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# TATHASTU

Institute of Civil Services



**CURRENT AFFAIRS March Month 2022**

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# Editorials of the Month

## Draft Data Accessibility and Use Policy

**News:** The Ministry of Electronics and Information Technology (MEITY) released the “Draft India Data Accessibility & Use Policy 2022”.

### Objectives of the policy

- If passed, it would govern, “all data and information created/generated/collected/archived by the Government of India” as much as, “State Governments [who] will also be free to adopt the provisions of the policy”. The twin purpose to which this data will be put to will be government-to-government sharing and high value datasets for valuation and licensing.

### Issues with the draft policy

#### Commercial interests

- The immediate risk arises when a government starts licensing citizen data. Over the past three years, there has been a rapid expansion in the nature and scope of our most intimate details.
- While the middle classes faced the mendacity of voluntarily linking their Aadhaar to their bank accounts and mobile connections, today, the digital sweep is all pervasive.
- For agriculture, there is an Agristack; for unorganised labourers, we have the e-SHRAM portal; in health we have Aarogya Setu and ABHA (Ayushman Bharat Digital Health Mission); and for school children and teachers there is NDEAR (National Digital Education Architecture).
- For every area of our lives, the government now has a database filled with our personal data.
- The stated purpose for collection has been improving service delivery, planning and checking leakages.
- Public data is now being viewed as a prized asset of the Union government that should be freely shared, enriched, valued and licensed to the private sector.
- Given that more data means more money, commercial interests will prompt the government to collect granular personal details through greater capture and increased retention periods.
- Tying government policy determinations with a fiscal potential may also lead to distortion of the aims of data collection — the welfare of farmers, healthcare, unorganised labourers or even schoolchildren.
- There is no indication that consent will be sought in a meaningful form. Over time, the original objectives for which databases are built will get diluted in favour of commercial interests.

#### Absence of transparency

- The second issue emerges from the disingenuous phrasing of “making data open by default”.
- The World Bank notes that one of the first benefits of open data is that it supports “public oversight of governments and helps reduce corruption by enabling greater transparency”.
- These principles were recognised in past policy pronouncements of the government.
- Specifically, the National Data Sharing and Accessibility Policy, 2012 and the implementation guidelines formulated in 2017 refer to the Right to Information Act, 2005.
- However, within the present draft data accessibility policy, while the phrase “open data” has been used, its values and objectives are absent. The primary, overpowering objectives in the draft data accessibility policy and the background note are commercial.

## Absence of legal basis

- The final area for reconsideration is a larger trend of policy-based administration detached from our constitutional framework. Compounding this problem, the present policy, as many others, is untethered to any legislative basis and contains no proposals for the creation of a legal framework.
- As per the Supreme Court's Puttaswamy judgment on the fundamental right to privacy, the first ingredient to satisfy constitutionality is the existence of a legal, more often a legislative, basis.
- Without a law, there is absence of defined limits to data sharing that are enforceable and contain remedies.
- In this case, the promise of privacy preservation through anonymisation tools holds little promise when it cannot be independently assessed by a body for data protection.
- Even heavily sampled anonymised datasets are unlikely to satisfy the modern standards for anonymisation set forth by GDPR and seriously challenge the technical and legal adequacy of the de-identification release-and-forget model.
- This becomes vital as it is the principal measure suggested in the draft data accessibility policy.

## Way forward:

- Parliamentary enactments also help bring accountability through deliberation that furthers foresight and contains financial memorandums – given that public money would be spent to enrich datasets of public data.
- Since the policy contemplates sharing data between databases of the central and state governments as well as through central funded schemes, it may also be prudent to deliberate further in the Rajya Sabha.
- Federalism becomes a relevant issue given that such data, when it is generated, processed and enriched by state governments to comply with interoperability standards, will lead to revenue generation for itself.

## Digital Public Infrastructure

**News:** A lot has been written about the emphasis on “digital” in the 2022 Union Budget. But one aspect that hasn't been talked about as much is the importance given in the budget to digital public infrastructure (DPI).

## Background:

- A global trendsetter: India is seen as a global trendsetter in the DPI movement, having set up multiple large-scale DPIs like Aadhaar, UPI and sector-specific platforms like DIGIT for eGovernance and DIKSHA for education.
- Improvement in public service delivery: These DPIs have helped push the frontier of public service delivery.
- This year's budget adds to the growing discourse on DPIs by making four key announcements:
  - In health, an open platform with digital registries, a unique health identity and a robust consent framework;
  - In skilling, a Digital Ecosystem for Skilling and Livelihood (DESH-Stack) to help citizens upskill through online training;
  - Unified Logistics Interface Platform (ULIP) to streamline movement of goods across modes of transport; and for travel,
  - In mobility, an “open source” mobility stack for facilitating seamless travel of passengers.
- Analysis by the Centre for Digital Economy Policy Research (C-DEP) estimates that national digital ecosystems could add over 5 per cent to India's GDP.

## Way forward:

- But important design considerations must be set right if we are to truly unlock the value of these platforms.

## Differentiating between tech and non-tech layer

- We need to differentiate between the “tech” and “non-tech” layers of our digital infrastructure.
- While India seems to have made significant headway on the “tech” layers, the “non-tech” layers of community engagement and governance need a lot more work.
- The combination of these three layers is what is critical to making tech work for everyone.
- Together, they embody what we call the open digital ecosystems (ODE) approach.

## Get non-tech layers right

- To unleash the true potential of India's ODEs, we need to get the “non-tech” layers right, by prioritising principles around data protection, universal access and accountability.



- In this regard, three specific non-tech levers are critical.
1. **Data protection:** Protecting the data of all users and giving them agency over how their data gets used.
    - The passage of a robust Data Protection Bill is imperative.
    - But we also need to go beyond the mere requirement of “consent”.
  2. **Address digital divide:** It is important to address the digital divide.
    - Research by ORF, for instance, shows that Indian women are 15 per cent less likely to own a mobile phone and 33 per cent less likely to use mobile internet services than men.
    - So, we need a “phygital” approach that provides services through both online and offline options and strong grievance redressal mechanisms.
  3. **Institutional mechanism:** As we push the frontier on digitisation, India must also focus on developing anchor institutions and robust governance frameworks.
    - Just as Aadhaar is anchored by UIDAI under an Act of Parliament, and the Ayushman Bharat Digital Mission is anchored by the National Health Authority, every new ODE requires an accountable institutional anchor. These institutions are critical for setting standards, ensuring a level playing field and safeguarding consumer interest.

## Oil Prices and Stagflation in India

**News:** Reports suggest that crude oil prices soared and touched almost \$140 per barrel mark amid Russian invasion of Ukraine. This has posed a risk of causing Stagflation in India.

### What is Stagflation?

- Stagflation is a stagnant growth and persistently high inflation. It, thus, describes a rather rare and curious condition of an economy. Iain Macleod, a Conservative Party MP in the United Kingdom, is known to have coined the phrase during his speech on the UK economy in November 1965.
- Typically, rising inflation happens when an economy is booming — people are earning lots of money, demanding lots of goods and services and as a result, prices keep going up.
- When the demand is down and the economy is in the doldrums, by the reverse logic, prices tend to stagnate (or even fall). But stagflation is a condition where an economy experiences the worst of both worlds — the growth rate is largely stagnant (along with rising unemployment) and inflation is not only high but persistently so.
- The best-known case of stagflation is what happened in the early and mid-1970s. The OPEC (Organisation of Petroleum Exporting Countries), which works like a cartel, decided to cut crude oil supply.
- This sent oil prices soaring across the world; they were up by almost 70%.
- This sudden oil price shock not only raised inflation everywhere, especially in the western economies but also constrained their ability to produce, thus hampering their economic growth.
- High inflation and stalled growth (and the resulting unemployment) created stagflation.

### Is India facing stagflation?

- In the recent past, this question has gained prominence since late 2019, when retail inflation spiked due to unseasonal rains causing a spike in food inflation. In December 2019, it was also becoming difficult for the government to deny that India’s growth rate was witnessing a secular deceleration.
- As revised estimates, released in January end, now show, India’s GDP growth rate decelerated from over 8% in 2016-17 to just 3.7% in 2019-20. However, the answer to this question in December 2019 was a clear no.
- For one, in absolute terms, India’s GDP was still growing, albeit at a progressively slower rate.

### Why this is a cause of concern?

- Russia is the world’s second-largest oil producer and, as such, if its oil is kept out of the market because of sanctions, it will not only lead to prices spiking, but also mean they will stay that way for long.
- While India is not directly involved in the conflict, it will be badly affected if oil prices move higher and stay that way. India imports more than 84% of its total oil demand. At one level, that puts into perspective all the talk of being Atmanirbhar (or self-reliant). Without these imports, India’s economy would come to a sudden halt — both metaphorically as well as actually.

## Impact on Indian Economy

- Higher inflation would rob Indians of their purchasing power, thus bringing down their overall demand.
- In other words, people are not demanding enough for the economy to grow fast.
- Private consumer demand is the biggest driver of growth in India.
- Such aggregate demand — the monetary sum of all the soaps, phones, cars, refrigerators, holidays etc. that we all spend on in our personal capacity — accounts for more than 55% of India's total GDP.
- Higher prices will reduce this demand, which is already struggling to come back up to the pre-Covid level.
- Fewer goods and services being demanded will then disincentivise businesses from investing in new capacities, which, in turn, will exacerbate the unemployment crisis and lead to even lower incomes.

## Start-ups and Society

**News:** As per the Economic Survey 2021-22, India has become the third-largest startup ecosystem in the world after the US and China.

### Background:

- India attracted huge investment in startups in 2021: Private equity investment was \$77 billion, of which \$42 billion went to early-stage ventures. Every startup where salaries are paid by investors rather than customers is breathlessly rethinking business plans.

### Impact on Society:

#### Innovation, productivity and job creation:

- The high failure rate of startups is not a problem per se — society only needs a few successes to harness the gains of innovation, productivity and job creation.
- A new book, The Power Law makes the case that startup investing is unlike public market investing.
- He suggests public markets follow a “normal” distribution like human height — most people cluster around the average with a few exceptionally low or high.
- But venture investments follow a “power law” of distribution, that is, most go to zero but the tiny number that succeeds more than compensate for the losses or mediocrity of the many.

#### Development of social sectors:

- Startups don't socialise their losses, Corporate bank loans expanded from Rs 18 lakh crore in 2008 to Rs 54 lakh crore in 2014. Such high corporate bank loans created bad loans that needed many lakh crores of government money to recapitalise nationalised banks.
- This money was diverted from government spending on healthcare, education and defence. The current venture capital binge will also create many write-offs but this cost will fall on consenting adults with broad shoulders — foreign institutions, angel investors and entrepreneurs with successful previous exits.

#### Solution to many problems:

- Ending our poverty needs higher productivity regions, cities, sectors, firms and individuals.
- A modern state is a welfare state that does less commercially so it can do more socially.
- It needs allies in reimagining financial inclusion, supply chains, distribution logistics, employability, retail, transport, media, healthcare, agriculture and much else.
- Many of our startups shall redeem their pledge to solve these problems “not wholly or in full measure, but very substantially”.

#### Issues

- Fiscal and monetary policy normalisation: The global capital supply fuelling startup funding faces challenges from fiscal and monetary policy normalisation: The rate-sensitive two-year US government bond recently touched a 1.6 per cent yield after being at 0.4 per cent as recently as November — because the risk-free return cannot be return-free-risk forever. Investors are returning to weighing financial sustainability and capital efficiency along with addressable markets.
- This explosive startup funding has created excesses.

- Private markets are not only delaying IPOs — Amazon went public within three years of starting with less than half the value of a unicorn — but unicorn IPOs’ underperformance suggests that public markets have a different calibration.

## India’s Demand for Gold

**News:** Gold’s appeal as a safe haven is only rising: as tensions escalate in Ukraine, its price is approaching records.

