs.
- . **Article 15 (5)** empowers the State to reserve seats for SCs and the STs in admission to educational institutions including private educational institutions, whether aided or unaided by the State.
  - œ However, it excludes minority educational institutions referred to in Article 30 (1).
- . **Article 16 (4A)** - Nothing in this article shall prevent the State from making any provision for reservation in matters of promotion to any class or classes of posts in the services under the State in favor of the Scheduled Castes and the Scheduled Tribes which, in the opinion of the State, are not adequately represented in the services under the State.
- . **Article 46** - The State shall promote with special care the educational and economic interests of the weaker sections of the people, and in particular, of the Scheduled Castes and the Scheduled Tribes, and shall protect them from social injustice and all forms of exploitation.
- . **Article 243D** – This article assures the reservation of seats in Panchayats, both for men and women of Scheduled castes and scheduled tribes and also assures the seats of chairpersons in the Panchayats, according to their population in the constituencies.
  - œ The actual number of seats is to be provided by the state govt by law, but the percentage should approximate the population of these caste groups in the respective constituencies.
- . **Article 243T** - This article makes the similar provision of seats for SC/ST men and women, in the Municipalities.
- . **Article 275** – A provision is made for providing grants-in-aid, out of Consolidated Fund of India, each year for promoting the welfare of the Scheduled Tribes in the State or raising the level of administration of the Scheduled Areas.
- . **Article 330** – It makes provision for Reservation of seats for Scheduled Castes and Scheduled Tribes in the House of the people.
- . **Article 332** – It makes similar provisions for SC and ST people, in the Legislative Assemblies of the States.
- . **Article 338** – It makes provision for National Commission for Scheduled Castes & Scheduled Tribes.
- . **Article 339** - Control of the Union over the administration of Scheduled Areas and the welfare of Scheduled Tribes.

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## **ARCI DEVELOPS LOW-COST SUPER-CAPACITOR**

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- ◎ **CONTEXT:** Recently, the International Advanced Research Centre for Powder Metallurgy and New Materials (ARCI) developed a low-cost supercapacitor device. ARCI is an autonomous organization of the Department of Science and Technology, Government of India.
- ◎ **ABOUT**
  - Indian scientists at ACRI have developed a low-cost and environment-friendly fabrication method for super-capacitor devices by utilizing **industrial waste cotton as the electrode material and natural seawater-based electrolyte.**

- . The simple and sustainable supercapacitor developed shows excellent potential for practical implementation as energy storage in self-powered devices using solar cells.
- . The seawater-based supercapacitor exhibited maximum capacitances at a current density of 1 ampere per gram. Besides, it can last 10,000 charge-discharge cycles with 99% of capacitance retention and 99% of **Coulombic efficiency (efficiency with which charge is transferred in a system facilitating an electrochemical reaction)**.
- . In their search for low-cost materials to make affordable supercapacitors, the ARCI scientists **converted industrial waste cotton into highly porous carbon fibers by the activation process**. They then utilized the porous carbon fibers to make high-performance supercapacitor electrodes.
- . They explored natural seawater as an environment-friendly, cost-effective and scalable substitute for the existing aqueous-based electrolytes.
- . Supercapacitors could be combined with solar cells to enable low-cost, eco-friendly, and efficient self-powered devices capable of energy storage.
  - œ Thus, the integrated solar cell with supercapacitor can be used as an energy harvester storage device due to its long cycle life and maintenance-free power supply.
- . It is an excellent example of the creative science for the sustainable, green processes embedding principles of waste-to-wealth.

## COMET C/2020 F3 NEOWISE

### ● CONTEXT:

The recently discovered comet called C/2020 F3, also known as NEOWISE after the NASA telescope that discovered it, will make its closest approach to the Earth on July 22, 2020.

### ● ABOUT:

- On July 3, the comet was closest to the sun at 43 million km. On this day, the comet cruised inside Mercury's orbit and, due to its proximity to the sun; its outer layer was released creating an atmosphere (referred to as coma) of gas and dust from its icy surface.
  - œ This atmosphere sometimes leads to the formation of a bright tail of debris that can extend for thousands or millions of kilometres.
- . On July 22, the comet, which takes 6,800 years to complete one lap around its orbit, will be at a distance of 64 million miles or 103 million kilometers while crossing Earth's outside orbit.

### Comets

- . Comets or "dirty snowballs" are mostly made of dust, rocks, and ice, the remnants from the time the solar system was formed over 4.6 billion years ago.
- . The word comet comes from the Latin word "**Cometa**" which means "**long-haired**" and the earliest known record of a comet sighting was made by an astrologer in 1059 BC.
- . Comets can range in their width from a few miles to tens of miles wide. As they orbit closer to the sun, they heat up and release debris of dust and gases that form into a "glowing head" that can often be larger than a planet.
- . The debris forms a tail that can stretch out to millions of miles. Each time a comet passes the sun, it loses some of its material and it will eventually disappear completely as a result.
- . While there are millions of comets orbiting the sun, there are more than 3,650 known comets as of now, according to NASA.
- . Comets may be occasionally pushed into orbits closer to the sun and the Earth's neighborhood due to forces of gravity of other planets.



- appearance of some comets, like those that take less than 200 years to orbit around the sun is predictable since they have passed by before. These may be referred to as **short-period comets**.
- œ These can be found in the Kuiper belt, where many comets orbit the sun in the realm of Pluto, occasionally getting pushed into orbits that bring them closer to the sun.
  - œ One of the most famous **short-period comets** is called **Halley's Comet** that reappears every 76 years. **Halley's will be sighted next in 2062.**
- . The **less-predictable comets** can be found in **the Oort cloud** that is about 100,000 AU from the sun, or 100,000 times the distance between the Earth and the sun.
    - œ Comets in this cloud can take as long as 30 million years to complete one rotation around the sun.

### Visibility of the Comet

- . Comets do not have the light of their own and what humans are able to see from Earth is the reflection of the sun's light off the comet as well as the energy released by the gas molecules after it is absorbed from the sun.
- . The visibility of a comet cannot be precisely predicted since a lot depends on the way the "outbursts" of gas and dust play out determining how much of a "good show" the comet will put out for observers.

### Importance of studying and tracking the comets

- . Astronomers study comets since they believe that they hold important clues about the formation of the solar system and it is possible that comets brought water and other organic compounds, which are the building blocks of life to Earth.
- . **NASA tracks all Near Earth Objects (NEOs)** that includes comets and asteroids using telescopes placed all around the Earth, as part of its **NEO Observation Program**.
  - œ This program has a congressionally directed objective to find, track, and characterize NEOs that are 140 meters or larger since they can pose a risk to the Earth because of the devastation a potential impact can cause.

## POPULATION TRENDS BY THE LANCET

- © **CONTEXT:** According to the study by the Lancet, India's population is forecasted to peak in 2048 at 1.6 bn, to decline to 1.09 bn in 2100.
- © **ABOUT:**
  - The study was conducted by researchers at the University of Washington's Institute for Health Metrics and Evaluation (IHME). It analyzed population trends in 195 countries.
  - . It used data from the **Global Burden of Disease Study 2017** to model future populations in various scenarios as a function of fertility, migration, and mortality rates.

### Key Findings

- . The world population is forecasted to **peak at around 9.7 billion people in 2064 and fall to 8.8 billion by the century's end**, with 23 countries seeing populations shrink by more than 50 percent, including Japan, Thailand, Italy, and Spain.
- . The **global Total Fertility Rate (TFR)** is predicted to steadily decline from **2.37 in 2017 to 1.66 in 2100** — well below the minimum rate of 2.1.
  - œ TFR indicates the average number of children expected to be born to a woman during her reproductive span of 15-49 years.

- . The new study also predicts huge shifts in the global age structure, with an estimated 2.37 billion individuals over 65 years globally in 2100 compared with 1.7 billion under 20 years.

### India Specific Findings

- . According to the analysis by the Lancet, India's population is forecasted to peak in **2048 at around 1.6 billion**, up from 1.38 billion in 2017, which will be followed by a **32 percent decline to around 1.09 billion in 2100**.
- . India is also expected to surpass China's workforce population in the mid - the 2020s, where the working-age population is estimated to decline from 950 million in 2017 to 357 million in 2100.
- . According to the study, **India in 2100 will be the world's most populous country**.
- . The number of **working-age adults aged 20-64 in India** is projected to fall from around **762 million in 2017 to around 578 million in 2100**.
  - œ However, India has been forecasted to have the largest working-age population in the world by 2100.
- . From 2017 to 2100 India is projected to rise the rankings of countries with the **largest total gross domestic product (GDP) globally from 7<sup>th</sup> to 3<sup>rd</sup>**.
- . The country's total fertility rate (TFR) declined to below 2.1 in 2019 and is projected to have a continued steep fertility decline until about 2040, **reaching a TFR of 1.29 in 2100**.
- . India is also forecasted to have the **second-largest net immigration in 2100**, with an estimated half a million more people immigrating to India in 2100 than emigrating out.

### Challenges

- . The new population forecasts are in contrast with projects of "continuing" global growth by the United Nations Population Division.
- . The study highlights huge challenges to the economic growth of a shrinking workforce, the high burden on health and social support systems of an aging population.
  - œ As countries move toward prioritizing development, fertility reduction is inevitable. At the same time, improved survival at all ages, especially at the older ages, would lead to the rapid aging of the population.

### Suggestions

- . Liberal migration policies could be adopted temporarily but it is not a permanent solution.
- . To invest in technological advancements that can compensate for human shortages.
  - œ For example, Japan has managed the needs of its greying population with virtually no emphasis on migration.
- . The effect of fertility decline on women's reproductive health rights has to be accompanied by greater economic independence.
  - œ This would allow women to negotiate with the system on their terms and for better support services as well.

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**SECTION: C**  
**(GOOD GOVERNANCE)**  
**CURRENT AFFAIRS**



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## **PANCHAYAT BANKS: PROVIDING BANKING FACILITIES AT THE VILLAGE LEVEL IN JHARKHAND**

**The Panchayat Banks model of Jharkhand has provided rural citizens with improved access to a range of government schemes as well as financial services. The initiative has also led to the creation of local entrepreneurs amongst community members and provided a source of livelihood to bank operators. It has reduced systemic leakages and increased transparency.**

### **Need for such an Initiative**

The network of financial institutions in Jharkhand is weak as most of the bank branches are mostly concentrated in urban areas. Residents of rural and far-flung areas face several difficulties in carrying out financial transactions and also to access government schemes such as pensions and MGNREGA payments.

### **Initiatives taken to increase the reach of the financial network**

- œ Postal savings schemes and regional rural banks have expanded their reach to some extent, although these are still confined to the block level.
- œ In 2010 the Government of Jharkhand decided to introduce financial services as part of the existing system of Common Service Centres (CSCs), known as **Pragya Kendras in Jharkhand**.
  - > The Pragya Kendra is a Gram Panchayat level centre. Citizens can visit the kendras to avail of e-Governance services such as applying for a birth certificate, caste certificate, etc.
  - > Locally residing Village Level Entrepreneurs (VLEs) build and operate these centres in return for a commission on each service provided.
  - > The Government of Jharkhand decided to integrate the Panchayat Banks into the Pragya Kendras, rather than create stand-alone centres.

### **Objectives**

- œ The primary objective of this initiative is to provide banking and financial services at the Panchayat level. The idea is also to provide access to government schemes.