### Background:

- India is the world’s second-largest market for the yellow metal, behind China, though it produces almost none at home. This is partly driven by tradition. Brides are given jewellery as part of their dowry and it is deemed auspicious to buy bullion around certain religious festivals. It is a handy store of undeclared wealth, too, often stashed in wardrobes or under the mattress. But the pandemic has also affirmed an investment advice passed on over generations: park savings in gold as a rainy-day fund.

### Concerns:

- Vast gold imports can destabilise the economy. During the 2013 “taper tantrum”, when India’s foreign-exchange reserves were lower than they are now, a rush of gold imports helped push the current-account deficit to 4.8% of GDP and fuelled worries of a currency crisis.
- Savings stashed away as idle gold could be put to more productive use elsewhere. Indian households hold 22,500 tonnes of the physical metal—five times the stock in America’s bullion depository.

### Policy measures by the government:

- Import duties hover around 10%, even after cuts in last year’s budget aimed at keeping smuggling in check.
- The central bank has ramped up issuance of sovereign gold bonds, which are denominated in grams of gold.
- Of the 86 tonnes’ worth issued since 2015, about 60% were sold after the pandemic began.
- And the gold monetisation scheme, which allows households to hand gold over to a bank and earn interest, was revamped last year to reduce limits on the size of deposits.
- Lockdowns inadvertently helped the state’s agenda.
- Mobile payments platforms like PhonePe and Google Pay reported rising appetite for digital gold, which is sold online and stored by the seller. Money also rushed into gold exchange-traded funds (ETFs).
- Their assets hit 184bn rupees (\$2.5bn) in December, a 30% rise in a year.

## Impact of TB on Women

**News:** As India steadily steers its way through the pandemic to safer shores, we must foreground a disease which has been impacting our country for years, and disproportionately affecting women – tuberculosis.

### Background:

- In India, the TB case fatality ratio increased from 17 per cent in 2019 to 20 per cent in 2020. According to a joint report (2010-13) of the Registrar General of India and the Centre for Global Health Research, TB was the fifth-leading cause of death among women in the country, accounting for nearly 5 per cent of fatalities in women aged 30–69.

### Impact on women:

- While both men and women suffer the consequences of this debilitating disease, women patients pay a much steeper socio-economic price.
- From social ostracisation and lack of family support to the negative impact on marital prospects, women absorb the repercussions of TB beyond the clinical metrics.
- Stigma also acts as a strong deterrent when it comes to health-seeking behaviour.
- Fewer women, therefore, get included in the available cascade of care for TB.

### Measures by government

- In 2019, the Health Ministry-Central TB Division developed a national framework for a gender-responsive approach to TB in India. The document takes cognisance of the challenges faced by women in accessing treatment and offers actionable solutions.



- In December 2021, a parliamentary conference on 'Women Winning Against TB' was organised by the Ministry of Women and Child Development where gender-responsive policy interventions were discussed.
- The Vice-President of India urged states to take proactive steps such as ensuring nutritional support to women and children and the doorstep delivery of TB services, especially for women from socio-economically weaker backgrounds.

**Way forward:**

- One, as elected representatives, we need to come together more to highlight the issue at all relevant forums and spaces. These meetings see increased participation of women leaders from all walks of life in the community going forward.
- We need to strengthen counselling networks for women patients and their families. Irrespective of where the patient seeks care – public or private sector – build the capacity of healthcare workers to educate the patient's family about the importance of providing her a supportive environment during the course of her treatment.
- We need to ensure that the nutritional needs of women are being met. Undernutrition is a serious risk factor for TB and research indicates such risks are higher for women. It is commendable that the government, through Nikshay Poshan Yojana, has effectively provided a monthly benefit of Rs 500 to enable a nutritious diet for TB patients in the last few years. For the 2020 cohort, the total amount paid under NPY via DBT has been over Rs 200 crore. Additionally, we can look to further strengthen inter-departmental coordination, wherein the Public Distribution System can explore appropriate linkages with relevant departments of the MoHFW and even include a protein-rich diet for TB patients.
- At a community level, we must amplify accurate TB messaging and showcase how gender plays a role in determining the course of action on the ground.

# General Studies – 1

## **Indian Heritage and Culture**

1. Indian culture will cover the salient aspects of Art Forms, Literature and Architecture from ancient to modern times.

## **History**

2. Modern Indian history from about the middle of the eighteenth century until the present significant events, Personalities, Issues.
3. The Freedom Struggle — Its various stages and Important contributors / contributions from different parts of the country.
4. Post-independence consolidation and reorganization within the country.
5. History of the world will include events from 18th century such as Industrial revolution, World wars, Redrawing of national boundaries, Colonization, decolonization, Political philosophies like communism, capitalism, socialism etc.— their forms and effect on the society

## **Society**

6. Salient features of Indian Society, Diversity of India.
7. Role of women and women's organization, Population and associated issues, Poverty and developmental issues, Urbanization, their problems and their remedies.
8. Effects of globalization on Indian society.
9. Social empowerment, Communalism, regionalism & secularism.

## **Geography**

10. Salient features of world's physical geography.
11. Distribution of key natural resources across the world (including South Asia and the Indian sub-continent) Factors responsible for the location of primary, secondary, and tertiary sector industries in various parts of the world (including India).
12. Important Geophysical phenomena such as earthquakes, Tsunami, Volcanic activity, cyclone etc., Geographical features and their location-changes in critical geographical features (including water-bodies and ice-caps) and in flora and fauna and the effects of such changes

# History & Culture

## Perini Dance

**News:** A Perini dance performance by artistes in Hyderabad has left the audience awestruck.

### Perini Dance

- Perini Sivathandavam is an ancient dance form, from Telangana, which has been revived in recent times.
- It originated and prospered in Telangana, during the Kakatiya dynasty.
- It is performed in honour of Lord Siva, the hindu god of destruction and it is believed that in ancient times this was performed before the soldiers set to war. One can find evidence of this dance in the sculptures near Garbha Gudi (Sanctum Sanctorum) of the Ramappa Temple at Warangal.
- The Perini siva Thandavam is a dance form usually performed by males. It is called 'Dance of Warriors'. Warriors before leaving to the battlefield enact this dance before the idol of Lord Śiva (Siva).
- The dance form, Perini, reached its pinnacle during the rule of the 'Kakatiyas' who established their dynasty at Warangal and ruled for almost two centuries. It is believed that this dance form invokes 'Prerana' (inspiration) and is dedicated to supreme dancer, Lord Siva.

## Savitribai Phule

**News:** Maharashtra Governor Bhagat Singh Koshyari has recently received flak for his remarks on the social reformist couple Jyotirao and Savitribai Phule. He said in a video, "Savitribai was married off at the age of 10 and her husband was 13 years old at that time. Now think about it, what must girls and boys be thinking after getting married".

### Details:

- Born in Naigaon in Maharashtra on January 3, 1831, Phule is widely regarded as one of India's first-generation modern feminists for her significant contributions in ensuring equal education opportunities under the British raj. She became the first female teacher in India in 1848 and opened a school for girls along with her husband, social reformer Jyotirao Phule.
- The two also worked against discrimination based on caste-based identity, something vehemently opposed by the orthodox sections of society in Pune. The couple set up 'Balyata Pratibandak Gruha', a childcare centre for the protection of pregnant widows and rape victims.
- Phule also played a pivotal role in directing the work of the Satyashodhak Samaj, formed by her husband with the objective to achieve equal rights for the marginalised lower castes.
- As an extension, they started, 'Satya Shodhaka Marriage' where the marrying couple has to take a pledge to promote education and equality.
- Savitribai opened a clinic in 1897 for victims of the bubonic plague that spread across Maharashtra just before the turn of the century. She also set up "Balhatya Pratibandhak Griha".
- She organised a boycott by barbers against the tradition of head tonsuring of widows.
- In her honour, University of Pune was renamed Savitribai Phule University in 2015.

### Jyotirao Phule:

- Born in 1827 in Satara district of Maharashtra. Phule was given the title of Mahatma on May 11, 1888, by Vithalrao Krishnaji Vandekar, a Maharashtrian social activist.
- His famous works are Tritiya Ratna (1855), Gulamgiri (1873), Shetkarayacha Aasud, or Cultivator's Whipcord (1881), Satyashodhak Samajokt Mangalashthakasa Sarva Puja-vidhi (1887).

## Pal-Dadhvav Massacre

**News:** The Gujarat government has marked 100 years of the Pal-Dadhvav killings, calling it a massacre "bigger than the Jallianwala Bagh".

## Pal-Dadhvav Massacre

- The massacre took place on March 7, 1922, in the Pal-Chitariya and Dadhvaav villages of Sabarkantha district, then part of Idar state. The day was Amalki Ekadashi, which falls just before Holi, a major festival for tribals.
- Villagers from Pal, Dadhvav, and Chitariya had gathered on the banks of river Heir as part of the 'Eki movement', led by one Motilal Tejawat. The movement was to protest against the land revenue tax (lagaan) imposed on the peasants by the British and feudal lords.
- Tejawat, who belonged to Koliyari village in the Mewad region of Rajasthan, had also mobilised Bhils from Kotda Chhavni, Sirohi, and Danta to participate.
- Tejawat had been outlawed by the Udaipur state, which had announced a Rs-500 reward on his head.
- The Mewad Bhil Corps (MBC), a paramilitary force raised by the British that was on the lookout for Tejawat, heard of this gathering and reached the spot. On a command from Tejawat, nearly 2000 Bhils raised their bows and arrows and shouted in unison- 'We will not pay the tax'.
- The MBC commanding officer, HG Sutton, ordered his men to fire upon them creating a huge stampede.
- Nearly 1,000 tribals (Bhils) fell to bullets. While the British claimed some 22 people were killed, the Bhils believe 1,200-1,500 of them died.

## Hague Convention 1954

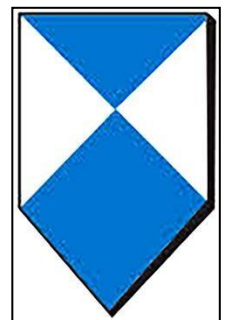
**News:** Recently, the United Nations Educational, Scientific and Cultural Organization (UNESCO) has pitched for protective measures to preserve Ukraine's endangered cultural heritage in light of Russia's invasion over Ukraine. To avoid deliberate or accidental damages, the agency is marking cultural sites and monuments in Ukraine with the distinctive "Blue Shield" emblem of the 1954 Hague Convention for the Protection of Cultural Property in the Event of Armed Conflict.

### What is the Hague Convention 1954?

- Through history, armed conflicts always wrought havoc on the lives of people. In addition to its humanitarian toll, conflicts also led to the large-scale destruction of cultural heritage, weakening the foundations of communities, lasting peace and prospects of reconciliation.
- Considering that the preservation of cultural heritage is of great importance for all peoples of the world and thus needs universal protection, the Convention for the Protection of Cultural Property in the Event of Armed Conflict was adopted in 1954 under the auspices of UNESCO. This convention is referred to as the 1954 Hague Convention.
- It is the first and the most comprehensive multilateral treaty dedicated exclusively to the protection of cultural heritage in times of peace as well as during an armed conflict.
- The convention aims to protect cultural property, such as monuments of architecture, art or history, archaeological sites, works of art, manuscripts, books and other objects of artistic, historical or archaeological interest, as well as scientific collections of any kind regardless of their origin or ownership.
- India is party to Hague Convention 1954.

### What is the Blue Shield Emblem?

- Article 6 of the 1954 Hague Convention states that cultural property may bear a distinctive emblem so as to facilitate its recognition. In pursuance of this, the Blue Shield, formerly the International Committee of the Blue Shield was founded in 1996.
- It is a non-governmental, non-profit, international organisation committed to the protection of heritage across the world. The Blue Shield network, often referred to as the cultural equivalent of the Red Cross. The Blue Shield is a network of committees of dedicated individuals across the world that is committed to protect the world's cultural heritage from threats such as armed conflict and natural disasters.
- This includes museums, monuments, archaeological sites, archives, libraries and audio-visual material, and significant natural areas, as well as intangible heritage.
- Some States have refrained from marking their cultural property, arguing that it would make that property more vulnerable to attack by an enemy determined to destroy its symbols of national identity.



- Unfortunately, this proved to be the case during the war in the former Yugoslavia where cultural property marked with the Blue Shield was intentionally targeted.

## Shaheed Diwas

**News:** Every year, Shaheed Diwas, also known as Martyrs Day or Sarvodaya Day, is observed on 23<sup>rd</sup> March.

### History:

- Bhagat Singh, Rajguru and Sukhdev were executed on this day in 1931 by the British government for assassinating John Saunders, a British police officer.

### Role of Bhagat Singh in Freedom struggle:

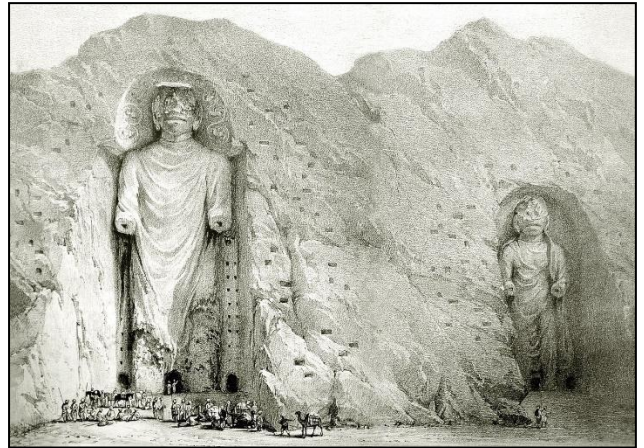
- In 1923, Bhagat Singh joined the National College, Lahore which was founded and managed by Lala Lajpat Rai and Bhai Parmanand.
- In 1924 in Kanpur, he became a member of the Hindustan Republican Association
- In 1926, he founded the Naujawan Bharat Sabha, which sought to foment revolution against British Raj by gathering worker and peasant youth.
- In 1927, he was first arrested on charges of association with the Kakori case
- In 1928, Bhagat Singh changed the name of Hindustan Republican Association to Hindustan Socialist Republican Association (HSRA)
- His time in prison was spent protesting, seeking better living conditions for inmates. He was part of hunger strike that killed fellow defendant Jatin Das in September 1929.
- 2 years later, Singh was convicted and hanged at the age of 23.

## Bamiyan's Buddha

**News:** The Taliban regime in Afghanistan has said it would protect the ancient Buddha statues in Mes Aynak Copper Mines.

### About Bamiyan's Buddha:

- The Bamiyan Buddha statues, cut from sandstone cliffs, are said to have dated back to the 5th century AD, and were once the tallest standing Buddhas in the world.
- The statues were great examples of a confluence of Gupta, Sassanian and Hellenistic artistic styles.
- Bamiyan is situated in the high mountains of the Hindu Kush in the central highlands of Afghanistan. The Bamiyan valley, was once integral to the early days of Silk Road.
- After the destruction of Bamiyan Buddha by Taliban regime in 2001, the UNESCO in 2003, included the remains the Bamiyan Buddhas in its list of world heritage sites.





# Society

## Kuki tribe of Manipur

**News:** Just before the first of the two phases of the Assembly Elections went underway in Manipur, all insurgent groups associated with the Kuki tribes in Manipur said they will vote for a particular political party.

### Who are the Kukis?

- The Kukis are an ethnic group including multiple tribes originally inhabiting the North-Eastern states of India such as Manipur, Mizoram and Assam; parts of Burma (now Myanmar), and Sylhet district and Chittagong hill tracts of Bangladesh. While Kuki is not a term coined by the ethnic group itself, the tribes associated with it came to be generically called Kuki under colonial rule.
- In Manipur, the various Kuki tribes, living mainly in the hills, currently make up 30% of the total 28.5 lakh population of the State. While Churachandpur is their main stronghold, they also have a sizable population in Chandel, Kangpokpi, Tengnoupal and Senapati districts.
- The rest of the population of Manipur is made up mainly of two other ethnic groups — the Meiteis or non-tribal, Vaishnavite Hindus who live in the valley region of Manipur, and the Naga tribes, historically at loggerheads with the Kukis, also living in the hilly areas of the State. Of the 60 seats in the Manipur Assembly, 40 are held by Meiteis and the rest 20 seats are held by Kukis and Nagas.

### Kuki insurgencies in Manipur:

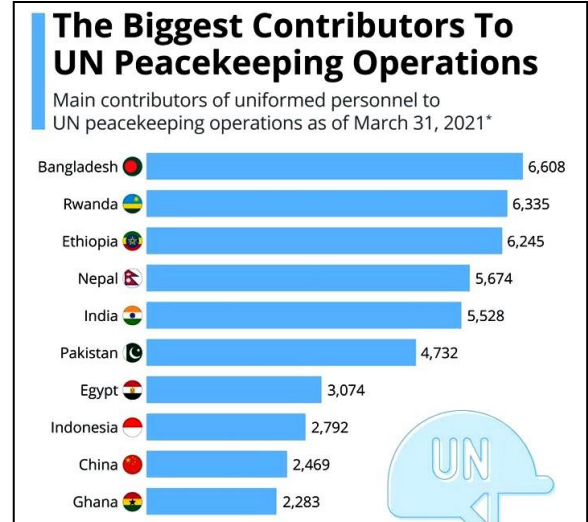
- The Kuki insurgent groups have been under Suspension of Operation (SoO) since 2005, when they signed an agreement for the same with the Indian Army.
- Later, in 2008, the groups entered a tripartite agreement with the State government and the UPA led Central government to temporarily suspend their operations and give political dialogue a chance.
- Manipur, formerly a princely state including parts of Burma, made the accession into India after Independence, but was only made a full-fledged State in 1972. The resentment over the “forceful” inclusion into India and delay in granting statehood led to the rise of various insurgent movements.
- The roots of Kuki militancy lie in conflicts of ethnic identity.
- First was the demand for self-determination solely for groups belonging to their ethnic fabric, meaning the dream to form a Kukiland. The second reason for insurgency lies in the inter-community conflicts between the Kukis and the Nagas in Manipur. The Kuki-Naga conflict was started over securing identity and land as some Kuki inhabited areas coincided with Naga inhabited areas.
- Wanting to dominate trade and cultural activities in those areas the two communities often engaged in violent standoffs, with villages being torched, civilians killed and so on.

## Women in UN Peacekeeping

**News:** Recently, many women soldiers were training to be a part of a United Nations Peacekeeping mission. For more than a decade, the United Nations (UN) has called for more participation from women in conflict prevention, post-conflict peacebuilding and peacekeeping.

### What is UN Peacekeeping?

- UN Peacekeeping began in 1948 when the UN Security Council authorised the deployment of UN military observers to the Middle East. UN Peacekeeping helps countries navigate the difficult path from conflict to peace. It deploys troops and police from around the world, integrating them with civilian peacekeepers to address a range of mandates set by the UN Security Council (UNSC) and the General Assembly.



### **Indian context:**

- For the first time in the history of UN peacekeeping, India sent an all-female Formed Police Unit (FPU) to be deployed in Liberia in 2007 after a civil war ravaged the African nation.
- Recently, at the UN Security Council (UNSC), Indian officials called for more female participation in public life and the elimination of violence against them as a prerequisite for promoting lasting peace around the world.
- In a profession that continues to be heavily dominated by men, and in a nation that is riddled with gender violence, these female police officers from India are breaking stereotypes to represent their country on the world stage.

### **Present scenario:**

- Women are deployed in all areas – police, military and civilian – and have made a positive impact on peacekeeping environments, including in supporting the role of women in building peace and protecting women's rights.
- According to the UN, in 2020, out of approximately 95,000 peacekeepers, women constitute 4.8% of military contingents and 10.9% of formed police units and 34% of justice and corrections government-provided personnel in UN Peacekeeping missions.
- UN Police Division launched 'the Global Effort' to recruit more female police officers into national police services and into UN police operations around the world. The 2028 target for women serving in military contingents is 15%, and 25% for military observers and staff officers.
- UN Security Council resolution 1325 (UNSCR1325) has called for an expansion of the role and contribution of women in its operations, including uniformed women peacekeepers.
- The UN Action for Peacekeeping (A4P) initiative views the Women, Peace and Security agenda as critical to enhancing peacekeeping operations' performance.
- This can be achieved through supporting women's full participation in peace processes and making peacekeeping more gender-responsive, including through increasing the number of civilian and uniformed women in peacekeeping at all levels and in key positions.

### **Way forward:**

- Greater diversity and a broadened skillset means improved decision-making, planning and results, leading to greater operational effectiveness and performance.
- Women peacekeepers can better access the population, including women and children - for example, by interviewing and supporting survivors of gender-based violence and violence against children - thereby generating critical information that would otherwise be difficult to reach.
- Women peacekeepers are essential enablers to build trust and confidence with local communities and help improve access and support for local women.
- For example, by interacting with women in societies where women are prohibited from speaking to men.
- Women peacekeepers serve as powerful mentors and role models for women and girls in post-conflict settings in the host community, setting examples for them to advocate for their own rights and pursue non-traditional careers.

## **Manual Scavenging**

**News:** Three laborers in Mumbai, allegedly hired for manual scavenging, died after inhaling toxic fumes in a septic tank.

### **What is Manual Scavenging?**

- Manual scavenging is the practice of removing human excreta by hand from sewers or septic tanks.
- India banned the practice under the Prohibition of Employment as Manual Scavengers and their Rehabilitation Act, 2013 (PEMSR). The Act bans the use of any individual for manually cleaning, carrying, disposing of or otherwise handling in any manner, human excreta till its disposal.
- In 2013, the definition of manual scavengers was also broadened to include people employed to clean septic tanks, ditches, or railway tracks. The Act recognizes manual scavenging as a "dehumanizing

practice,” and cites a need to “correct the historical injustice and indignity suffered by the manual scavengers.”

#### **Factors contributing it in India:**

- Manual scavenging is mostly done by the marginalized section of the society and they are generally not aware about their rights.
- The lack of enforcement of the Act and exploitation of unskilled labourers are the reasons why the practice is still prevalent in India.
- The Mumbai civic body charges anywhere between Rs 20,000 and Rs 30,000 to clean septic tanks.
- The unskilled labourers, meanwhile, are much cheaper to hire and contractors illegally employ them at a daily wage of Rs 300-500.
- Caste hierarchy still exists and it reinforces the caste’s relation with occupation. Almost all the manual scavengers belong to lower castes.

#### **Policy initiatives**

- Prohibition of Employment as Manual Scavengers and their Rehabilitation (Amendment) Bill, 2020: It proposes to completely mechanise sewer cleaning, introduce ways for ‘on-site’ protection and provide compensation to manual scavengers in case of sewer deaths.
- Prohibition of Employment as Manual Scavengers and their Rehabilitation Act, 2013: Superseding the 1993 Act, the 2013 Act goes beyond prohibitions on dry latrines, and outlaws all manual excrement cleaning of insanitary latrines, open drains, or pits.
- Rashtriya Garima Abhiyan: It started national wide march “Maila Mukti Yatra” for total eradication of manual scavenging from 30th November 2012 from Bhopal.
- Prevention of Atrocities Act: In 1989, the Prevention of Atrocities Act became an integrated guard for sanitation workers since majority of the manual scavengers belonged to the Scheduled Caste.
- As per the Prohibition of Employment of Manual Scavengers and their Rehabilitation (PEMSR) Act, 2013 and the Supreme Court’s decision in the Safai Karamchari Andolan vs Union of India case, a compensation of Rs 10 lakh is awarded to the victims family.

#### **Way forward**

- Regular surveys and social audits must be conducted against the involvement of manual scavengers by public and local authorities. There must be proper identification and capacity building of manual scavengers for alternate sources of livelihood.
- Creating awareness about the legal protection of manual scavengers is necessary.

# Geography

## IPCC Sixth Assessment Report

**News:** The Intergovernmental Panel on Climate Change (IPCC) released the second part of its sixth assessment report. The first part was released in 2021.