### **Key Stakeholders**

- œ The key stakeholders involved in the programme are Jharkhand Agency for Promotion of IT, banks, Service Centre Agencies (SCAs), and VLEs.

### **Implementation Strategy**

- œ The first step in implementation was to bring banks on board. This was done through regular

engagements between the government and banks through the State Level Bankers Committee.

- > The first partner banks were the State Bank of India (SBI) and Bank of India (BoI).

- œ The strategy was to use a 'one block, one bank' approach for streamlined payments.

- œ Initially, two service delivery models – smart card and kiosk banking – were used. However, over time the kiosk banking model based on online biometric authentication as used by SBI proved to be more successful than smart cards. Hence, a decision was taken to standardise kiosk banking across the state and discontinue the smart card model.

- œ The initial benefit delivered through the system was MGNREGA wage disbursements. Subsequently, different departments were directed to integrate their systems into the initiative.

- œ Currently, financial transactions available at the Panchayat Banks are cash deposits, cash withdrawals, money transfers, and account opening. For these two models are available:

- > One is the SBI model where the biometric data of the account holder is stored with SBI itself.
- > The other model is the Aadhaar based system where biometrics is stored with the Unique Identification Authority of India (UIDAI).

- œ To spread awareness the government has held camps and fairs where citizens were mobilised and encouraged to open bank accounts.

### **Impact of the Project**

- œ **Improved access to financial services in rural areas:** No need to travel for long distances (urban areas) to avail of financial services.

- œ **Reduction in corruption and leakages:** The usage of biometric authentication and the direct transfer of payments to beneficiary accounts have significantly reduced corruption and leakages.

- œ **Increase in savings:** As customers are now able to withdraw only as much as they need, since they can access the withdrawal services more easily.

- œ **Increased efficiency of banks:** The reduced load on bank branches has enabled them to devote more time to core operations such as deposit mobilisation and credit operations.
  - > Livelihood generation: Provides entrepreneurial opportunities to community members.

### Key Challenges & Steps taken to overcome these challenges

- œ Availability of electricity and internet, limited network connectivity, unreliable internet connectivity
  - > Efforts are currently underway to connect Panchayats to the **National Optical Fibre Network** through which 100 MBPS connectivity will be available to the Panchayat headquarters where CSCs are located.
- œ Delays in processing VLE applications
  - > The importance of the initiative has to be effectively communicated to the local level bank managers to overcome this issue.
- œ Limited data sharing between agencies.
- œ Limited inter-operability: There is limited synchronisation between bank switches. Due to which if the customers of one bank go to a Pragma Kendra that is affiliated to another bank, they are unable to conduct transactions.

### Replicability of the Project

- . **For replicability following preconditions are required:**

- > Willingness and support from banks.
  - . Banks should train personnel, especially grassroots functionaries who directly interface with SCAs and VLEs.
  - . Banks should also provide training to VLEs to enhance their efficiency and smoothen operations.
  - . The banks will also have to ensure interoperability.
  - . Systems to make quick payments to SCAs and VLEs have to be established.
- > It needs to be ensured that IT providers share data. All stakeholders need to integrate their IT systems in such a way that relevant information is always and immediately available.
- > Adequate and appropriate infrastructure is necessary for the effective functioning of the Panchayat Banks.

### © CONCLUSION

Panchayat Banks is an innovative effort to enhance access to financial services in rural areas. It has served a felt need for financial services in rural areas. Efforts should be made to synchronise transaction details of Panchayat Banks with governmental servers. This will help in getting real-time updates. Efforts should be made to further improve this banking model, and the goal of one bank per Panchayat is to be achieved.

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**CURRENT AFFAIRS ANALYST**

WEEK- 5 (JULY, 2020)

**CONTENTS**

**Section - A: MAINS CURRENT AFFAIRS**

Area of GS	Topics in News
ECONOMY	<ul style="list-style-type: none"> <li>Consumer Protection Act, 2019</li> <li>NPAs may soar to 20-yr high</li> </ul>
INTERNATIONAL RELATIONS	<ul style="list-style-type: none"> <li>China-Bhutan Border Dispute</li> <li>Deepening India South Korea ties</li> <li>New - Tech Cold War</li> </ul>
POLITY & GOVERNANCE	<ul style="list-style-type: none"> <li>Plea Bargaining</li> </ul>
CONTEMPORARY ISSUES	<ul style="list-style-type: none"> <li>Deeper links between shrinking wetlands, environmental imbalance, and natural disaster</li> </ul>

**Section - B: PRELIMS CURRENT AFFAIRS**

Area of GS	Topics in News
DEFENCE	<ul style="list-style-type: none"> <li>Mine Ploughs for T-90 Tanks</li> </ul>
ENVIRONMENT	<ul style="list-style-type: none"> <li>Indian Bullfrog</li> <li>KURMA App</li> </ul>
ECONOMY	<ul style="list-style-type: none"> <li>Government Sets Up Single-Window Clearance for Aviation Sector</li> </ul>
GEOGRAPHY	<ul style="list-style-type: none"> <li>Zoram Mega Food Park</li> <li>Kakrapar Atomic Plant</li> </ul>
GOVERNANCE	<ul style="list-style-type: none"> <li>Manodarpan</li> <li>Non – Personal Data</li> </ul>
INDIAN HERITAGE & CULTURE	<ul style="list-style-type: none"> <li>Madhubani Paintings</li> </ul>
SCIENCE & TECH	<ul style="list-style-type: none"> <li>BlackRock Android Malware</li> </ul>

**Section - C: GOOD GOVERNANCE**

**Topic in News**

- Mazhapolima: Ensuring water security through participatory well-recharge in Kerala.

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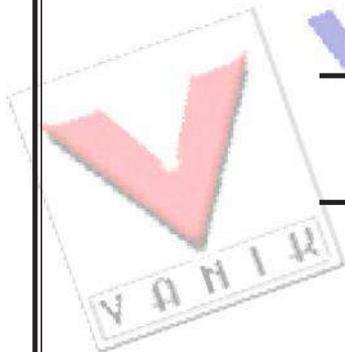
# **SECTION: A**

## **(MAINS)**

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### **CURRENT AFFAIRS**

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**VANIKA-IAS**  
Exclusive Coaching for UPSC/OPSC

# CONSUMER PROTECTION ACT, 2019

## CONTEXT

The Consumer Protection Act, 2019 came in to force from 20<sup>th</sup> July 2020. It has replaced the three-decade-old Consumer Protection Act, 1986.

### Key Highlights of the Act

- œ It will empower consumers and help them in protecting their rights through its various notified Rules and provisions.
- œ **Central Consumer Protection Authority (CCPA):**
  - > It is established to promote, protect, and enforce the rights of consumers.
  - > It will be empowered to conduct investigations into violations of consumer rights and institute complaints/prosecution.
  - > Order recall of unsafe goods and services
  - > Order discontinuance of unfair trade practices and misleading advertisements
  - > Impose penalties on manufacturers/endorsers/publishers of misleading advertisements
- œ The **rules for the prevention of unfair trade practices by e-commerce platforms** will also be covered under this Act.
  - > Under this act, every e-commerce entity is required to provide information relating to return, refund, exchange, warranty and guarantee, delivery and shipment, modes of payment, etc. including country of origin which are necessary for enabling the consumer to make an informed decision at the pre-purchase stage on its platform.
- œ The e-commerce platforms have **to acknowledge the receipt of any consumer complaint within forty-eight hours** and **redress the complaint within one month** from the date of receipt under this Act.
- œ **Simplification of the consumer dispute adjudication** process in the consumer commissions:
  - > It includes the empowerment of the State and District Commissions to review their orders.
  - > Enabling a consumer to file complaints electronically and file complaints in consumer Commissions that have jurisdiction over the place of his residence.
  - > Video-conferencing for hearing and deemed admissibility of complaints if the question of admissibility is not decided within the specified period of 21 days.
- œ **Alternate Dispute Resolution mechanism of Mediation:**
  - > This will simplify the adjudication process.
  - > A complaint will be referred by a Consumer Commission for mediation, wherever scope for early settlement exists and parties agree for it.
  - > The mediation will be held in the Mediation Cells to be established under the aegis of the Consumer Commissions.
  - > There will be no appeal against settlement through mediation.
- œ As per the **Consumer Disputes Redressal Commission Rules:**
  - > There will be no fee for filing cases up to Rs. 5 lakh.
  - > There are provisions for filing complaints electronically, credit of amount due to unidentifiable consumers to the **Consumer Welfare Fund (CWF)**.
  - > The State Commissions will furnish information to the Central Government quarterly on vacancies, disposal, the pendency of cases, and other matters.
- œ **Product Liability**
  - > The New Act introduces the concept of product liability and brings within its scope, the product manufacturer, product service provider, and product seller, for any compensation claim.
- œ The Act provides for punishment by a competent court for the manufacture or sale of adulterant/spurious goods.
  - > The court may, in case of the first conviction, suspend any licence issued to the person for a period of up to two years, and in case of second or subsequent conviction, cancel the licence.
- œ The **Central Consumer Protection Council Rules** are provided for constitution of the **Central Consumer Protection Council:**
  - > It will be an advisory body on consumer issues, headed by the Union Minister of Consumer Affairs, Food and Public Distribution with the Minister of State as Vice Chairperson and 34 other members from different fields.
  - > The Council, which has a three-year tenure, will have Minister-in-charge of consumer affairs

from two States from each region- North, South, East, West, and North East Region.

- > There is also provision for having working groups from amongst the members for specific tasks.

### **How is the Consumer Protection Act, 2019 better than Consumer Protection Act, 1986?**

- œ In the previous act i.e Consumer Protection Act, 1986, there was no separate regulator while the Consumer Protection Act, 2019 provides for Central Consumer Protection Authority (CCPA).
  - > Additional swift executive remedies are provided through CCPA.
- œ The provision of mediation cells was not there under the act of 1986.
- œ There were no provisions related to e-commerce in the previous act, while the 2019 act is extended to e-commerce.
- œ In the 2019 Act, the jurisdiction of the Consumer Commissions has also been expanded to allow

complaints to be made where the **complainant resides or personally works for gain**.

- > Previously, in the 1986 Act, it could have been where complaints had to be instituted where the opposite party resides or conducted business, or where the cause of action arose.
- œ In the 2019 Act, product liability provision to deter manufacturers and service providers from delivering defective products or deficient services has been added.
- œ In the 2019 Act, there is provision for deterrent punishment to check misleading advertisements and adulteration of products

### **© CONCLUSION**

Consumer Protection Act, 1986 provided single-point access to justice, which was also time-consuming. The new act protects buyers not only from traditional sellers but also from the new e-commerce retailers/platforms. This Act will prove a significant tool in protecting consumer rights in the country only if its provisions are implemented on the ground.

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## NPAS MAY SOAR TO 20-YR HIGH

### CONTEXT

Indian banks' bad loan ratio is expected to climb to the highest level in more than 20 years as a protracted lockdown has severely disrupted business operations and left millions of people jobless, crimping their ability to repay loans.

#### What is a Non-Performing Asset (NPA)?

œ NPAs or Non-Performing Assets are those kinds of loans or advances that are in default or arrears. In other words, these are those kinds of loans wherein principal or interest amounts are late or have not been paid for 90 days. These are also the kinds of loans where the lender considers the loan agreement to be broken and the receiver of the loan is unable to pay back the loan amount.

#### Semi-annual Financial Stability Report by RBI on NPA

- œ Non-performing assets may rise 4 percentage points to 12.5% of total advances by March 2021, the highest since the year ended 31 March 2000, under the baseline stress scenario, the Reserve Bank of India said in its semi-annual Financial Stability Report.
- œ The central bank warned that if the economic conditions worsen further, the ratio may soar to 14.7% under the very severely stressed scenario.
- œ Deterioration in asset quality will put further pressure on lenders who are struggling with subdued credit demand amid the coronavirus pandemic and a mountain of bad loans.
- œ Banks are preparing for a further worsening of

asset quality by raising funds to bolster their capital buffers. The end of a moratorium on loan repayments, aimed at providing relief to businesses and individual may see many loan accounts turn non-performing.

- œ The rise in bad loans may further reduce the ability of banks, especially the weak ones, to extend credit, and the government may have to infuse more funds into state-run banks to build stronger buffers that can absorb loan losses.
- œ The RBI cautioned that the impact of the loan moratorium is still evolving and the exact extent of its impact on asset quality is difficult to ascertain accurately.
- œ Among commercial banks, the gross bad loan ratio of state-run banks could increase to 15.2% under the baseline scenario, the highest among its peer groups.
- œ Indian state-owned banks were just coming out of the last bad loan crisis and cleaning up their books when the coronavirus pandemic struck.

#### What led to the rise in NPAs in recent years?

- œ Some of the factors leading to the increased occurrence of NPAs are external, such as decreases



in global commodity prices leading to slower exports. Some are more intrinsic to the Indian banking sector.

- œ A lot of the loans currently classified as NPAs originated in the mid-2000s, at a time when the economy was booming and the business outlook was very positive. Large corporations were granted loans for projects based on extrapolation of their recent growth and performance.
- œ With loans being available more easily than before, corporations grew highly leveraged, implying that most financings were through external borrowings rather than internal promoter equity. But as economic growth stagnated following the global financial crisis of 2008, the repayment capability of these corporations decreased.
- œ This contributed to what is now known as **India's Twin Balance Sheet problem**, where both the banking sector (that gives loans) and the corporate sector (that takes and has to repay these loans) have come under financial stress.
- œ When the project for which the loan was taken started underperforming, borrowers lost their capability of paying back the bank. The banks at this time took to the practice of 'evergreening', where fresh loans were given to some promoters to enable them to pay off their interest. This effectively pushed the recognition of these loans as non-performing to a later date but did not address the root causes of their unprofitability.
- œ Further, recently there have also been frauds of high magnitude that have contributed to rising NPAs. Although the size of frauds relative to the total volume of NPAs is relatively small, these frauds have been increasing, and there have been no instances of high profile fraudsters being penalised.

**What is being done to address the problem of growing NPAs?**

- œ The measures taken to resolve and prevent NPAs can broadly be classified into two kinds – first, regulatory means of resolving NPAs per

various laws (like the Insolvency and Bankruptcy Code), and second, remedial measures for banks prescribed and regulated by the RBI for the internal restructuring of stressed assets.

- œ The Insolvency and Bankruptcy Code (IBC) was enacted in May 2016 to provide a time-bound 180-day recovery process for insolvent accounts (where the borrowers are unable to pay their dues).
- œ Under the IBC, the creditors of these insolvent accounts presided over by an insolvency professional, decide whether to restructure the loan or to sell the defaulter's assets to recover the outstanding amount.
- œ If a timely decision is not arrived at, the defaulter's assets are liquidated. Proceedings under the IBC are adjudicated by the Debt Recovery Tribunal for personal insolvencies, and the National Company Law Tribunal (NCLT) for corporate insolvencies.
- œ **SARFAESI Act:** It allows banks and other financial institutions to auction residential or commercial properties (of Defaulter) to recover loans.
- œ **Indradhanush plan:** To revamp or improve the functioning of public sector banks. Indradhanush mainly focuses on systemic changes in state-run lenders, including a fresh look at hiring, a comprehensive plan to de-stress bloated lenders, capital infusion, accountability incentives with higher rewards including stock options, and cleaning up governance.

⦿ **CONCLUSION:**

The COVID-19 pandemic has severely affected the global economy. The Indian economy is further expected to undergo a difficult economic situation in the coming months. Subdued demand and NPA issues are likely to hold back growth in corporate banking. Hence, concerted efforts should be taken at this time by both RBI and the government to keep the financial system and financial markets sound, liquid and smoothly functioning so that finance keeps flowing to all stakeholders, especially those that are disadvantaged and vulnerable.

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# CHINA-BHUTAN BORDER DISPUTE

## CONTEXT

China makes a new claim on the eastern border with Bhutan and reiterates it has a border dispute with Bhutan in the eastern sector.

### What's behind China's expansion of its territorial dispute with Bhutan?

- œ The Sino-Bhutanese relationship normally flies under the radar. Bhutan has the distinction of being the only other country apart from India with which China has an unsettled land border.
- œ It is also the only state to border China that does not have official diplomatic ties with Beijing. But despite this lack of official relations, the two sides have worked for years to arrive at a resolution to their border disputes, which until now primarily focused on areas in the central and western sectors.
- œ The western sector dispute — over the Doklam plateau — has received the most attention after the 2017 India-China standoff there. The central sector disputes — over areas known as Jakarlung and Pasamlung — have received less attention comparatively.
- œ Even without formal diplomatic ties, Bhutan and China have held 24 rounds of border talks between their envoys; talks that have been frozen since their last round in 2016, partly due to the heightened tensions that erupted during the Doklam standoff. A 25<sup>th</sup> round is yet to take place.

### Eastern sector claim:

- œ The addition of the eastern sector is notable as **this has not been part of the agenda across the 24 rounds of China-Bhutan border talks**. The China's MFA statement's inclusion of the eastern sector came shortly after the government of Bhutan issued a demarche to China after a Chinese delegate at the 58<sup>th</sup> Global Environment Facility Council, held earlier this summer, referred to the Sakteng Wildlife Sanctuary, an area in eastern Bhutan, as disputed.
- œ The claim itself may have some basis in history, but not one well supported by official Chinese maps. Back in 2017, in the course of studying the Sino-Indian and Sino-Bhutanese disputes over Doklam, it came across at least one older, unofficial Chinese map that portrayed a capacious dispute in the eastern sector.
- œ Now, that view has changed in Beijing. The political geography of the area in question bears underscoring: Given that India fully administers Arunachal Pradesh, even if Bhutan were to unilaterally cede this area, it would amount to an enclave without any direct border with China's Tibet Autonomous Region.

### Dividing line

A brief overview of the boundary dispute between China and Bhutan

- Bhutan and China have no formal diplomatic relations but have held 24 rounds of boundary talks between 1984 and 2016
- Talks concentrated on north and west Bhutan regions
- Eastern Bhutan not part of the talks
- so far, say officials
- Sakteng sanctuary is situated close to the border with Arunachal Pradesh
- In June 2020, China attempted to stop UNDP-GEF funding for Sakteng by claiming it was disputed, but was overruled



**The complicating factors:**

- œ The novelty of China’s claim in its dispute with Bhutan has already raised eyebrows, but there are other complicating factors here.
- œ First, the purported eastern sector dispute over the Sakteng Wildlife Sanctuary, in geographic terms, would be the single largest tranche of disputed territory across all sectors in the China-Bhutan context, representing about 11 percent of the territory currently administered by the Bhutanese government.
- œ Second, the territory in question abuts the Indian state of Arunachal Pradesh, which is itself claimed in its near entirety as part of Tibet.
- œ Not only is this the case, but the Sakteng area specifically borders Arunachal’s western Tawang region, which China has particularly prioritized in negotiations with India; arguably, Tawang is the least negotiable piece of territory for Beijing in the entirety of the eastern sector.

**Background of Border issues between Bhutan and China**

- œ **Early Chinese territorial claims on Bhutan:** Chinese claims on Bhutanese territory were first made when Mao Zedong declared in the original 1939 version of The Chinese Revolution and the Communist Party that “the correct boundaries of China would include Burma, Bhutan, and Nepal”.
- œ **The annexation of Bhutanese enclaves:** In July 1959, along with the occupation of Tibet, the Chinese People’s Liberation Army occupied several Bhutanese enclaves in western Tibet which were under Bhutanese administration for more than 300 years and had been given to Bhutan by a Ladakhi King Singye Namgyal in the 17<sup>th</sup> century.
- œ **Chinese map claiming territories in Bhutan:** A Chinese map published in 1961 showed China claiming territories in Bhutan, Nepal, and the Kingdom of Sikkim. Incursions by Chinese soldiers and Tibetan herdsmen also provoked tensions in Bhutan. Imposing a cross-border trade embargo

and closing the border, Bhutan established extensive military ties with India.

- œ **Engagement:** Until the 1970s, India represented Bhutan’s concerns in talks with China over the broader Sino-Indian border conflicts. Obtaining membership in the United Nations in 1971, Bhutan began to take a more independent course in its foreign policy. In 1984, China and Bhutan began annual, direct talks over the border dispute. However, China’s building of roads on what Bhutan asserts to be Bhutanese territory, allegedly in violation of the 1998 agreement, has provoked tensions.
- œ On 11 August 2016 Bhutan Foreign Minister Damcho Dorji visited Beijing, capital of China, for the 24<sup>th</sup> round of boundary talks with Chinese Vice President Li Yuanchao. Both sides made comments to show their readiness to strengthen co-operations in various fields and hope of settling the boundary issues.
- œ **Doklam crisis, 2017:** When China started constructing a road in the disputed area of Doklam, Bhutan asked for help from India and it sent the army to stop the construction. The military standoff in the area lasted more than two months. However, after diplomatic conversations between the two sides, both countries agreed to withdraw troops from the region.
- œ **Sakteng Wildlife Sanctuary:** China raised a new dispute over territory in June 2020 that has never come up in boundary talks earlier. Beijing objected to the grant for Sakteng Wildlife Sanctuary (SWS) in eastern Bhutan’s Trashigang district bordering India and China, claiming that the location was disputed, during the virtual meeting of the Global Environment Facility (GEF) in the first week of June.

**CONCLUSION:**

Given the ongoing Sino-Indian tensions in the western sector of their border in Ladakh, the timing of the revelation of this “new” dispute with Bhutan will likely be seen as coercive by India.

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## DEEPENING INDIA SOUTH KOREA TIES

### CONTEXT

**India-Republic of Korea (RoK) relations have made great strides in recent years and have become truly multidimensional, spurred by a significant convergence of interests, mutual goodwill, and high-level exchanges.**

#### Bilateral relations

- œ Bilateral relations between India and South Korea, officially known as the Republic of Korea, were established in 1962 and upgraded to Ambassador-level in 1973.
- œ South Korea's open market policies found resonance with India's economic liberalization, and its 'look east policy' and 'act east policy', leading to the establishment of strong bilateral relations.