### What is IPCC?

- The IPCC, an intergovernmental body was established in 1988 by the World Meteorological Organization (WMO) and the United Nations Environment Programme (UNEP). It was later endorsed by the UN General Assembly. Membership is open to all members of the WMO and UN.
- The IPCC produces reports that contribute to the work of the UN Framework Convention on Climate Change (UNFCCC), the main international treaty on climate change.
- The objective of the UNFCCC is to “stabilize greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic (human-induced) interference with the climate system.”

### What are the Assessment Reports?

- Every few years, the IPCC produces assessment reports that are the most comprehensive scientific evaluations of the state of earth’s climate. Instead, it asks scientists from around the world to go through all the relevant scientific literature related to climate change and draw up the logical conclusions.
- So far, five assessment reports have been produced, the first one being released in 1990. The IPCC’s Fifth Assessment Report was a critical scientific input into the UNFCCC’s Paris Agreement in 2015.

### First Assessment Report (1990)

- Emissions resulting from human activities are substantially increasing the atmospheric concentrations of the greenhouse gases.
- Global temperatures have risen by 0.3 to 0.6 degree Celsius in last 100 years. In business-as-usual scenario, temperatures likely to increase by 2 degree Celsius compared to pre-industrial levels by 2025, and 4 degree Celsius by 2100
- Sea-level likely to rise by 65 cm by 2100
- This report formed the basis for negotiation of the UN Framework Convention on Climate Change in 1992.

### Second Assessment Report (1995)

- Revises projected rise in global temperatures to 3 degree Celsius above pre-industrial levels by 2100, sea-level rise to 50 cm, in light of more evidence.
- Global rise in temperature by 0.3 to 0.6 degree Celsius since late 19th century, “unlikely to be entirely natural in origin”.
- This report was the scientific underpinning for Kyoto Protocol in 1997.

### PREVIOUS IPCC ASSESSMENT REPORTS: HIGHLIGHTS

#### FIRST REPORT, 1990

- Emissions resulting from human activities are increasing atmospheric concentrations of greenhouse gases
- Global temperatures have risen by 0.3°–0.6°C in 100 years. In business-as-usual scenario, likely to increase by 2°C compared to pre-industrial levels by 2025, and 4°C by 2100
- Sea-level likely to rise 65 cm by 2100
- Report formed basis for negotiation of UN Framework Convention on Climate Change in 1992

#### SECOND REPORT, 1995

- Revises projected rise in global temperatures to 3°C by 2100, and sea-level rise to 50 cm
- The scientific underpinning for Kyoto Protocol in 1997

#### THIRD REPORT, 2001

- Revises predicted temperature rise to 1.4°–5.8°C by 2100 compared to 1990
- Rainfall to increase; sea-level likely to rise by 80 cm from 1990 by 2100.
- Frequency, intensity and duration of extreme weather events to increase
- Presents new and stronger evidence

to suggest most of warming attributable to human activities

#### FOURTH REPORT, 2007

- Greenhouse gas emissions rose by 70% between 1970 and 2004
- Atmospheric concentrations of CO<sub>2</sub> in 2005 (379 ppm) the highest in 650,000 years
- In worst-case scenario, global temperatures could rise 4.5°C by 2100 from pre-industrial levels; sea-levels could be 60 cm higher than in 1990
- Wins 2007 Peace Nobel for IPCC
- Report is the scientific input for the 2009 Copenhagen climate meeting

#### FIFTH REPORT, 2014

- Temperature rise by 2100 could be 4.8°C from pre-industrial times
- Atmospheric concentrations of CO<sub>2</sub>, CH<sub>4</sub> and N<sub>2</sub>O “unprecedented” in last 800,000 years
- More frequent and longer heat waves “virtually certain”
- “Large fraction of species” face extinction
- Forms scientific basis for negotiations of Paris Agreement in 2015



### **Third Assessment Report (2001)**

- Revises projected rise in global temperatures to 1.4 to 5.8 degree Celsius by 2100 compared to 1990. Projected rate of warming unprecedented in last 10,000 years.
- Rainfall will increase on an average. The report also predicts that by 2100, the sea level is likely to rise by as much as 80 cm from 1990 levels. Glaciers to retreat during the 21st century.
- Frequency, intensity and duration of extreme weather events to increase.
- Presents new and stronger evidence to suggest that global warming is mostly attributable to human activities.

### **Fourth Assessment Report (2007)**

- Greenhouse gas emissions increased by 70 per cent between 1970 and 2004.
- Atmospheric concentrations of CO<sub>2</sub> in 2005 (379 ppm) the maximum in 650,000 years.
- In worst case scenario, global temperatures could rise 4.5 degree Celsius by 2100 from pre-industrial levels. Sea-levels could be 60 cm higher than 1990 levels.
- The report won the 2007 Nobel Peace Prize for IPCC and was the scientific input for the 2009 Copenhagen climate meeting.

### **Fifth Assessment Report (2014)**

- More than half the temperature rise since 1950 attributable to human activities.
- Atmospheric concentrations of carbon dioxide, methane and nitrous oxide “unprecedented” in the last 800,000 years.
- Rise in global temperatures by 2100 could be as high as 4.8 degree Celsius from pre-industrial times
- More frequent and longer heat waves “virtually certain”.
- “Large fraction of species” face extinction. Food security would be undermined.
- This report formed the scientific basis for negotiations of the Paris Agreement in 2015.

### **Some projections of the first part of 6<sup>th</sup> Report**

- Apart from incorporating the latest available scientific evidence, the Sixth Assessment Report is also attempting to provide more actionable information to help governments take policy decisions.
- Regional focus: It is expected that this report would likely state what the scenarios for sea-level rise in the Bay of Bengal region is, not just what the average sea-level rise across the world is likely to be.
- Rise of extreme events: There is expected to be bigger focus on extreme weather events, like the ones we have seen in the last few weeks.
- Vulnerabilities of urban areas: Densely populated mega-cities are supposed to be among the most vulnerable to impacts of climate change. The report is expected to present specific scenarios the climate change impacts on cities and large urban populations, and also implications for key infrastructure.
- Synergy of climate action is needed: IPCC is expected to present a more integrated understanding of the situation, cross-link evidence and discuss trade-offs between different options or pathways, and also likely to cover social implications of climate change action by countries.

### **Highlights of the recent report**

- Rapidly advancing climate change: From the melting of the Greenland ice sheet to the destruction of coral reefs, climate related impacts are hitting the world at the high end much more quickly than previously assessed by the IPCC.
- Limitations of technology: The use of some technologies designed to limit warming or reduce CO<sub>2</sub> could make matters worse rather than better.
- Impact of urbanization: While large cities are hotspots for climate impacts, they also offer a real opportunity to avoid the worst impacts of warming. Limited opportunity for mitigation: The report has warned the opportunity for action will only last for the rest of this decade.

## **Bomb Cyclone**

**News:** Another violent bomb cyclone is grazing north just west of Ireland and UK with violent, hurricane winds and major waves. Thanks to still a very powerful southern lobe of the Polar Vortex aloft, the North Atlantic is yet to produce more dangerous storms this week.

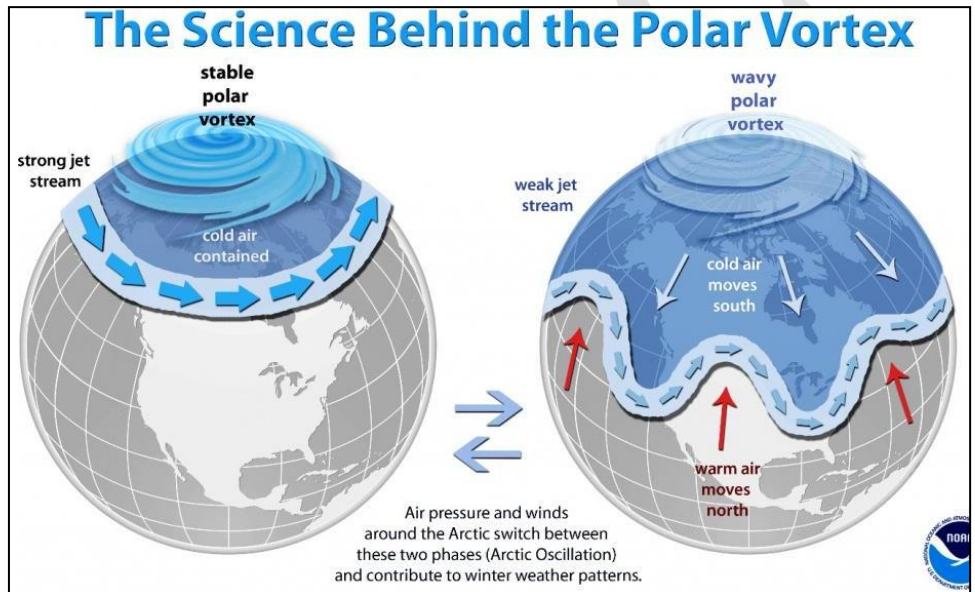


## What is a Bomb Cyclone?

- “Bombogenesis is the technical term. ‘Bomb cyclone’ is a shortened version of it.”
- It is a mid-latitude cyclone that intensifies rapidly.
- It has low pressure at its center, weather fronts and an array of associated weather, from blizzards to severe thunderstorms to heavy precipitation.
- Generally, a bomb cyclone happens when atmospheric pressure in the middle of the storm drops at least 24 millibars over 24 hours, quickly increasing in intensity. The lower the pressure, the stronger the storm.
- Most cyclones don’t intensify rapidly in this way. Bomb cyclones put forecasters on high alert, because they can produce significant harmful impacts.
- Things you should know about a bomb cyclone:
  - Occurs over midlatitudes.
  - Have cold air and fronts.
  - Form during winter.

## Polar vortex:

- It is described as a whirling cone of low pressure over the poles that is strongest in the winter months due to the increased temperature contrast between the polar regions and the mid-latitudes, such as the US and Europe.
- The polar vortex spins in the stratosphere.
- Usually, it forms a wall that protects the mid-latitudes from cold Arctic air.
- When the vortex weakens, the stratosphere warms sharply in an event known as sudden stratospheric warming, in just a few days, miles above the Earth’s surface.
- The warming weakens the polar vortex, shifting its location somewhat south of the pole or, in some instances, ‘splitting’ the vortex up into ‘sister vortices’.



## Wet Bulb Temperature

**News:** Recently, part 2 of the sixth assessment report of Intergovernmental Panel on Climate Change (IPCC), emphasised on the trend in the ‘Wet Bulb’ Temperature in South Asia. The trend will provide an index of the impact of heat and humidity combined — and its effect on health.

### What is the Wet Bulb Temperature?

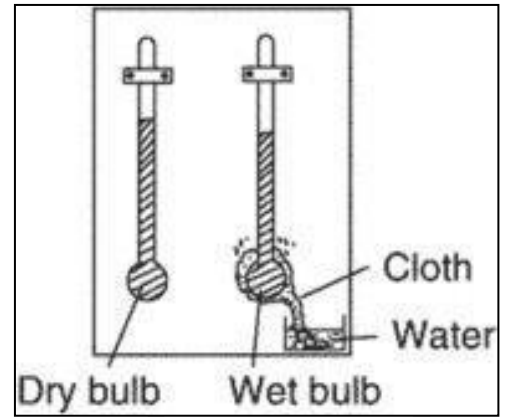
- Wet bulb temperature is the lowest temperature to which air can be cooled by the evaporation of water into the air at a constant pressure.