#### Political relations

- œ India played an important and positive role in Korean affairs after the latter's independence in 1945. During the Korean War (1950- 53), both warring sides accepted a resolution sponsored by India. A ceasefire was declared on July 27, 1953.
- œ In February 2006, former Indian President APJ Abdul Kalam visited RoK and his visit led to the launch of a Joint Task Force to conclude a bilateral **Comprehensive Economic Partnership Agreement (CEPA)**, which was operationalized on January 1, 2010.
- œ Following this, Korean President Lee paid a visit to India as Chief Guest at India's Republic Day celebrations on January 26, 2010. That is when bilateral ties between the two countries were raised to the level of strategic partnership.
- œ Both the countries signed the Civil Nuclear Energy Cooperation Agreement in 2011 during the then President Pratibha Patil's state visit to RoK.
- œ During Prime Minister Narendra Modi's visit to South Korea in 2015, the bilateral relationship was upgraded to 'special strategic partnership'.
- œ In a joint statement, PM Modi and President Park Geun-Hye agreed to establish a '**2+2' consultation mechanism** at Secretary/Vice Minister of Foreign Office and Defence Ministry.

#### Commercial relations

- œ Trade and economic relations between India and South Korea gathered momentum after the implementation of CEPA in 2010. Bilateral trade between the two countries in 2011 crossed \$20.5 billion, registering a 70 percent growth over two years.

- œ Bilateral Trade India's share in Korea's global trade was 1.89% in 2018, India's contribution to Korea's global imports increased from 0.78% in 2001 to 1.10% in 2018. India is Korea's 20<sup>th</sup> biggest source for imports and the 7<sup>th</sup> biggest export market as of 2018.
- œ India and South Korea have set a target to increase bilateral trade to \$50 billion by 2030 from \$20 billion in 2017-18 and to speedily conclude negotiations to upgrade the bilateral Comprehensive Economic Partnership Agreement (CEPA).
- œ Some of the major items that India exports to South Korea are mineral fuels, oil distillates (mainly naphtha), cereals, iron, and steel.
- œ Seoul's main export items are automobile parts, telecommunication equipment, hot rolled iron products, petroleum refined products, base lubricating oils, nuclear reactors, mechanical appliances, electrical machinery and parts, and iron and steel products.

#### Cultural relations

- œ India and South Korea established an **Indian Cultural Centre (ICC) in Seoul** in April 2011. Another Culture Centre was established in Busan in December 2013.
- œ To boost people-to-people relations and travel between the two countries, India extended the visa-on-arrival (VoA) facility for South Korean tourists in April 2014.
- œ Exchange of youth delegations between India and RoK has been taking place on an annual basis for several years now.
- œ Good air connectivity between the two countries has been established with Air India, Asiana Airlines, and Korean Air operating flights.
- œ In November 2015, the bilateral civil aviation agreement of 1994 was revised to increase weekly flights between the two countries to 19. This resulted in new operations by Korean Airlines, which then started direct flights to Delhi.
- œ **The Indian Culture Centre (ICC)** attempts to broaden base and appreciation of Indian culture by, for example, teaching south Indian dances to elementary school students in South Korea, or organising experiential sessions centred on Indian cuisine, are commendable.

### The India-South Korea Advantage

- œ India is a key focus area in South Korean President Moon Jae-in's **New Southern Policy (NSP)** which complements Prime Minister Narendra Modi's emphasis on an Act East Policy (AEP).
- œ South Korea's technological expertise and the capital base found a very attractive match in India's expanding consumer base and lucrative market potential.
- œ Popular South Korean brands in India are on expansion mode. Research and Development (R&D) centres of Samsung and LG Electronics in Bengaluru are their latest, outside of Korea, and Hyundai's R&D centre at Hyderabad is one of its five global hubs.
- œ To propel this relationship and ease business issues, the Indian government has set up a Korea Plus initiative under Invest India which has facilitated numerous business queries.
- œ On its part, the South Korean government has established a New Trade Order Strategy Office and decided to form a Korea-India Future Strategy Group and the India-Korea Centre for Research and Innovation Cooperation. The Korea Trade-Investment Promotion Agency is also spreading its work in India.
- œ The tensions between India and China create a common interest for both South Korea and India.

### Some issues

- œ However, the economic partnership is struck at \$22 billion annually, and their defence partnership appears to have receded from great all-round

promise to the mere sale and purchase of weapon systems.

- œ At the heart of this bilateral stasis is the fact that, despite the best efforts of many well-intended leaders, Indians and South Koreans are failing to touch a mutually meaningful chord of empathy and move closer to each other as people. This is at least in part due to cultural prejudices on both sides, which stands in the way of a relationship based on openness, curiosity and warmth.
- œ It is not that efforts to correct distortions in such perception have been wanting. Yet, clearly, whatever bilateral progress has been made, say in the realm of trade and investment, has not lent sufficient momentum that people start building bridges in other areas. So, for example, there may be a widespread perception among South Koreans of India as a third world country, rife with poverty and hunger.
- œ It is often the case that Indians are unable to distinguish between the cultural and social characteristics of South Koreans and people of other East Asian nations.

### ◎ CONCLUSION

As the two countries come closer, it is pertinent to reflect on poet and Nobel laureate Rabindranath Tagore's evocative poem Lamp of the East which revolves around Korea's promisingly bright future: "In the golden age of Asia Korea was one of its lamp bearers, and that lamp is waiting to be lit once again for the illumination of the East". India and Korea seem set to light that lamp together.

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## NEW - TECH COLD WAR

### CONTEXT

The U. S. has moved to block China’s access to chip-making tools and designated Huawei, ZTE as national security threats.

#### ◎ BACKGROUND

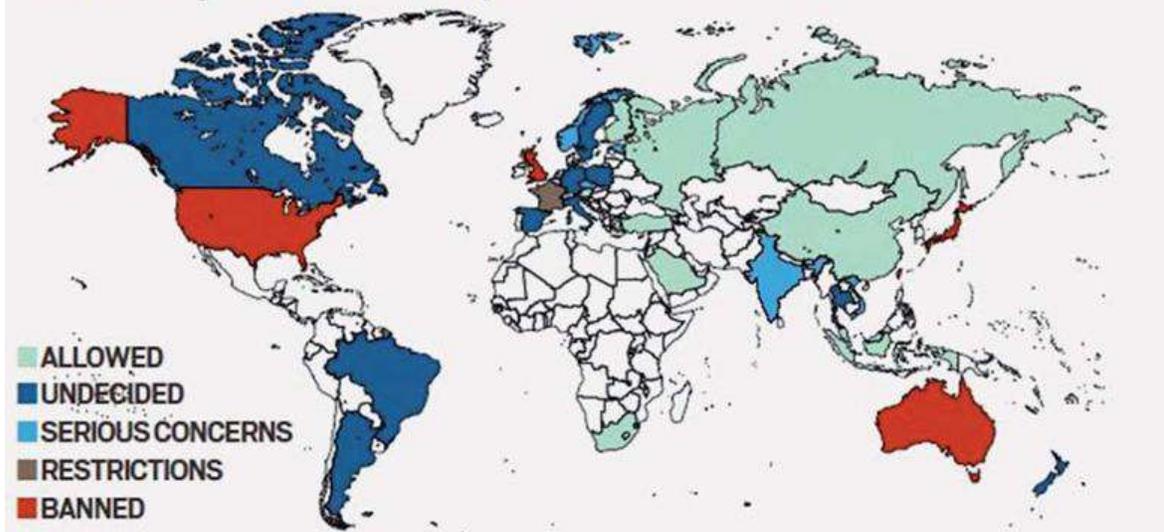
- œ A report by the US House Intelligence Committee flagging issues posed by Chinese telecom companies Huawei Technologies and ZTE nearly a decade ago has evolved into a full-scale duel between the two global technology powerhouses.
- œ In February 2011, Huawei published an open letter to the US government denying the security concerns raised about the company or its equipment, and requesting a full investigation into its corporate operations.
- œ In response, the House Permanent Select Committee on Intelligence began an investigation in November 2011 into “the counterintelligence and security threat posed by Chinese telecommunications companies doing business in the US”.
- œ In its report submitted in 2012, the House panel noted that “Huawei and ZTE cannot be trusted to be free of foreign state influence and thus pose a security threat to the United States”.
- œ Last month, the US Federal Communications Commission designated the two companies as national security threats.
- œ A subsequent move by the UK to block Huawei from its 5G networks aligns with the US view and marks an escalation of the Sino-American tech struggle to beyond just these two countries.

#### How could this develop into a tech cold war?

- œ Most observers refer to this as a ‘technological cold war’ that could extend beyond just the US and China, and compel other countries, including India, to effectively choose between one camp and the other.
- œ It is being described as a geopolitical struggle over technology that threatens to divide the world into two distinct technological blocs, with both countries striving to limit the other’s access to its advanced know-how.
- œ The main challenge is whether other countries think the risks are high enough to dump a cheaper, viable option.
- œ For China, the action has come at a time when 5G is set to be rolled out globally. For a lot of countries, a viable 5G rollout will need Chinese firms.

### WHERE HUAWEI IS ALLOWED IN 5G, WHERE IT IS NOT

Countries’ positions as of July 15



- œ But the 5G network in China relies on key components from the US, and the new American restrictions on the use of chipmaking tools mean Huawei could face shortages in the supply of specialist chips.

### India's Position

- œ In December 2009, the Department of Telecommunications (DoT) had asked Indian mobile companies to suspend deals with Chinese equipment makers after fears that Chinese equipment was being used for hacking and spying. But India has never fully banned Chinese companies from its telecom equipment industry.
- œ After the recent standoff in Ladakh, the government has asked the state-owned telecom service providers to exclude Chinese companies from the scope of their network upgrade contracts; this was part of the wider decision to signal curbs on Chinese investments and tech companies in the country.
  - > India justified the ban on 59 mobile apps with Chinese links on grounds of a threat to national security.
- œ India's hesitation in completely banning the Chinese equipment has derived from the view that the Chinese have brought in a semblance of competitiveness to a market earlier dominated by pricier European firms. However, the border

clashes and the US action could now force India into the anti-China camp.

### Implications for the stakeholders in the telecom industry

- œ Huawei could face shortages in its supply of specialist chips.
- œ Globally, the concern is that the fresh wrangling could end up in cascading actions by other western countries
- œ This could have a bearing on the growing competition to dominate next-generation technologies such as 5G networks and artificial intelligence, and impact the plans of most countries preparing to transition to a 5G regime, including India.

### ❶ CONCLUSION

With the Chinese being increasingly blocked by governments in 5G networks, other global players could be at a competitive advantage. Even in the US, small operators in rural parts of the country will no longer be able to access federal subsidies to buy or maintain Chinese equipment and will be forced to deploy components by other manufacturers. This could have a bearing on how the global 5G rollout takes place, especially in the countries outside of North America and Europe.



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## PLEA BARGAINING

### CONTEXT

Many members of the Tablighi Jamaat belonging to different countries have obtained release from court cases in recent days using plea bargaining.

#### ● ABOUT

- œ Accused of violating visa conditions by attending a religious congregation in Delhi, these foreign nationals have walked free after pleading guilty to minor offences and paying the fines imposed by the court.
- œ These cases have brought the focus on plea bargaining as a practice by which time-consuming trials can be avoided.

#### What is Plea Bargaining?

- œ It refers to a person charged with a criminal offence negotiating with the prosecution for a lesser punishment than what is provided in law by pleading guilty to a less serious offence.
- œ It primarily involves pre-trial negotiations between the accused and the prosecutor. It may involve bargaining on the charge or in the quantum of sentence.