**WHAT IS WET-BULB TEMPERATURE** Photo: Piyal Bhattacharjee

- Wet-bulb temperature is the lowest temperature to which air can be cooled by the evaporation of water into the air
- It is measured by factoring in heat and humidity levels
- Theoretically, if wet-bulb temperature reaches 35 degrees Celsius –its highest point– it means humans can no longer lose internal body heat by sweating and cool themselves
- This could potentially lead to heatstrokes

Wet-bulb days in Delhi each year at present | **63 days**  
RCP 8.5 or business as usual scenario (2050) | **99 days**  
RCP 8.5 or business as usual scenario (2100) | **131 days**  
RCP 2.6 (stringent scenario where global temperature rise will be below 2°C by 2100) | **81 days**

- WBT is a limit that considers heat and humidity beyond which humans cannot tolerate high temperatures.
- The Wet Bulb temperature is the temperature of adiabatic saturation. This is the temperature indicated by a moistened thermometer bulb exposed to the air flow.
- An adiabatic process is one in which no heat is gained or lost by the system.
- Wet Bulb temperature can be measured by using a thermometer with the bulb wrapped in wet muslin.
- The adiabatic evaporation of water from the thermometer and the cooling effect is indicated by a "wet bulb temperature" lower than the "dry bulb temperature" in the air.
- The rate of evaporation from the wet bandage on the bulb, and the temperature difference between the dry bulb and wet bulb, depends on the humidity of the air.
- The evaporation is reduced when the air contains more water vapour.
- The wet bulb temperature is always lower than the dry bulb temperature but will be identical with 100% relative humidity (the air is at the saturation line). A wet-bulb temperature of 31°C is exceedingly harmful to humans, while a temperature of 35°C is unsurvivable for more than 6 hours.



### Impact on India:

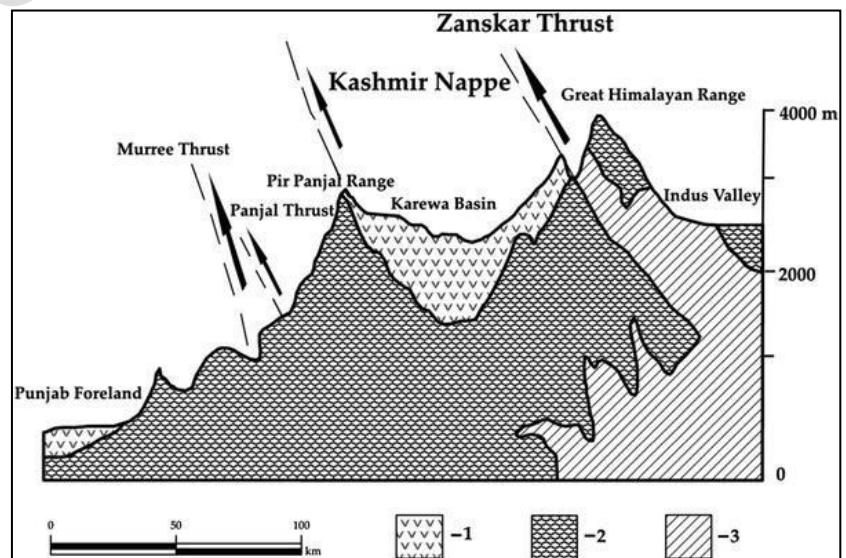
- Lucknow and Patna, were among the cities predicted to reach wet-bulb temperatures of 35°C if emissions continued to rise, while Bhubaneswar, Chennai, Mumbai, Indore, and Ahmedabad are 'at risk' of reaching wet-bulb temperatures of 32°C-34°C with continued emissions. With continuing emissions, parts of central India including Vidarbha are at risk of exceeding wet bulb temperatures of 32-34°C.
- This will have consequences such as a rise in heat-wave linked deaths or reduced productivity.
- Relying on artificial cooling to cope with the growing heat would supercharge energy demand and leave many people dangerously exposed to power failures. It would also abandon the most vulnerable members of society and doesn't help those who have to venture outside.

## Karewas

**News:** Kashmir's highly fertile alluvial soil deposits called 'karewas' are being destroyed in the name of development, much to the peril of local people

### What are Karewas?

- The Kashmir valley is an oval-shaped basin, 140 km long and 40 km wide, trending in the NNW-SSE direction.
- It is an intermountain valley fill, comprising of unconsolidated gravel and mud.
- A succession of plateaus is present above the Plains of Jhelum and its tributaries.
- These plateau-like terraces are called 'Karewas' or 'Vudr' in the local language.
- These plateaus are 13,000-18,000 metre-thick deposits of alluvial soil and sediments like sandstone and mudstone.
- This makes them ideal for cultivation of saffron, almonds, apples and several other cash crops.



### How are they formed?

- The fertility of these patches is believed to be the result of their long history of formation.

- When formed during the Pleistocene period (2.6 million years to 11,700 years ago), the Pir Panjal range blocked the natural drainage in the region and formed a lake spanning 5,000 sq km.
- Over the next few centuries, the water receded, making way for the valley and the formation of the karewas between the mountains.

### Significance of Karewas

- Today, the karewa sediments not only hold fossils and remnants of many human civilisations and habitations, but are also the most fertile spots in the valley.
- Kashmir saffron, which received a Geographical Indication (GI) tag in 2020 for its longer and thicker stigmas, deep-red colour, high aroma and bitter flavour, is grown on these karewas.

### Threats to Karewas

- Despite its agricultural and archaeological importance, karewas are now being excavated to be used in construction. Between 1995 and 2005, massive portions of karewas in Pulwama, Budgam and Baramulla districts were razed to the ground for clay for the 125-km-long Qazigund-Baramulla rail line.
- The Srinagar airport is built on the Damodar karewa in Budgam.

## Heatwave in Konkan

**News:** The Konkan region, including Mumbai, has been experiencing sweltering heat in the recent days, with maximum temperatures touching the 40-degree mark.

### Details:

- The ongoing heatwave in Konkan, including Mumbai, is because it is under the direct influence of the prevailing heatwave in the adjacent Saurashtra-Kutch regions of Gujarat.
- The hot and dry winds from northwest India are reaching parts of Konkan.
- In addition, the slow movement of sea breeze along the Maharashtra coast and the overall clear sky conditions have together resulted in such hot conditions.

### What is a heatwave?

- The IMD says heatwave is considered when the maximum temperature of a station touches at least 40 degrees Celsius or more for plains, 37 degrees Celsius or more for coastal regions and at least 30 degrees Celsius or more for hilly regions.
- Heatwave is declared when the departure from normal temperature is by 4.5 to 6.4 degrees Celsius and a severe heatwave is when the departure from normal is more than 6.4 degrees Celsius.
- For plains, based on actual maximum temperature, IMD considers heatwaves when actual maximum temperature is more than 45 degrees Celsius and severe heat wave when it is more than 47 degrees Celsius.
- This apart, if the locality records over 45 degrees and 47 degrees on any given day, then the IMD declares heatwave and severe heatwave.

### Heatwaves in India:

- Magnified effect of paved and concrete surfaces in urban areas and a lack of tree cover.
- Urban heat island effects can make ambient temperatures feel 3 to 4 degrees more than what they are.
- More heat waves were expected as globally temperatures had risen by an average 0.8 degrees in the past 100 years. Night-time temperatures are rising too.
- Higher daily peak temperatures and longer, more intense heat waves are becoming increasingly frequent globally due to climate change.
- High intensity of UV rays in medium-high heat wave zones.
- Combination of exceptional heat stress and a predominantly rural population makes India vulnerable to heat waves.

### Solutions:

- Identifying heat hot-spots through appropriate tracking of meteorological data and promoting timely development and implementation of local Heat Action Plans with strategic inter-agency coordination, and a response which targets the most vulnerable groups.



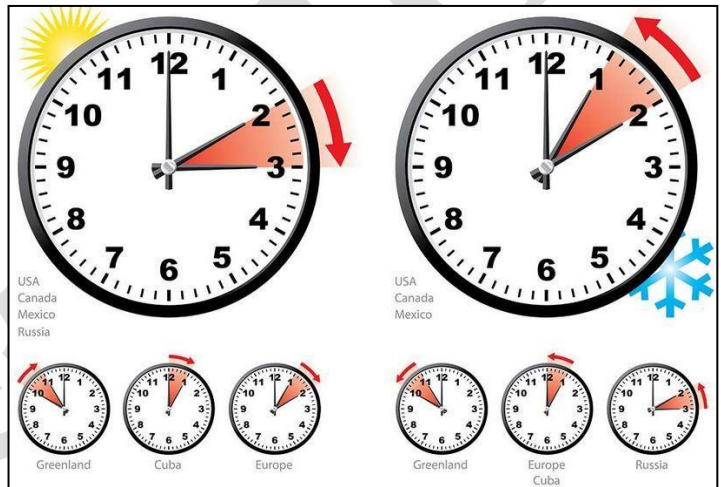
- Review of existing occupational health standards, labour laws and sectoral regulations for worker safety in relation to climatic conditions.
- Policy intervention and coordination across three sectors health, water and power is necessary.
- Promotion of traditional adaptation practices, such as staying indoors and wearing comfortable clothes.
- Popularisation of simple design features such as shaded windows, underground water storage tanks and insulating housing materials.
- Advance implementation of local Heat Action Plans, plus effective inter-agency coordination is a vital response which the government can deploy in order to protect vulnerable groups.

## Daylight Saving Time

**News:** The United States Senate unanimously passed a law making daylight saving time (DST) permanent, scrapping the biannual practice of putting clocks forward and back coinciding with the arrival and departure of winter.

### Details:

- With clocks in the US going back an hour, the time difference between New York and India will increase from the current nine and a half hours to ten and a half hours. In the Southern Hemisphere, the opposite has happened, where countries have “sprung forward”, and time difference with India has reduced.
- DST is the practise of resetting clocks ahead by an hour in spring, and behind by an hour in autumn (or fall).
- During these months, countries that follow this system get an extra hour of daylight in the evening.
- Because the spring to fall cycle is opposite in the Northern and Southern Hemispheres, DST lasts from March to October/November in Europe and the US, and from September/October to April in New Zealand and Australia.
- Dates for this switch, which happens twice a year (in the spring and autumn) are decided beforehand.
- By law, the 28 member states of the EU switch together — moving forward on the last Sunday of March and falling back on the last Sunday in October.
- In the US, clocks go back on the first Sunday of November.
- DST is in practice in some 70 countries, including those in the European Union. India does not follow DST; since countries near the Equator do not experience high variations in daytime hours between seasons.
- There is, however, a separate debate around the logic of sticking with an only one-time zone in a country as large as India.
- The key argument is that DST is meant to save energy. The rationale behind setting clocks ahead of standard time, usually by 1 hour during springtime, is to ensure that the clocks show a later sunrise and later sunset — in effect a longer evening daytime. Individuals will wake an hour earlier than usual, complete their daily work routines an hour earlier, and have an extra hour of daylight at the end.



## India's Arctic Policy

**News:** Recently, the Ministry of Earth Science has unveiled India's Arctic Policy, titled 'India and the Arctic: building a partnership for sustainable development'. India holds one of the 13 positions as the Observer in the Arctic Council.

## **Background:**

- India's engagement with the Arctic began when it signed the Svalbard Treaty in 1920 in Paris between Norway, the US, Denmark, France, Italy, Japan, the Netherlands, Great Britain, and Ireland, and the British overseas Dominions and Sweden concerning Spitsbergen.
- Spitsbergen is the largest island of the Svalbard archipelago, part of Norway, in the Arctic Ocean.
- Spitsbergen is the only permanently inhabited part of Svalbard. More than 50% of the land is covered in ice year-round. Together with the glaciers, it is mountains and fjords that define the landscape.
- Ever since then, India has been closely monitoring all the developments in the Arctic region.
- India initiated its Arctic research program in 2007 with a focus on climate change in the region.
- The objectives included studying teleconnections between Arctic climate and Indian monsoon, to characterise sea ice in the Arctic using satellite data, to estimate the effect on global warming.
- India also focuses on conducting research on the dynamics and mass budget of Arctic glaciers and sea-level changes, carrying out an assessment of the flora and fauna of the Arctic.

## **What are the Major Provisions of India's Arctic Policy?**

### **Six Central Pillars:**

- Science and research.
- Environmental protection.
- Economic and human development.
- Transportation and connectivity.
- Governance and international cooperation.
- National capacity building.

### **Objectives:**

- It aims to strengthen national capabilities and competencies in science and exploration, climate and environmental protection, maritime and economic cooperation with the Arctic region.
- It seeks to strengthen institutional and human resource capacities within the government and academic, research and business institutions through inter-ministerial coordination in pursuit of India's interests in the Arctic.
- It seeks to enhance understanding of the impact of climate change in the Arctic region on India's climate, economic and energy security.
- It aims to promote better analysis, prediction and coordinated policymaking on the implications of ice melting in the Arctic on India's economic, military and strategic interests related to global shipping routes, energy security and exploitation of mineral wealth.
- It seeks to study the linkages between polar regions and the Himalayas and deepen the cooperation between India and the countries of the Arctic region under various Arctic forums, drawing expertise from scientific and traditional knowledge.
- The policy also seeks to increase India's participation in the Arctic Council and improve understanding of the complex governance structures in the Arctic, relevant international laws and geopolitics of the region.