#### Few countries where Plea Bargaining is practiced

- œ In 1975, the Law Reform Commission of Canada defined 'plea bargaining' as 'any agreement by the accused to plead guilty in return for the promise of some benefit'.
  - > But over a period of time there was a movement away from the use of the term 'plea bargaining' and toward more neutral expressions such as 'plea discussions', 'resolution discussions', 'plea negotiations', and 'plea agreements'.
- œ It is common in the United States and has been a successful method of avoiding protracted and complicated trials. As a result, conviction rates are significantly high there.
- œ In the U.S. and other countries, the prosecutor plays a key role in bargaining with the suspected offender.

#### Indian Scenario

- œ There has always been a provision in the Code of Criminal Procedure for an accused to plead 'guilty' instead of claiming the right to a full trial, but it is not the same as plea bargaining.

œ The **Law Commission of India, in its 142<sup>nd</sup> Report**, mooted the idea of "**concessional treatment**" of those who plead guilty on their own volition but was careful to underscore that it would not involve any plea bargaining or "haggling" with the prosecution.

œ The concept was not part of the law until 2006. Plea bargaining (Doctrine of Nolo Contendere) was introduced in 2006 as part of a set of amendments to the CrPC as Chapter XXI-A, containing Sections 265A to 265L.

œ The Supreme Court of India has examined the concept of plea-bargaining in the case of **Murlidhar Meghraj Loyat v. State of Maharashtra and Kasambhai v. the State of Gujarat**.

- > In Murlidhar Meghraj Loya vs the State of Maharashtra, the Supreme Court criticized the concept of Plea Bargaining and said that it intrudes upon the society's interests.
- > In Kasambhai's case, the Supreme Court resisted a plea of guilt based on plea-bargaining, as it would be opposed to public policy, if an accused were to be convicted by inducing him to plead guilty, by holding out a light sentence as an allurement.

#### To what cases is it applicable?

- œ The Indian code makes plea bargaining a process that can be initiated only by the accused; further, the accused will have to apply to the court for invoking the benefit of bargaining.
- œ Cases for which the practice is allowed are limited. Only someone who has been charge-sheeted for an offence that does not attract the death sentence, life sentence, or a prison term above seven years can make use of the scheme. It is also applicable to private complaints of which a criminal court has taken cognisance.
- œ Categories of cases that cannot be disposed of through plea bargaining are those that involve:
  - > Offences affecting the "socio-economic conditions" of the country, or
  - > Committed against a woman or a child below the age of 14.

### Benefits of Plea Bargaining

- œ The **Justice Malimath Committee** on reforms of the criminal justice system endorsed the various recommendations of the Law Commission concerning plea bargaining.
- œ The practice would ensure a speedy trial, end uncertainty over the outcome of criminal cases, save litigation costs, and relieve the parties of anxiety. It would also have a dramatic impact on conviction rates. It may help offenders make a fresh start in life.

### Drawbacks

- œ **Voluntary Mechanism:** The applicant should approach the court stating that it is a voluntary preference and that he has understood the nature and extent of punishment provided in law for the offence.
- œ **Non-Binding on the court:** If the applicant reaches an agreement with the prosecutor, the court is not bound to accept this agreement.

- œ It may lead to poor investigatory procedures.
- œ **Coercive Manipulation:** Its close relationship with rewards, threats, and coercion potentially endanger the correct legal outcome.
- œ **It provides for lighter sentence even if the person is found guilty.**
- œ It requires a defendant to plead guilty to the lighter charges; it eliminates the chance for an appeal.

### © CONCLUSION

Plea bargaining has been introduced to overcome the problem of overcrowded jails, overburdened courts, and abnormal delays; it may also result in faster disposal of cases. But the reason behind the delay in trials can be traced to the operation of the investigative agencies as well as the judiciary. Therefore reformation of the existing system may be a more prudent approach rather than introducing a parallel arrangement (as recommended by the Law Commission) or supplementing the present arrangement.

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## CONTEMPORARY ISSUES

# DEEPER LINKS BETWEEN SHRINKING WETLANDS, ENVIRONMENTAL IMBALANCE, AND NATURAL DISASTER

### CONTEXT

The rapid development is also rapidly violating the environment. The development has provided us with facilities, but their disadvantages are also being seen in society and nature. Modern development has caused the most damage to our environment and wetlands.

#### Human Causes

- œ The sewage from the factories, mining, and excessive exploitation of groundwater are some of the human causes that have caused great damage to wetlands.
- œ At the same time, wetlands are losing their true form due to natural causes like sea-level rise, climate change, storms, etc.

#### Example of Jharkhand

- . According to environmental institutions, Jharkhand has about **25 per cent** of the land wetlands. Out of which **12 per cent** has been encroached.
- . Buildings have been constructed by filling these wetlands. Many of these are government buildings. Thus, In addition to geo-mafias, government departments are also responsible for ending the existence of ponds.
- . Any construction work is also prohibited within a radius of at least 200 metres from the last end of the wetland area.

#### Shrinking water sources

- œ Sources of fresh drinking water worldwide are rapidly depleting, causing a crisis for human life on Earth in the near future.
- œ **Urbanization, industrialization, increasing demand for land for roads, rail routes, etc., the rapid expansion of agriculture has eliminated 35 percent of water sources like lakes, rivers, swamps, and trenches between 1970 and 2015.**
- œ The water sources, considered to be extremely important to the world's ecosystem, are spread over **12 million square kilometers worldwide.**
- œ But, since 2000, the rate of decline has increased rapidly.

- œ The global assessment has identified wetlands as the **most at-risk ecosystem.**
- œ According to UNESCO, it affects 40% of the world's flora and fauna inhabit or breed in wetlands.

#### World Wetland Day

- . World Wetland Day is celebrated **on February 2.**
- . It aims to spread awareness about the importance of wetlands such as marshes and mangroves in the face of global warming.
- . The theme of World Wetlands Day for 2020 this year was **'Wetlands and Biodiversity'**.

#### What is a Wetland?

- œ Submerged lands are called wetlands. Natural or artificial, permanent or temporary, full-term humid or short-term, stable water or unstable water, clean water or unclean, saline, muddy water- all these water sites are covered under wetland.
- œ Seawater, where the depth of efflux water does not exceed **six meters**, is also called wetland.
- œ Thus, water-rich marshy forest land (Swamps), marshy bush-rich sites (Marsh), grass-rich marshy marshes, water-logged grassland (bogs) mineral-rich wetlands (Fens) rotten-necked vegetation wetlands (Peatland) swamps, rivers, lakes, flood areas, flooded forests, seaside bushed sites (Mangroves) Delta, paddy fields, coral reefs, dams, canal waterfalls, desert waterfalls, glaciers, seashore tides, etc all these areas are called wetlands.
- œ Humanized artificial water sites like fisheries, reservoirs, etc. also come under the definition of a wetland.
- œ Each wetland has its own ecosystem, biodiversity, and vegetative diversity. These wetlands are habitats of aquatic animals, birds, etc.

### Importance of Wetlands

- œ Wetlands are called kidneys of the biosphere, which perform an accumulation, biological, geochemical, hydrology, climate, and gas control functions.
- œ Wetland systems are of great importance for maintaining the stability of ecosystems and preserving the biological diversity of plant species that grow thereon.
- œ In fact, wetlands are a specific type of ecosystem and an important part of biodiversity. Being a meeting point of aquatic and terrestrial biodiversity, the wetland is a rich ecosystem with an abundance of wild animal species and flora.
- œ More than 40 percent of the species live in wetlands and are nourished through them.
- œ Wetland is an extremely productive aquatic ecosystem. Wetlands not only store and preserve water but also reduce the flood menace by covering the water in addition to the flood.

- œ Wetland serves as a natural and efficient carbon sink. For example, swampy moss is spread over only 3% of the land, but it has the potential to absorb carbon in just twice as much as all forests in the world.

### © CONCLUSION

- œ India is a signatory to the Ramsar Convention (February 1982), an international treaty for the conservation and sustainable use of wetlands. The country has only 26 sites designated as wetlands of international importance, with a surface area of 689,131 hectares, whereas a much smaller country like the UK has 169 Ramsar sites. Even these 26 sites are plagued by uncontrolled development and illegal encroachment.
- œ 90% of the world's disasters are water-related and affect 60% of people living in coastal areas with floods or tsunamis. Wetlands act as buffers against climate-related disasters, the way to avoid the accidental effects of climate change.

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**SECTION: B**  
**(PRELIMS)**

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**CURRENT AFFAIRS**



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## MINE PLOUGHS FOR T-90 TANKS

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- **CONTEXT :** The Acquisition Wing of the Ministry of Defence (MoD) signed a ` 557-crore contract with the Bharat Earth Movers Limited (BEML) for the procurement of 1,512 mine ploughs for T-90 Tanks. The induction is expected to be completed by 2027.
- **ABOUT:**
  - These mine ploughs will be fitted on T-90 Tanks of the Indian Armoured Corps which will **facilitate individual mobility to the tanks** while negotiating a minefield.
  - Mine ploughs help tanks to clear minefields and minimize risks to men and machines.
  - The mobility of the tank fleet will enhance manifold which in turn would extend the reach of the armored formations deep into enemy territory without becoming a mine causality.
  - As per the procedure, the contract has Buy and Make (Indian) categorisation with a minimum of 50% indigenous content in the Make portion.
  - It is to be noted that the Russian-origin T-90 main battle tanks were recently deployed by the Indian Army in the Galwan Valley sector of Ladakh amid the border dispute with China.

### Features of the T-90 Tank

- It has the capability to deal with Biological and Chemical weapons.
- It is the **Main Battle Tank** of the Indian Army and has the best-armored protection.
- This Tank is of **Russian origin**. But is now built-in India and can fire 8 shells in 60 seconds
- It comes with 125 Mm main gun to make surefire and can launch a missile up to 6 km.
- It is considered to be the lightest and the strongest tank in the world and weighs around 48 tons.
- With the ability to fight in day/night, it comes with a missile attack shield.
- Has a powerful 1000 horsepower engine and can run with a speed of 72 km/h. And can cover 550 km at a time.

### Bharat Earth Movers Limited (BEML)

- BEML is an Indian Public Sector Undertaking with headquarters in Bengaluru, Karnataka.
- The company manufactures a variety of heavy equipment, such as that used for earth moving, transport and mining.
- BEML has manufacturing plants in Kolar Gold Fields, Bengaluru, Mysore and Palakkad.

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## INDIAN BULLFROG

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- **CONTEXT:** As the monsoon arrives, the Indian Bullfrog has made its presence felt in the rainy season.
- **ABOUT:**
  - At any other time during the year, the Indian Bullfrog roams alone and has a varied dull olive green-brown appearance, camouflaging well with their immediate surroundings.
  - When the rain comes down, their breeding season begins, and the males, now yellow, with two blue vocal sacs, set out in search of females that are generally larger.

### Indian Bullfrog

- . **Scientific Name:** Hoplobatrachus tigerinus.
- . **Common Name(s):** Indian Bullfrog, Bull Frog, Golden Frog, Tiger Frog, Tiger Peters Frog.
- . **Distribution:** This species is found throughout most wetland areas of India, Bangladesh, northern Pakistan, southern parts of Nepal, and Myanmar. It has also been introduced to the Maldives and Madagascar.
- . **Habitat:** It is mainly aquatic, inhabiting mostly freshwater wetlands, both natural and artificial. It is absent or uncommon in forested areas and coastal regions.
- . **Conservation Status:**
  - œ **IUCN Status: Least Concern**
  - œ **Appendix II** of CITES.
  - œ **Schedule IV** of the Indian Wildlife (Protection) Act, 1972.
- . **Key Points:**
  - œ The bullfrogs are **prolific breeders**: they have short breeding seasons, and each egg clutch can contain up to 5,750 eggs. Its tadpoles are carnivorous and eat other tadpoles (including their species).
  - œ They can be identified by the pointed snout and long hind limbs, which help them jump.
  - œ These are **nocturnal and formidable ambush predators**.

## KURMA APP

### ◎ CONTEXT:

Union Environment and Information & Broadcasting Minister Prakash Javadekar hailed the KURMA mobile application as a unique tool for tracking and reporting Indian turtles.

### ◎ ABOUT:

- The Mobile Application, KURMA, was launched on **23<sup>rd</sup> May** this year on the occasion of **World Turtle Day**. The citizen science initiative aims at the conservation of turtles and tortoises.
- The mobile application has been developed by the **Indian Turtle Conservation Action Network (ITCAN)** in collaboration with the **Turtle Survival Alliance-India and Wildlife Conservation Society-India**.
- It provides users the database to identify a species and also provides the location of the nearest rescue centre for turtles across the country.
- It serves as a digital database, with a built-in digital field guide covering 29 species of freshwater turtles and tortoises of India, and information on turtle identification, distribution, vernacular names, and threats.
- Freshwater turtles and tortoises are referred to as the '**non-marine**' **chelonians**, as they lack the adaptation to survive in seawater.
- Turtles are one of the most threatened groups of vertebrates – India is home to 28 species of non-marine Chelonians, of which 54% are listed as Threatened in the IUCN Red List.

### Concerns

- Tortoise and freshwater turtles are among the most trafficked in the country.
  - œ A report released in 2019 by TRAFFIC, showed that at least 200 tortoises and freshwater turtles fall prey to illicit poaching and smuggling every week.



- . One of the major challenges for freshwater turtle conservation in the country is that wildlife crime prevention agencies are not sufficiently equipped to know how to distinguish one species from the other, or their protection status under CITES (Convention on International Trade in Endangered Species) and the Wildlife Protection Act.

#### **World Turtle Day 2020**

- . World Turtle Day is observed on May 23 annually. The day is celebrated to make people aware of turtle and tortoise and their habitats.
- . Every year since 2000, **American Tortoise Rescue (ATR)**, a nonprofit organization, sponsors the celebrations for World Turtle Day.
- . Theme of World Turtle Day 2020: **'Adopt, Don't Shop'**.
- . The day was celebrated by National Mission for Clean Ganga (NMCG), along with the Wildlife Institute of India (WII), in India.

## **GOVERNMENT SETS UP SINGLE-WINDOW CLEARANCE FOR AVIATION SECTOR**

◎ **CONTEXT:**

The civil aviation ministry has set up a single-window clearance mechanism to expedite various investment proposals in the domestic aviation industry.

◎ **ABOUT:**

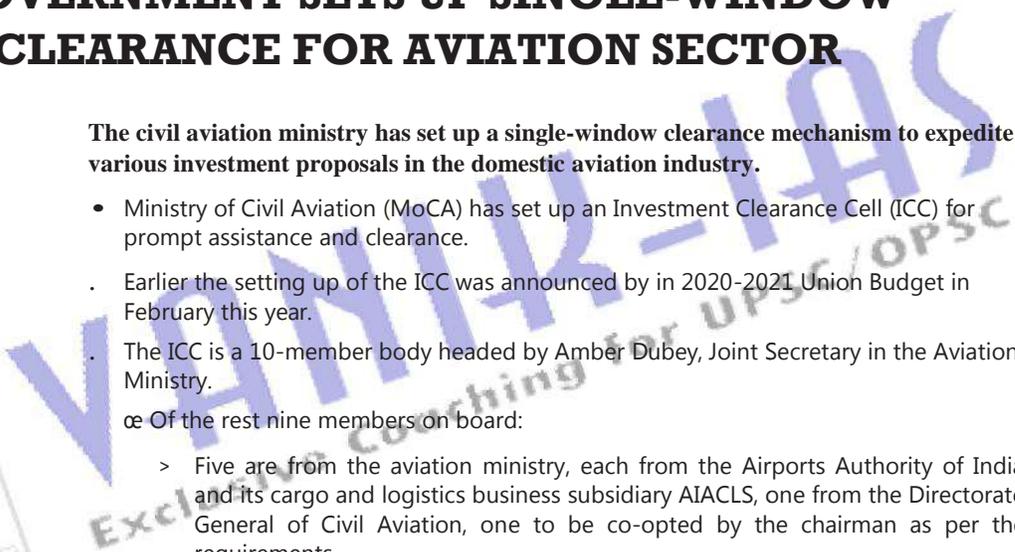
- Ministry of Civil Aviation (MoCA) has set up an Investment Clearance Cell (ICC) for prompt assistance and clearance.
- . Earlier the setting up of the ICC was announced by in 2020-2021 Union Budget in February this year.
- . The ICC is a 10-member body headed by Amber Dubey, Joint Secretary in the Aviation Ministry.
  - œ Of the rest nine members on board:
    - > Five are from the aviation ministry, each from the Airports Authority of India and its cargo and logistics business subsidiary AIACLs, one from the Directorate General of Civil Aviation, one to be co-opted by the chairman as per the requirements.

. **Functions:**

- œ The ICC has been mandated to serve as a single-window system for attracting investment and its terms of reference include accelerating investments, bringing projects to the Empowered Group of Secretaries (EGoS) which require special incentive, policy interventions, etc.
- œ It will also identify projects and report to EGoS and maintain active contacts with investors and work with the states, duly adopting ways of on-boarding the states to make them a part of the institutional set-up.
- œ It will identify policy and regulatory issues that come in the way of investments and engage with potential investors to bring the proposal for consideration of EGoS.

. **Need for ICC**

- œ The Indian aviation sector is hit severely by the coronavirus pandemic and economic downturn.
- œ Rating agency IcrA expects India's GDP to contract by 9.5 percent this fiscal on account of the localised lockdowns put in place by various state governments and rising cases of coronavirus infection.



## ZORAM MEGA FOOD PARK

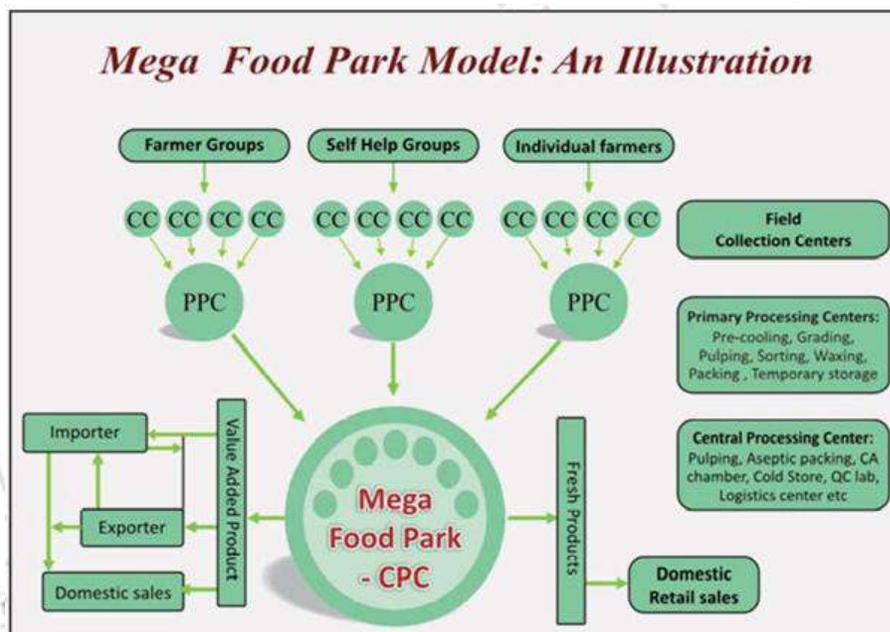
◎ **CONTEXT:**

Recently, the Zoram Mega Food Park was inaugurated in the state of Mizoram.

◎ **ABOUT:**

- The Zoram Mega Food Park is located at **Village-Khamrang in Kolasib District, Mizoram**. This is the first Mega Food Park operationalized in the State of Mizoram.
- It has been set up in 55.00 acres of land at a project cost of Rs. 75.20 crore.
- This Mega Food Park will benefit the people of Kolasib-District as well as the adjoining areas. This park will help in enhancing the income of farmers and ensuring the fair price of farm produce.
- It will provide direct and indirect employment to 5,000 persons and benefit about 25,000 farmers in the CPC (Core Processing Centre) and PPC (Primary Processing Centre) catchment areas.

### Mega Food Park Scheme



- It was launched in 2008 by the Ministry of Food Processing Industries.
- It aims at providing a **mechanism to link agricultural production to the market** by bringing together farmers, processors, and retailers to ensure maximizing value addition, minimizing wastage, increasing farmers' income, and creating employment opportunities particularly in the rural sector.
- The Scheme is **based on the "Cluster" approach** and envisages the creation of state of art support infrastructure in a well-defined agri / horticultural zone for setting up of modern food processing units in the industrial plots provided in the park with the well-established supply chain.

• **Components of the Scheme:**

- œ **Collection Centers (CCs) and Primary Processing Centers (PPCs):** These components have facilities for cleaning, grading, sorting and packing, dry warehouses, specialized cold stores.

- œ **Central Processing Centers (CPCs):** This Includes common facilities like Testing Laboratory, Cleaning, Grading, Sorting and Packing Facilities, Dry Warehouses, specialized storage.
- œ **Cold Chain Infrastructure** includes Reefer Vans, Packaging Unit, Irradiation Facilities, Steam Sterilization Units, Steam Generating Units, and Food Incubation cum Development Centers, etc.
- . The scheme is implemented by a **Special Purpose Vehicle (SPV) which is a Body Corporate** registered under the Companies Act, 2013.
  - œ State Government, State Government entities, and Cooperatives are not required to form a separate SPV for implementation of the Mega Food Park project.
  - œ Subject to fulfillment of the conditions of the Scheme Guidelines, the funds are released to the SPVs.
- . Under the Scheme, the Government of India provides financial assistance up to Rs. 50.00 Crore per Mega Food Park project.
- . Presently, 18 Mega Food Park Projects are under implementation in various states and 19 Mega Food Parks have already become functional in the States.
  - œ 6 of them are in the Northeastern region. 2 MFPs in Northeastern Region are operational at Assam and Mizoram.

## **KAKRAPAR ATOMIC PLANT**

● **CONTEXT:**

● **ABOUT:**

Recently, the Kakrapar atomic power plant-3 achieved criticality.