### **Significance:**

- The Arctic region is significant due to the shipping routes that run through it.
- According to an analysis published by the Manohar Parrikar Institute for Defence Studies and Analyses, the adverse effects of the Arctic are not just impacting the availability of mineral and hydrocarbon resources, but also transforming global shipping routes.
- According to the Ministry of External Affairs, India can play a constructive role in securing a stable Arctic.
- The region holds immense geopolitical importance as the Arctic is projected to be ice-free by 2050 and world powers making a beeline to exploit the region rich in natural resources.



# General Studies – 2

## **Polity & Constitution**

1. Indian Constitution—historical underpinnings, evolution, features, amendments, significant provisions and basic structure.
2. Functions and responsibilities of the Union and the States, issues and challenges pertaining to the federal structure, devolution of powers and finances up to local levels and challenges therein.
3. Separation of powers between various organs dispute redressal mechanisms and institutions
4. Comparison of the Indian constitutional scheme with that of other countries.
5. Parliament and State legislatures—structure, functioning, conduct of business, powers & privileges and issues arising out of these.
6. Structure, organization and functioning of the Executive and the Judiciary—Ministries and Departments of the Government; pressure groups and formal/informal associations and their role in the Polity.
7. Salient features of the Representation of People’s Act.
8. Appointment to various Constitutional posts, powers, functions and responsibilities of various Constitutional Bodies.
9. Statutory, regulatory and various quasi-judicial bodies.

## **Social Justice**

10. Government policies and interventions for development in various sectors and issues arising out of their design and implementation.
11. Development processes and the development industry —the role of NGOs, SHGs, various groups and associations, donors, charities, institutional and other stakeholders.
12. Welfare schemes for vulnerable sections of the population by the Centre and States and the performance of these schemes; mechanisms, laws, institutions and Bodies constituted for the protection and betterment of these vulnerable sections.
13. Issues relating to development and management of Social Sector/Services relating to Health, Education, Human Resources.
14. Issues relating to poverty and hunger.

## **Governance**

15. Important aspects of governance, transparency and accountability, e-governance, applications, models, successes, limitations, and potential; citizens charters, transparency & accountability and institutional and other measures.
16. Role of civil services in a democracy.

## **International Relations**

17. India and its neighborhood- relations.
18. Bilateral, regional and global groupings and agreements involving India and/or affecting India’s interests.
19. Effect of policies and politics of developed and developing countries on India’s interests, Indian diaspora.
20. Important International institutions, agencies and fora- their structure, mandate

# Polity & Governance

## Death Sentence

**News:** Last week, a little over 13 years after the blasts in 2008 (in July) in Ahmedabad, Gujarat, the designated court to conduct a speedy trial decided the fate of 78 of the accused people. Within a week, the court sentenced 38 of 49 people to death.

### Background:

- The death sentence grants the state the monopoly of violence. This monopoly is justified by claiming that such a step prevents crime or that it is a measure of long-due justice.
- Fundamentally, 'rarest of rare' is a standard that allows a court of law to use public sentiment as a judicially reliable standard in handing out the death sentence.
- India's carceral criminal jurisprudence requires a court to calculate proportionality between crime and punishment. But a death sentence is a sentence that goes beyond the confines of these calculations to deprive a person of their life — committing an act whose central value itself is immeasurable.
- The impossibility of reform, the heinous nature of the crime, the shock to the public conscience, none of these things sufficiently justify the right of a fallible institution to take someone's life.
- After the verdict is delivered in any criminal trial, lawyers make what are called 'mitigating arguments' — essentially to contextualise the convict as an individual and not as the accused.
- Unlike other trial stages where a court adjudicates between competing legal identities of an accused, the complainant, etc., in mitigation, the court hears evidence of a person's humanity.
- Hearing mitigating circumstances requires — however temporarily — for the trappings of distance and formality to be stripped away so that a court may see a person instead of a convict.

### The issue in the above case

- In this case, first, the court orally convicted 'en masse' several of the accused instead of declaring the charges proved against them separately. The prosecution argued that the defendants should argue for mitigation before it would even disclose which convicts it intended to seek the death sentence.
- The role attributed to each of the accused was different. By equating them for mitigation purposes (individual circumstances were unaccounted for and context and circumstances were considered to be the same) and handing down a mass death sentence, the court has only opened the door for greater misuse of a questionable power to end a life without any oversight.
- A permanent sentence requires us to assume that our institutions are infallible and user-proof. To cast this as a simple 'penalty' ignores what it truly does — and did in this case; it negates the individual for the final time.

## Article 80 of the Constitution

**News:** The Chandigarh Municipal Corporation has approved a proposal to amend Article 80 of the Constitution. This amendment says, its councillors could send a representative to the Rajya Sabha. A Private Member's Bill in this regard has also been introduced.

### Background:

- Article 80 of the Constitution of India deals with the composition of the council of states also called the Upper House and Rajya Sabha (Upper House).
- Chandigarh is a Union Territory without any legislative assembly. Chandigarh has a seat of Member of Parliament (MP) in the lower house (Lok Sabha) or House of the People.
- Chandigarh residents elect an MP every five years through direct voting.
- Rajya Sabha members are elected indirectly by the people, that is, by the MLAs.
- Members of a state's Legislative Assembly vote in the Rajya Sabha elections in proportional representation with the single transferable vote (STV) system. Each MLA's vote is counted only once.
- To win a Rajya Sabha seat, a candidate should get a required number of votes. That number is found out using the below formula. Required vote = Total number of votes / (Number of Rajya Sabha seats + 1) + 1.

**Latest bill:**

- The bill (Private Member Bill) sought the adding of a provision “provided that the representative of the Union Territory of Chandigarh in the council of states shall be elected by an electoral college. The electoral college should consist of elected members of the Municipal Corporation of Chandigarh constituted under the Punjab Municipal Corporation (Extension to Chandigarh) Act, 1994 in Article 80 of the Constitution.
- An amendment has also been sought to the Fourth Schedule of the Constitution with ‘Entry 32, Chandigarh.
- The fourth Schedule contains provisions as to the allocation of seats in the Council of States.

**Legal issue:**

- The elected Municipal Corporation Councillors do not form the electoral college for selecting a member for Upper house (Rajya Sabha) because it is beyond the powers of the Municipal Corporation (As defined by the Constitution).
- If the functions of the civic body are to be extended beyond the listed scope of functions it would not be feasible and would go against the constitutional mandate of any such Municipal Corporation.

## J&K Delimitation

**News:** Political leaders participating in the delimitation process in J&K as well as independent observers have raised fears of “islands” being formed.

**What is Delimitation?**

- Delimitation literally means the process of fixing limits or boundaries of territorial constituencies in a state that has a legislative body.
- Delimitation is undertaken by a highly powerful commission. They are formally known as Delimitation Commission or Boundary Commission.
- These bodies are so powerful that its orders have the force of law and they cannot be challenged before any court.

**Details:**

- The Delimitation Act, 2002 says that apart from population, the constituencies have to be geographically compact areas and contiguous. Observers say this principle is not being followed in the ongoing Delimitation exercise. For example, a village in one tehsil would be completely surrounded by villages in another Tehsil. Geographical connectedness is not being considered here. This gives rise to the voter islands.
- It is being said that the Commission “has carved out geographical islands and joined with the other Assembly segments without any proximity or connectivity”.
- The first delimitation exercise, carving out 25 assembly constituencies in the then state, was carried out by a Delimitation Committee in 1951.
- The first full-fledged Delimitation Commission was formed in 1981 and it submitted its recommendations in 1995 on the basis of 1981 Census. Since then, there has been no delimitation.
- In 2020, the Delimitation Commission was constituted to carry out the exercise on the basis of 2011 Census, with a mandate to add seven more seats to the Union Territory’ and grant reservations to SC and ST communities. Now, the total number of seats in Jammu and Kashmir will be raised to 90 from the previous 83. This is apart from 24 seats which have been reserved for areas of PoK and have to be kept vacant in the Assembly.
- The Delimitation Commission for Jammu and Kashmir was constituted by the Centre on March 6 last year to redraw Lok Sabha and assembly constituencies of the union territory in accordance with the provisions of the Jammu and Kashmir Reorganisation Act, 2019 and Delimitation Act, 2002, passed by the Centre in August 2019 along with other J&K-specific Bills.

## Democracy Report 2022

**News:** The latest edition of Democracy Report was released recently by the V-Dem Institute at Sweden’s University of Gothenburg. The study was titled ‘Democracy Report 2022: Autocratisation Changing Nature?’

## Details:

- The report classifies countries into four regime types based on their score in the Liberal Democratic Index (LDI):
  1. Liberal Democracy,
  2. Electoral Democracy,
  3. Electoral Autocracy, and
  4. Closed Autocracy.
- More than twice as many countries are undergoing Autocratisation as are witnessing democratization.
- The level of democracy enjoyed by the average global citizen in 2021 is down to 1989 levels, with the democratic gains of the post-Cold War period eroding rapidly in the last few years.
- Autocratisation is spreading rapidly, with a record of 33 countries autocratising.
- The level of democracy enjoyed by the average global citizen in 2021 is down to 1989 levels.
- While Sweden topped the LDI index, other Scandinavian countries such as Denmark and Norway, along with Costa Rica and New Zealand make up the top five in liberal democracy rankings.
- One of the biggest drivers of autocratisation is “toxic polarisation”. It is a dominant trend in 40 countries, as opposed to 5 countries that showed rising polarisation in 2011. Autocratisation is defined as a phenomenon that erodes respect of counter-arguments and associated aspects of the deliberative component of democracy.
- The report identified “misinformation” as a key tool deployed by autocratising governments to sharpen polarisation and shape domestic and international opinion.
- Repression of civil society and censorship of media were other favored tools of autocratising regimes.
- Rise of political hate speeches has also impacted the situation.

## India's performance:

- It classifies India as an electoral autocracy ranking it 93rd on the LDI, out of 179 countries.
- India is one of the top ten ‘autocratisers’ in the world says the report.
- India is part of a broader global trend of an anti-plural political party driving a country's Autocratisation.
- Ranked 93rd in the LDI, India figures in the “bottom 50%” of countries.
- It has slipped further down in the Electoral Democracy Index, to 100, and even lower in the Deliberative Component Index, at 102. In South Asia, India is ranked below Sri Lanka (88), Nepal (71), and Bhutan (65) and above Pakistan (117) in the LDI.

## Role of Technology in Judiciary

**News:** Recently, the Law Minister has said that for implementing phase two of the eCourts project, there is a need to adopt new, cutting-edge technologies of Machine Learning (ML) and Artificial Intelligence (AI) to increase the efficiency of the justice delivery system. Also, to explore the use of AI in the judicial domain, the Supreme Court of India has constituted an Artificial Intelligence Committee. The committee has identified application of AI technology in Translation of judicial documents, Legal research assistance and Process automation.

### Background:

- The recent National Judicial Data Grid (NJDG) shows that 3,89,41,148 cases are pending at the District and Taluka levels and 58,43,113 are still unresolved at the high courts. Such pendency has a spin-off effect that takes a toll on the efficiency of the judiciary, and ultimately reduces peoples' access to justice.

### Examples:

- **Virtual Hearing:** Over the course of the Covid-19 pandemic, the use of technology for e-filing, and virtual hearings has seen a dramatic rise. **SUVAS (Supreme Court Vidhik Anuvaad Software):** It is an AI system that can assist in the translation of judgments into regional languages. This is another landmark effort to increase access to justice.
- **SUPACE (Supreme Court Portal for Assistance in Court Efficiency):** It was recently launched by the Supreme Court of India.
- Designed to first understand judicial processes that require automation, it then assists the Court in improving efficiency and reducing pendency by encapsulating judicial processes that have the capability of being automated through AI.