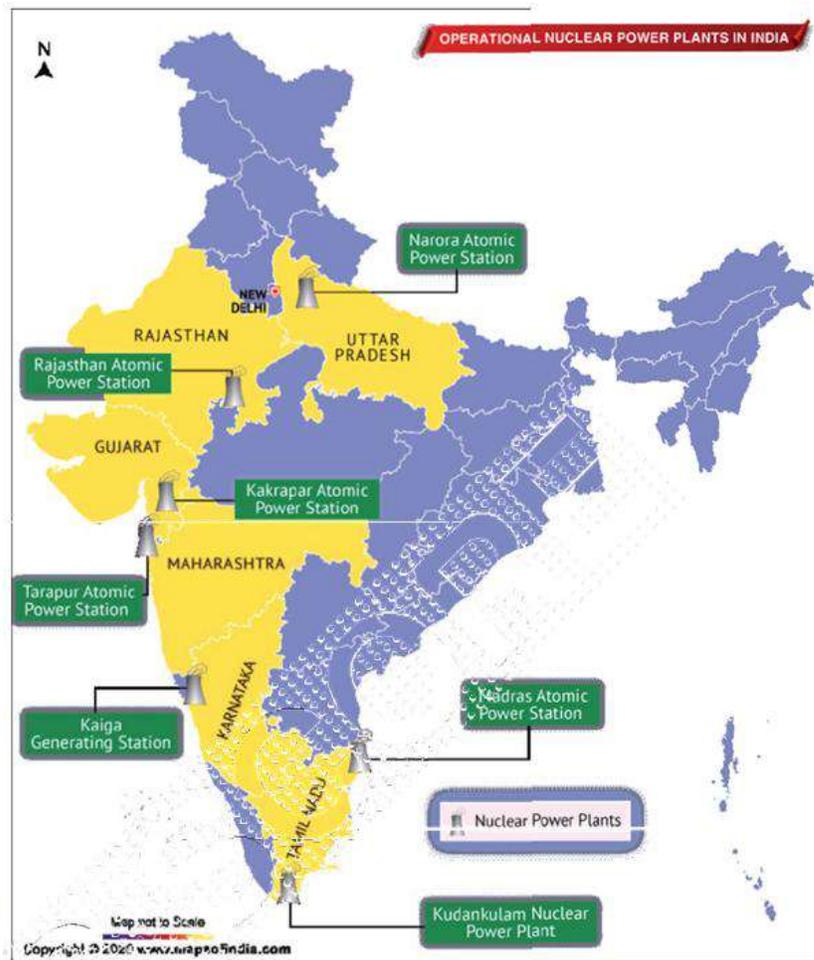
- Almost 25 years after the last unit was commissioned at Kakrapar Atomic Power Plant, the Nuclear Power Corporation of India Limited (NPCIL) has achieved criticality of the third unit of 700 MWe at the plant in Tapi district.
- . NPCIL has seven more reactors under construction which include the fourth unit of 700 MWe at Kakrapar. These reactors are expected to be completed and achieve criticality next year onwards.
- The first two units at Kakrapar of 220 MWe (Megawatt electric) each were based on Canadian technology. The third unit is fully indigenous.
- . The first Pressurised Heavy Water Reactor (PHWR) of 220 MWe was commissioned on May 6, 1993, while the second unit of similar capacity was commissioned on September 1, 1995.
- . The third reactor at Kakrapar is the front runner in a series of 16 indigenous 700 MWe PHWRs which are under various stages of development.
- . The work on the third and fourth units of 700 MWe each began in 2011. The fuel loading for the reactor core was completed by mid-March 2020.

● **BACKGROUND:**

### **Kakrapar-3 (KAPP-3)**

- . KAPP-3 is India's first 700 MWe unit, and the biggest indigenously developed variant of the Pressurised Heavy Water Reactor.
- . The indigenous 700 MWe PHWRs have advanced safety features like steel-lined inner containment, passive decay heat removal system, containment spray system, hydrogen management system, among others.
- . Until now, the biggest reactor size of the indigenous design was the 540 MWe PHWR, two of which have been deployed in Tarapur, Maharashtra.





### Reactors & Criticality

- Reactors are the heart of an atomic power plant, where a **controlled nuclear fission reaction** takes place that produces heat, which is used to generate steam that then spins a turbine to create electricity.
- Fission is a process in which the nucleus of an atom splits into two or smaller nuclei, and usually some by-product particles.
- When the nucleus splits, the kinetic energy of the fission fragments is transferred to other atoms in the fuel as heat energy, which is eventually used to produce steam to drive the turbines.
- For every fission event, if at least one of the emitted neutrons on average causes another fission, a self-sustaining chain reaction will take place.
- A nuclear reactor achieves criticality when each fission event releases a sufficient number of neutrons to sustain an ongoing series of reactions.
- Criticality is the first step towards power production.

- © **SIGNIFICANCE:**
  - The PHWRs, which use natural uranium as fuel and heavy water as moderator, is the mainstay of India's nuclear reactor fleet.

- . The operationalisation of India's first 700MWe reactor marks a significant scale-up in technology, both in terms of optimisation of its PHWR design.
- . It addresses the issue of excess thermal margins, and an improvement in the economies of scale, without significant changes to the design of the 540 MWe reactor.
  - œ **'Thermal margin'** refers to the extent to which the operating temperature of the reactor is below its maximum operating temperature.
- . The 700MWe reactors will be the backbone of a new fleet of 12 reactors to which the government accorded administrative approval and financial sanction in 2017, and which are to be set up in fleet mode.
- . As India works to ramp up its existing **nuclear power capacity of 6,780 MWe to 22,480 MWe by 2031**, the 700MWe capacity would constitute the biggest component of the expansion plan.
  - œ Currently, nuclear power capacity constitutes less than 2% of the total installed capacity of 3,68,690 MW (end-January 2020).
- . As the civilian nuclear sector gears up for the next frontier, building a 900 MWe Pressurised Water Reactor (PWR) of indigenous design, the experience of executing the larger 700MWe reactor design will come in handy, especially about the improved capability of making large pressure vessels.
  - œ This is alongside isotope enrichment plants being developed to supply part of the required enriched uranium fuel to power these new generation reactors over the next decade or so.

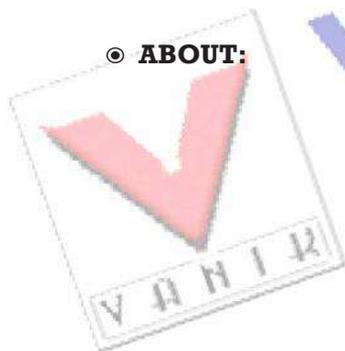
## **MANODARPAN**

● **CONTEXT:**

**Ministry of Human Resource Development launched 'Manodarpan' initiative for mental health and counselling of students.**

● **ABOUT:**

- . It aims to provide psychosocial support and counseling to students for their mental health and well-being.
- . Under this initiative, the minister launched a toll-free national helpline number - 8448440632, a website of Manodarpan and a handbook on 21<sup>st</sup>-century life skills for the students of the school, college, and universities.
- . Manodarpan comprises of the following components:
  - œ Advisory guidelines
  - œ Web page
  - œ National level database and directory of counselors
  - œ National Toll-free helpline number
  - œ Interactive online chat option
- . Manodarpan is an initiative under the Atmanirbhar Bharat Abhiyan.
- . **Need for such an initiative:**
  - œ COVID -19 pandemic is not only a serious medical concern but also has brought mixed emotions and psycho-social stress for all.
  - œ With a specific focus on children and adolescents, there are emerging mental health concerns that are often reported in such situations.
  - œ Children and adolescents may be more vulnerable and may experience a heightened level of stress, anxiety, and fearfulness, along with a range of other emotional and behavioural issues.



- . Manodarpan is going to help children as well as their parents in facing a tense situation in life including COVID 19 pandemic induced lockdown and its effects on academics.

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## **NON – PERSONAL DATA**

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◎ **CONTEXT:**

Recently, a government committee has suggested that non-personal data generated in the country be allowed to be harnessed by various domestic companies and entities.

◎ **ABOUT:**

- The 9 member committee headed by the **Infosys co-founder Kris Gopalakrishnan** released the draft report and has kept time till August 13 for the public to send suggestions.
- . The committee has also suggested setting up a new authority that would be empowered to monitor the use and mining of such non-personal data.
- . The government committee, in its report, has classified non-personal data depending on the source of the data and whether it is anonymised in a way that no individual can be re-identified from the data set, into three categories, namely public non-personal data, community non-personal data, and private non-personal data.

### **Definition of Non-Personal Data**

- . In its most basic form, it is any set of data that does not contain personally identifiable information. This in essence means that no individual or living person can be identified by looking at such data.

### **Public, Community, and Private Non-Personal Data**

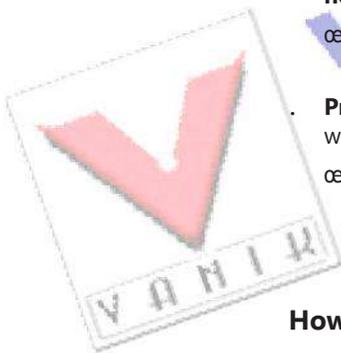
- . **All the data collected by the government and its agencies** such as census, data collected by municipal corporations on the total tax receipts in a particular period, or any information collected during execution of all publicly funded works have been kept under the **umbrella of public non-personal data**.
- . Any data identifiers about a set of people who have either the same geographic location, religion, job, or other common social interests will form the **community's non-personal data**.
  - œ For example, the metadata collected by ride-hailing apps, telecom companies, electricity distribution companies, etc.
- . **Private non-personal data** can be defined as those which are produced by individuals which can be derived from the application of proprietary software or knowledge.
  - œ For example, while order details collected by a food delivery service will have the name, age, gender, and other contact information of an individual, it will become non-personal data if the identifiers such as name and contact information are taken out.

### **How sensitive non-personal data is?**

- . Unlike personal data, which contains explicit information about a person's name, age, gender, sexual orientation, biometrics, and other genetic details, non-personal data is more likely to be in an anonymised form.
- . However, certain categories such as **data related to national security or strategic interests** even if provided in anonymised form can be dangerous. Similarly, even if the data is about the health of a community or a group of communities, though it may be in anonymised form it can be still dangerous.

### **Global standards on non-personal data**

- . In May 2019, the European Union came out with a regulatory framework for the free flow of non-personal data in the European Union, in which it suggested that member states of the union would cooperate when it came to data sharing.



œ The regulation, however, had not defined what non-personal data constituted of and had simply said all data which is not personal would be under the non-personal data category.

- In several other countries across the world, there are no nationwide data protection laws, whether for personal or non-personal data.

### **Analysis of India’s non-personal data draft**

- The draft is a pioneer in identifying the power, role, and usage of anonymised data, there are certain aspects such as community non-personal data, where the draft could have been clearer.
- According to some experts, the final draft must clearly define the roles for all participants, such as the data principal, the data custodian, and data trustees.
- Regulation must be clear, and concise to provide certainty to its market participants, and must demarcate the roles and responsibilities of participants in the regulatory framework. To address these issues more public consultation and more deliberation are required.

## **MADHUBANI PAINTINGS**

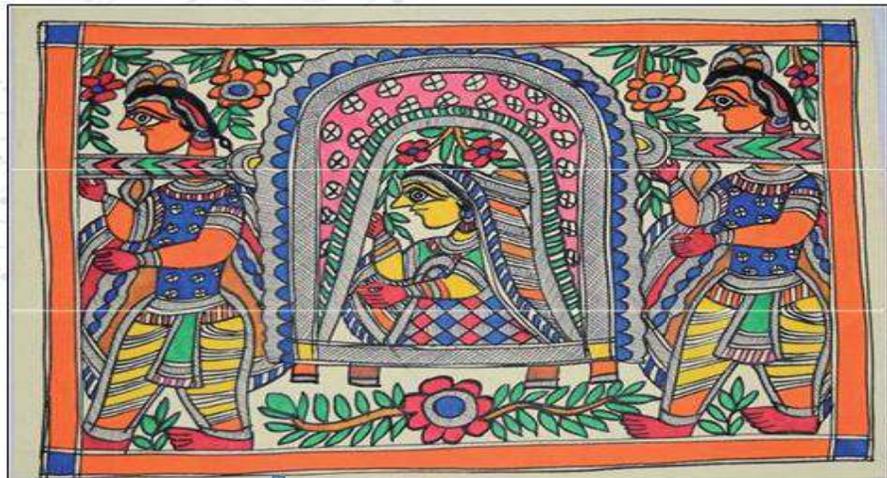
### © **CONTEXT:**

Noted Madhubani artist Remant Kumar Mishra known as Bihar’s “mask man”, despatched masks with hand-painted Madhubani motifs all over India during the ongoing CoVID-19 pandemic.