- **US:** COMPAS (Correctional Offender Management Profiling for Alternative Sanctions).
- **UK:** HART (Harm Assessment Risk Tool).
- **China/Mexico/Russia:** Giving legal advice, approving pensions.
- **Estonia:** Robot judge for adjudicating small claims.
- **Malaysia:** Supporting sentencing decisions .
- **Austria:** Sophisticated document management.
- **Argentina/Colombia:** Prometea (Identifying urgent cases within minutes).
- **Singapore:** Transcribing court hearings in real-time.

#### Applications:

- Increasing efficiency of Judiciary: It has the possibility of helping judges conduct trials faster and more effectively thereby reducing the pendency of cases.
- It will assist legal professionals in devoting more time in developing better legal reasoning, legal discussion and interpretation of laws.
- Creating Judge Analytics: After “training” the application on a huge historical set of precedents, the application is capable of highlighting key points that are relevant in specific contracts.
- This will help analyse thousands of previous cases and create a ‘judge analytics’.

#### What is eCourts Project?

- It was conceptualized with a vision to transform the Indian Judiciary by ICT (Information and Communication Technology) enablement of Courts.
- It is a pan-India Project, monitored and funded by the Department of Justice, Ministry of Law and Justice, for the District Courts across the country.
- Objectives of the Project:
  - To provide efficient & time-bound citizen-centric services delivery.
  - To develop, install & implement decision support systems in courts.
  - To automate the processes to provide transparency and accessibility of information to its stakeholders.
  - To enhance judicial productivity, both qualitatively & quantitatively, to make the justice delivery system affordable, accessible, cost-effective, predictable, reliable and transparent.

## Women in Judiciary

**News:** Chief Justice of India N.V. Ramana has dubbed it “unfortunate” that only 17 of 37 women recommended by the Supreme Court collegium were appointed as judges in high courts while the rest still remain pending with the government.

#### Details:

- The appointment of women judges should not be reduced to a mere “symbolic” gesture.
- Women judges add rich experience and bring to the table a nuanced understanding of the differing impacts that certain laws may have on both men and women.
- In the 71 years of history of the SC, there have been only 11 women judges — the first was Justice Fathima Beevi, who was elevated to the bench after a long gap of 39 years from the date of establishment of the SC. The 25 high courts in the states have 81 women among 677 judges – five of them do not have a single female judge.

#### Benefits:

- Increased Transparency, inclusiveness, and representation.
- By their mere presence, women judges enhance the legitimacy of courts, sending a powerful signal that they are open and accessible to those who seek recourse to justice.
- By elucidating how laws and rulings can be based on gender stereotypes, or how they might have a different impact on women and men, a gender perspective enhances the fairness of the adjudication.
- Women judges bring those lived experiences to their judicial actions, experiences that tend toward a more comprehensive and empathetic perspective.
- Improving the representation of women could go a long way towards a more balanced and empathetic approach in cases involving sexual violence.



## Challenges:

- The eligibility criteria to take the entrance exams:
  - Lawyers need to have seven years of continuous legal practice and be in the age bracket of 35-45.
  - This is a disadvantage for women as many are married by this age.
- Further, the long and inflexible work hours in law, combined with familial responsibilities, force many women to drop out of practice and they fail to meet the requirement of continuous practice.

## Ban on Wearing Hijab

**News:** The Karnataka High Court has upheld the ban on the wearing of hijab (head scarf) by students in schools and colleges in the State.

### Details:

- The judgment was delivered by a three-judge bench comprising Chief Justice Ritu Raj Awasthi, Justice Krishna S. Dixit and Justice J.M. Khazi.
- It rejected all the petitions filed by girl students of pre-university colleges in Udupi district.
- The HC held that wearing hijab is not an essential religious practice in Islam and is not, therefore, protected under by the right to freedom of religion guaranteed by Article 25 of the Constitution.
- The court said it was a reasonable restriction that was constitutionally permissible. The Bench also upheld the legality of the order prescribing guidelines for uniforms in schools and pre-university colleges under the provisions of the Karnataka Education Act, 1983.
- The court said that school uniform will cease to be a uniform if hijab is also allowed.
- The Bench also spoke about the possibility of some “unseen hands” behind the hijab row to engineer social unrest and disharmony. It expressed dismay over the issue being blown out of proportion by the powers that be.

### Reactions:

- Some factions have said that the order is a blow to right to education for Muslim women. Other see it as an empowerment of women. Feminists says that it’s not about an item of clothing, it’s about the right of a woman to choose how she wants to dress. The Leftists perceived it as a blow against the universal right to education without discrimination, guaranteed by the law and the Constitution of India.

## Lokpal

**News:** The Lokpal has failed to provide prosecution sanction to public servants charged with corruption since its constitution nearly three years ago, according to an RTI reply by the anti-graft ombudsman.

### Details:

- The appointments of directors of inquiry and prosecution, the two top personnel for looking into complaints of corruption and processing prosecution of accused public servants, are yet to be made.
- According to the Lokpal and Lokayuktas Act, 2013:
  - There shall be a director of inquiry, not below the rank of Joint Secretary to the Government of India.
  - He/she shall be appointed by the Central government for conducting preliminary inquiries referred to the Central Vigilance Commission (CVC) by the Lokpal.

**The dress row** | A brief timeline of events around the hijab controversy in Karnataka

<b>December 2021:</b> Muslim students of Government PU College for Girls, Udupi seek nod to wear hijab in classes		<b>February 10:</b> The Bench restrains all the students from wearing hijabs, saffron shawls, and religious flags in classrooms until further orders
<b>January 2022:</b> Hijab row spreads to other districts of Karnataka	<b>Tightened vigil:</b> Police outside the Karnataka HC after the hijab ban was upheld. • PTI	<b>March 15:</b> HC upholds legality of the State's guidelines
<b>February 5, 2022:</b> Karnataka government issues guidelines on uniforms	<b>February 9:</b> Four girls file petitions challenging the guidelines; Chief Justice sets up a three-judge Bench	 <b>There is sufficient intrinsic material within the scripture itself to support the view that wearing hijab been only recommendatory, if at all it is</b> — KARNATAKA HIGH COURT

### **Lokpal Act of 2013:**

- The Act allows setting up of anti-corruption ombudsman called Lokpal at the Centre and Lokayukta at the State-level. The Lokpal will consist of a chairperson and a maximum of eight members.
- The Lokpal will cover all categories of public servants, including the Prime Minister. But the armed forces do not come under the ambit of Lokpal.
- The Act also incorporates provisions for attachment and confiscation of property acquired by corrupt means, even while the prosecution is pending.
- The States will have to institute Lokayukta within one year of the commencement of the Act.
- The Act also ensures that public servants who act as whistleblowers are protected.

### **Powers:**

- The Lokpal will have the power of superintendence and direction over any investigation agency including CBI for cases referred to them by the ombudsman.
- As per the Act, the Lokpal can summon or question any public servant if there exists a prima facie case against the person, even before an investigation agency (such as vigilance or CBI) has begun the probe. Any officer of the CBI investigating a case referred to it by the Lokpal, shall not be transferred without the approval of the Lokpal.
- An investigation must be completed within six months. However, the Lokpal or Lokayukta may allow extensions of six months at a time provided the reasons for the need of such extensions are given in writing.
- Special courts will be instituted to conduct trials on cases referred by Lokpal.

## **Bail Provisions under UAPA**

**News:** Recently, a Delhi court granted bail to a former Congress (Political Party) councillor in an Unlawful Activities (Prevention) Act 1967 (UAPA) case filed in connection with the 2020 anti-Citizenship (Amendment) Act, 2019, (CAA) protests.

### **Details:**

- The court granted bail to the accused despite the prosecution arguing that there were limitations contained in Section 43D(5) of the UAPA, a provision which makes grant of bail virtually impossible, as it leaves little room for judicial reasoning. The Defence argued that Section 43D UAPA only puts restrictions but is not an absolute bar to the grant of bail.

### **Issues:**

- The major problem with the UAPA lies in its Section 43(D)(5), which prevents the release of any accused person on bail if, police have filed the chargesheet that there are reasonable grounds for believing that the accusation against such person is prima facie true.
- The effect of Section 43(D)(5) is that once the police elect to charge an individual under the UAPA, it becomes extremely difficult for bail to be granted. Bail is a safeguard and guarantee of the constitutional right to liberty. This provision leaves very little room for judicial reasoning, and makes the grant of bail virtually impossible under UAPA.
- In the case of Zahoor Ahmed Shah Watali, the Supreme Court in 2019 confirmed that courts must accept the state's case without examining its merits. However, courts have since read this provision differently, emphasizing the right to a speedy trial and raising the bar for the state to book an individual under UAPA.

### **Unlawful Activities (Prevention) Act 1967:**

- The UAPA was enacted in 1967, and later strengthened to be modelled as an anti-terror law by the government in 2008 and 2012. In August 2019, Parliament cleared the Unlawful Activities (Prevention) Amendment Bill, 2019 to designate individuals as terrorists on certain grounds provided in the Act.
- In order to deal with the terrorism related crimes, it deviates from ordinary legal procedures and creates an exceptional regime where constitutional safeguards of the accused are curtailed.
- Between 2016 and 2019, the period for which UAPA figures have been published by the National Crime Records Bureau (NCRB), a total of 4,231 First Information Report (FIR) were filed under various sections of the UAPA, of which 112 cases have resulted in convictions.

- This frequent application of UAPA indicates that it is often misused and abused like other anti-terror laws in the past in India such as POTA (Prevention of Terrorism Act) 2002 and TADA (Terrorist and Disruptive Activities (Prevention) Act) 1987.

#### Other issues:

- The definition of a “terrorist act” under the UAPA substantially differs from the definition promoted by the United Nations (UN) Special Rapporteur on the Protection of Human Rights and Fundamental Freedoms while Countering Terrorism. According to Special Rapporteur to call an offence a “terrorist act”, three elements must be cumulatively present: The means used must be deadly.
- The intent behind the act must be to cause fear amongst the population or to compel a government or international organisation to do or refrain from doing something. The aim must be to further an ideological goal. UAPA, on the other hand, offers an overbroad and ambiguous definition of a “terrorist act” which includes the death of, or injuries to, any person, damage to any property, etc.
- Given the state of justice delivery system in India, the rate of pendency at the level of trial is at an average of 95.5%. This means that trials are completed every year in less than 5% cases, signifying the reasons for long years of undertrial imprisonment.
- It also includes any act that is “likely to threaten” or “likely to strike terror in people”, giving unbridled power to the government to brand any ordinary citizen or activist a terrorist without the actual commission of these acts. Thus, the state gives itself more powers vis-a-vis individual liberty guaranteed under Article 21 of the constitution.
- Some experts feel that it is against the federal structure since it neglects the authority of state police in terrorism cases, given that ‘Police’ is a state subject under 7th schedule of Indian Constitution.

## Sealed Cover Jurisprudence

**News:** Recently, while hearing a criminal appeal against the Bihar Government, Chief Justice of India (CJI) admonished a counsel for submitting a ‘sealed cover report’ to the court. Sealed cover jurisprudence has been frequently employed by courts in the recent past for example Rafale Fighter Jet Deal 2018, 2014, BCCI Reforms Case, Bhima Koregaon case 2018 etc.

#### What is Sealed Cover Jurisprudence?

- It is a practice used by the Supreme Court and sometimes lower courts, of asking for or accepting information from government agencies in sealed envelopes that can only be accessed by judges.
- While a specific law does not define the doctrine of sealed cover, the Supreme Court derives its power to use it from Rule 7 of order XIII of the Supreme Court Rules and Section 123 of the Indian Evidence Act of 1872.
- Rule 7 of order XIII of the Supreme Court Rules:
- According to the rule, if the Chief Justice or court directs certain information to be kept under sealed cover or considers it of confidential nature, no party would be allowed access to the contents of such information, except if the Chief Justice himself orders that the opposite party be allowed to access it.
- It also mentions that information can be kept confidential if its publication is not considered to be in the interest of the public.