### © **ABOUT:**

#### **Madhubani Paintings**

- It is practiced in the **Mithila region of Bihar and Nepal**; it is called Mithila or Madhubani art.
- These are characterized by **complex geometrical patterns**.



- The themes of these paintings are festivals, religious rituals, etc.
- Some of the initial references to the Madhubani painting can be found in **the Hindu epic Ramayana**.
- The colors used in Madhubani paintings are usually derived from plants and other natural sources.
  - œ These **colors are often bright** and pigments like lampblack and ochre are used to create black and brown respectively.

- . Instead of contemporary brushes, objects like twigs, matchsticks, and even fingers are used to create the paintings.
- . Madhubani paintings are categorized into **five different styles, such as Tantrik, Kohbar, Bharni, Godna, Katchni.**
- . The paintings are largely made using powdered rice, colors derived from turmeric, pollen, pigments, indigo, various flowers, sandalwood, and leaves of various plants and trees, etc. Also, many natural sources are combined and are processed to obtain the desired colors.
- . If the artists come across empty spaces even after completing the painting, they usually fill up those empty spaces with the motifs of flowers, animals, birds, and geometrical patterns. A double line is usually drawn as the border.
- . **Eminent Artists:** Sita Devi, Jagdamba Devi, Ganga Devi, Mahasundari Devi, Karpuri Devi, Mahalaxmi and Dulari.

## **BLACKROCK ANDROID MALWARE**

### ◎ **CONTEXT:**

Security firm ThreatFabric has alerted about a new malware, called **BlackRock**, which can steal information like passwords and credit card information from about 377 smartphone applications, including Amazon, Facebook, Gmail, and Tinder.

### ◎ **ABOUT:**

- BlackRock is not exactly a new malware. It is based on the leaked source code of the Xeres malware, itself derived from a malware called LokiBot.
- The only big difference between BlackRock and other Android banking trojans is that it can target more apps than previous malware.
- According to the ThreatFabric, the malware can be used to send and steal SMS messages, hide notifications, keylogging, AV detection, and much more.
- The new malware is so powerful that it makes antivirus applications useless.
  - œ BlackRock isn't limited to online banking apps and targets general-purpose apps across various categories of Books & Reference, Business, Communication, Dating, Entertainment, Lifestyle, Music & Audio, News & Magazine, Tools, and Video Players & Editors.

### **How does it work?**

- . Once installed on a phone, it monitors the targeted app. When the user enters the login and/or credit card details, the malware sends the information to a server.
- . BlackRock uses the phone's Accessibility feature and then uses an Android DPC (device policy controller) to provide access to other permissions.
- . When the malware is first launched on the device, it hides its icon from the app drawer, making it invisible to the end-user. It then asks for accessibility service privileges.
- . Once this privilege is granted, BlackRock grants itself additional permissions required to fully function without having to interact any further with the victim. At this point, the bot is ready to receive commands from the command-and-control server and execute overlay attacks.

### **Protection from BlackRock Android malware**

- . Download apps only from the Google Play Stores, use strong passwords, beware of spam and phishing emails, use an antivirus app if possible, and check app permissions.

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**SECTION: C**  
**(GOOD GOVERNANCE)**  
**CURRENT AFFAIRS**



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## **MAZHAPOLIMA: ENSURING WATER SECURITY THROUGH PARTICIPATORY WELL-RECHARGE IN KERALA.**

Mazhapolima is a participatory climate change adaptation initiative which was launched by the Government of Kerala in Thrissur district. The project aims to alleviate the problem of water scarcity by harvesting rainwater from rooftops and feeding it into open dug wells, which traditionally form the water security mechanisms of the state.

### ◎ **OBJECTIVES**

It was initiated to enhance the water table and increase water availability in open dug wells throughout the year; improve the quality of water in open dug wells; reduce public spending on water tankers, and reduce saline intrusion into open dug wells along the coastal line.

### **Key Stakeholders**

Households and institutions facing water scarcity, the District Collectorate, the District Rainwater Harvesting Mission, the Revenue Department, Arghyam, Panchayati Raj Institutions (PRIs), the Department of Education, the State Planning Board, the Department of Rural Development, the State Bank of Travancore, the Thrissur Pooram City Chamber, and the Malayalam Manorama Group.

### **Implementation strategy**

- œ Mazhapolima was conceptualised by a group of like-minded conservationists and water activists in and around Thrissur district under the leadership of the then-District Collector.
- œ The draG plan was submitted to the Government of Kerala, where aGer the Department of Disaster Management, under the Ministry of Revenue, sanctioned Rs. 1 crore for the programme.
- œ AGer a demonstration of the technique's effectiveness, Mazhapolima's implementation began with the constitution of the Mazhapolima Monitoring and Coordination Unit (MMCU) as a special purpose agency attached to the District Collectorate.
- œ In the implementation of the initiative, the process begins with the Gram Panchayat (GP) submitting a list of possible beneficiaries.
  - > Although priority is given to below poverty line (BPL) households and other deserving categories, the households above poverty line (APL) are not excluded.
- œ The next step involves an agreement between the GP

and a nominee of the District Collector. ThereaGer, work is undertaken by the Beneficiary Committee at the GP level or by workers directly arranged by the GP.

- œ The MMCU helps in making a technical team available for the installation of open well-recharge units.
  - > A baseline survey is then conducted and a completion certificate obtained from the respective GP member.
- œ The initiative is being implemented in phases and improving over time.
- œ Mazhapolima has demonstrated the ability to respond to a common need with a simple but effective solution that covers four key components – innovation, awareness generation, grievance redressal, and training.

### **Key Challenges**

- œ There were several challenges in the implementation of the programme, especially from the beneficiaries.
  - > Low attendance at meetings.
  - > Beneficiaries have not taken care of the flush systems nor installed filter systems.
  - > Another challenge has been about generating agreements among family members on directing rainwater to open dug wells.
  - > There has also been resistance to a perceived change in the taste of water aGer recharge.
  - > Beneficiaries have also been complacent about water supply aGer abundant rain, coupled with low hydrogeological literacy among the new generation.
  - > Some other challenges related to the fact that the initiative was being implemented through PRIs, who preferred short-term solutions like tanker supply during summer.
  - > Panchayat members oGen sought equal shares for their respective wards, making it difficult to adopt a community cluster approach. This inadvertently reduced the scope for the participatory approach,

making the recharge units more like demonstration models in some target areas.

### **Replicability & Sustainability**

- œ As a water management model, Mazhapolima is suited to both the east areas and the west coast of Kerala. The technique used is simple to adopt and the financial implications much lower than providing tanker supply to drought-hit areas each year.
- œ The conditions necessary for replication of the programme are good rainfall and a culture of open wells, as household-level wells have the additional advantage of working as micro-aquifers. Except in

certain hydro-geological typologies, most of the coastal locations in India fulfill these conditions. Hence, Mazhapolima represents a low-cost, effective climate change adaptation strategy.

### ⦿ **CONCLUSION**

Mazhapolima has importance in light of the drastic and dramatic global climate change scenario. One of the sustainable ways to deal with the threat is to embrace adaptation mechanisms that reverse or at least limit the adverse impact of climate change. Such initiatives are the need of the hour, even if the pace of change and adoption is slow initially.

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# OCS SELECTIONS OF 2018

1 SELECTION IN EVERY  
2 SELECTION ARE FROM VANIK

7 IN TOP 10  
11 IN TOP 20  
24 IN TOP 50  
47 IN TOP 100  
48% SELECTION FROM VANIK



**DEBASIS PANDA**



**RITUPARNA MOHAPATRA**



**AKASH KUMAR PANDA**



**SANTOSHINI DAS**



**NARAYANI P. PANDA**



**SHAKTI MOHAPATRA**



**SMARANIKA TULO**



**Sampat Ku. Dash**



**Serada P. Panda**



**Sidhant Narayan**



**Akash Pattnaik**



**Priti R. Rath**



**Rajiv Das**



**Abhishek Sahu**



**Annanya Tripathy**



**Prasenjit Mishra**



**Debajyoti Panda**



**Avipsa Mohanty**



**Dillip Satapathy**



**Nibedita Parida**



**Rashmi Prava Das**



**Asima Padhi**



**Om Prasad**



**Jyotibikash Dash**



**Narayan Behera**



**Suvasnigdha**



**Subrat Ku. Swain**



**Biswa Tripathy**



**Upasana Padhi**



**Bibhuti Satapathy**



**Avilash Purshit**



**Birendra Tripathy**



**Himanshu B. Pale**



**Sambit Ku. Majhi**



**Subhadra**



**Byomakesh**



**Bishnu Govind**



**Tanmaya Nayak**



**Ashutosh Matari**



**Anshuman Sarangi**



**Krishna Padhi**



**Madhusmita Nanda**



**Adarsh A. Tripathy**



**Sanishree Mallick**



**Om Prakash Parida**



**Md. Azharuddin Khan**



**Rajesh Ku. Samal**



**Tattwomasi**



**Amit Biswal**



**Agurba R. Aich**



**Trisandhya Patra**



**Bani Satabdi Dash**



**Harekrushna Sahu**



**Nirmal Ku. Bhouli**



**Ajit Ku. Uttaray**



**Manoja Ku. Behera**



**Ananda Ch. Palei**



**Sushree Supriya**



**Dhiren Ku. Nayak**



**Nivedita Nayak**



**Biranchi N. Jagat**



**Sridhar Ku. Sethi**



**Ananta Ku. Nayak**



**Abhijit S. Swain**



**Gyanaranjan Majhi**



**John Major Dalai**



**Jyoti P. Sethi**



**Arjun Majhi**



**Subha P. Kanungo**



**Deepak Ku. Jena**



**Rashmirani Sonapati**



**Subha Kanta Naik**



**Madhusmita Samal**



**Gitu Behera**



**Madhusmita Singh**



**Manaranjan Suna**



**Prachi**



**Tapan Ku. Malik**



**Manoj Ku. Behera**



**Manaswee Sethi**



**Bhabani Pradhan**



**Upanjali Majhi**



**Satyabrata Naik**



**Sagar Palo**



**Prasanti Pradhan**



**D. Satyabhusan**



**Prem Chand Jani**



**Mrutunjaya Sabar**



**Gouranga Ghosh**



**Meera Naik**



**Deepak Bara**



**Debasish Patra**



**Bhabesh Majhi**



**Vikas Mundari**



**Sandeep Singh**



**Prafulla Muduli**



**Smrutiranjana Tudu**



**Lalit Ku. Naik**



**Phalguni Sabar**



**Sunita Panda**

**And Many  
More Selections**