#### Section 123 of the Indian Evidence Act of 1872:

- Under this act, official unpublished documents relating to state affairs are protected and a public officer cannot be compelled to disclose such documents.
- Other instances where information may be sought in secrecy or confidence are when its publication impedes an ongoing investigation, such as details which are part of a police case diary.

#### Relevant issues:

- It is not favourable to the principles of transparency and accountability of the Indian justice system, as it stands against the idea of an open court, where decisions can be subjected to public scrutiny.
- In any process of adjudication, especially one that involves fundamental rights, evidence “must be shared with both parties to the dispute”.
- To enlarge the scope for arbitrariness in court decisions, as judges are supposed to lay down reasoning for their decisions, but this cannot be done when they are based upon information submitted confidentially.

- What is further contested is whether the state should be granted such a privilege to submit information in secrecy, when existing provisions like in-camera hearings already provide sufficient protection to sensitive information.
- It is also argued that not providing access to such documents to the accused parties obstructs their passage to a fair trial and adjudication. Sealed covers are dependent on individual judges looking to substantiate a point in a particular case rather than common practice. This makes the practice ad-hoc and arbitrary.

#### **SC's views on this:**

- In *Modern Dental College vs State of Madhya Pradesh* (2016), the apex court adopted the proportionality test proposed by Aharon Barak, the former Chief Justice, Supreme Court of Israel, "a limitation of a constitutional right will be constitutionally permissible if it is designated for a proper purpose.
- The measures undertaken to effectuate such a limitation are rationally connected to the fulfilment of that purpose or the measures undertaken are necessary in that there are no alternative measures that may similarly achieve that same purpose with a lesser degree of limitation.
- There needs to be a proper relation ('proportionality stricto sensu' or 'balancing') between the importance of achieving the proper purpose and the social importance of preventing the limitation on the constitutional right. This was reiterated in *K.S. Puttaswamy vs Union of India* (2017).
- In the 2019 judgement in the case of *P. Gopalakrishnan vs The State of Kerala*, the Supreme Court had said that disclosure of documents to the accused is constitutionally mandated, even if the investigation is ongoing and documents may lead to a breakthrough in the investigation.
- In the *INX Media* case in 2019, the Supreme Court had criticised the Delhi High Court for basing its decision to deny bail to the former union minister on documents submitted by the Enforcement Directorate (ED) in a sealed cover.

## **SC supports Centre's OROP scheme**

**News:** Recently, the Supreme Court has upheld the Centre's one rank, one pension (OROP) scheme for the armed forces.

#### **What is OROP scheme?**

- OROP implies that uniform pension be paid to Defence Forces Personnel retiring in the same rank with the same length of service, regardless of their date of retirement.

#### **Issues with OROP scheme**

- During the protests back in 2013-15 it was argued that meeting the demands of the defence forces personnel would be financially unsustainable
- The Defence ministry's pension-to-budget ratio is the highest among all the ministries, and pensions are more than one-fifth of the total defence budget
- The actual expenditure of the Defence Ministry on pensions was Rs 1.18 lakh crore in 2019-2020.
- It is estimated that a one-time payout of Rs. 83,000 crore would be needed to clear all past issues.

#### **Challenges to OROP**

- The petitioners argued that the principle of OROP was replaced by 'one rank multiple pensions'
- They also complained that the government had changed the earlier definition OROP and switched to automatic revision in the rates of pension.
- Now, any future raise in pension rates would be passed on to past pensioners and the revision would now take place at periodic intervals
- As per the petitioners, this is arbitrary and unconstitutional under articles 14 and 21 of the Constitution
- The Supreme Court has that there was 'no constitutional infirmity' in the way the government has introduced OROP among ex defence forces personnel.

## **National Commission for Scheduled Tribes**

**News:** As per a recent report by a parliamentary committee, the National Commission for Scheduled Tribes (NCST) has been dysfunctional for the last 4 years and has not given a single report to the Parliament.



### **About NCST:**

- NCST was set up by amending Article 338 and by inserting a new article 338A in the Constitution through the 89th Constitution Amendment Act, 2003. Hence, it is a constitutional body.
- The term of office of Chairperson, Vice-Chairperson and each member is three years from the date of assumption of charge.
- They are appointed by the President by warrant under his hand and seal.
- At least one member should be a woman.
- The Chairperson, the Vice-Chairperson and the other members hold office for a term of 3 years
- The members are not eligible for appointment for more than 2 terms.
- The Chairperson has been given the rank of Union Cabinet Ministers, the Vice Chairperson has the rank of a Minister of State and other Members have the rank of a Secretary to the Government of India.

### **Powers:**

- The NCST is empowered to investigate and overview matters relating to safeguards provided for Scheduled Tribes under different provisions of Constitution or under various laws of the government.
- It can also inquire into specific complaints relating to rights of the ST
- It can involve in the planning process relating to socio-economic development of ST's and to evaluate their development under union and state governments.

### **Whom does the commission submits its report to?**

- It annually submits its report to the President of the country on the working of safeguards and measures required for implementation of programmes and schemes pertaining to the ST of the country.

## **Article 355**

**News:** Citing post-poll violence and breakdown of constitutional machinery in Birbhum district, West Bengal, many political leaders have urged the president to invoke Article 355 of the Constitution to ensure that the state government functions in accordance with the provisions of the Constitution.

### **What is Article 355?**

- Article 355 refers to the provision in the Constitution that states that "It shall be the duty of the Union to protect every State against external aggression and internal disturbance and to ensure that the government of every State is carried on in accordance with the provisions of this Constitution".
- The Article 355 is part of emergency provisions contained in Part XVIII of the Constitution of India, from Article 352 to 360.

### **Relation between Article 356 and 355**

- It is this duty in the performance of which the centre takes over the government of a state under Article 356 in case of failure or breakdown of constitutional machinery in a state.
- This is known as 'President's Rule'

### **On what grounds can President's rule be proclaimed?**

- Article 356 empowers the President to issue a proclamation if he is satisfied that a situation has arisen in which the government of a state cannot be carried on in accordance with the provisions of the constitution.
- Article 365 says that whenever a state fails to comply with or to give effect to any direction from the centre, it will be lawful for the President to hold that a situation has arisen in which the government of the state cannot be carried on in accordance with the provisions of the constitution.
- A proclamation imposing the president's rule must be approved by both the houses of parliament within two months from the date of its issue.

### **What extraordinary powers does the President acquires?**

- He can take up the functions of the state government and powers vested in the governor or any other executive authority in the state.
- He can declare that the powers of the state legislature are to be exercised by the parliament.
- He can take all other necessary steps including the suspension of the constitutional provisions relating to any body or authority in the state.



## Is there any scope of Judicial Review?

- The 38<sup>th</sup> Amendment act of 1975 made the satisfaction of the President in invoking Article 356 final and conclusive which would not be challenged in any court on any ground
- However, this provision was subsequently deleted by the 44<sup>th</sup> Amendment Act of 1978 implying that the satisfaction of the President is not beyond judicial review.

## Criminal Justice Reforms

**News:** With the intention to make comprehensive changes in criminal laws, the government has initiated the process of amendment to laws such as Indian Penal Code, the Code of Criminal Procedure and Indian Evidence Act.

### Criminal Law in India:

- Lord Thomas Babington Macaulay is said to be the chief architect of codifications of criminal laws in India
- The criminal law and criminal procedure are in the concurrent list of the seventh schedule of the constitution

### Issues:

- The delay in disposal of cases was leading to human rights violations of the under-trials and convicts
- No concrete measures taken in police reforms on the ground in spite of directions given by Supreme court
- Years taken to implement court order directions involving convicted persons

### Reforms recommended:

- Digitisation of documents to speed up the process
- Special laws and fast-track courts could replace certain offences under the Indian Penal Code in order to reduce the piling up of cases at every police station.
- Any law or new offences involved to be guided by the principles of criminal jurisprudence
- The classification of offences must cater to the evolving nature of crimes in the future

### Different committees involved:

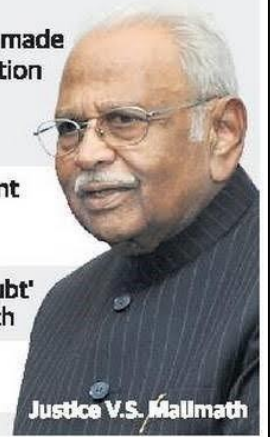
- At present, the Ministry of Home Affairs (MHA) has constituted committee under Ranbir Singh which would be gathering opinions online via consultations with experts
- Madhav Menon Committee (2007)
- Malimath Committee Report (2003)

### Looking back

The Malimath Committee report in 2003 made 158 recommendations on crime investigation and punishment, among others

#### Key recommendations

- Confessions made before a Superintendent of Police rank officer be admitted as evidence in a court of law
- Standard of 'proof beyond reasonable doubt' followed in criminal cases be done away with
- Stringent punishment needed for false registration of cases



Justice V.S. Malimath

## Foreigner's Tribunal

**News:** A Foreigners' Tribunal in Assam's Cachar district has served a notice to a deceased person, asking him to appear before it by March 30 as he had failed to produce valid documents to prove his Indian citizenship.

### What is a Foreigners' Tribunals?

- Foreigners' Tribunals are quasi-judicial bodies established as per the Foreigners' Tribunal Order, 1964 and the Foreigners' Act, 1946. Advocates not below the age of 35 years of age with at least 7 years of practice (or) Retired Judicial Officers from the Assam Judicial Service (or) Retired IAS of ACS Officers (not below the rank of Secretary/Addl. Secretary) having experience in quasi-judicial works.

### Who can setup these tribunals?

- The District magistrates in all states and union territories are empowered to set up tribunals who decide whether a person is staying illegally in India is a Foreigner or not.

- Earlier, the powers to constitute tribunals were vested only with the centre.

#### **Who can approach?**

- The amended order (Foreigners (Tribunal) Order, 2019) also empowers individuals to approach the Tribunals.
- Earlier, only the State administration could move the Tribunal against a suspect.

#### **Who is a Declared Foreigner?**

- A declared foreigner, or DF, is a person marked by Foreigners' Tribunal (FT) for allegedly failing to prove their citizenship after the State police's Border wing marks him or her as an illegal immigrant.

## **Voting Rights for Overseas Citizen**

**News:** The Union Minister for Law and Justice in response to a question in the Lok Sabha stated that the government is mulling the possibility of allowing online voting for Non-Resident Indians (NRI).

#### **Background:**

- In 2020, the Election Commission of India (ECI) in a proposal to the Law Ministry proposed to extend the facility of postal ballots to eligible NRIs for the various State Assembly elections to be held in 2021.
- The ECI then, had proposed amending the Conduct of Election Rules, 1961, in order to allow this facility. The postal ballots were to be sent to NRIs electronically after which they will send the ballots back, after choosing their candidate, via post.

#### **Current voting process for Overseas Voters in Indian elections:**

- It was through the Representation of the People (Amendment) Act, 2010, eligible NRIs who had stayed abroad beyond six months were allowed to vote, but only in person at the polling station where they have been enrolled as an overseas elector.
- An NRI can vote in the constituency in his/her place of residence, as mentioned in the passport, is located.
- She/He can only vote in person and will have to produce her passport in original at the polling station for establishing identity.

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

- From merely 11,846 overseas voters who registered in 2014, the number went close to 1,00,000 in 2019. However, only low proportion of voters have turned up to vote. The provision of visiting the polling booth in person has discouraged the eligible voters from exercising their mandate.

#### **What has the government done for Overseas Voter?**

- The government, in the winter session of parliament in 2017, proposed to remove the restriction imposed by Section 20A of the Representation of People Act.
- Section 20A of RPA required voters to be physically present to cast their votes in their constituencies.
- The bill provided overseas voters to be able to appoint a proxy to cast their votes on their behalf. The bill was passed in 2018, but lapsed with the dissolution of the 16<sup>th</sup> Lok Sabha.
- The ECI then approached the government to permit NRIs to vote via postal ballots.
- Postal ballots are similar to a system that is already used by service voters, (a member of the armed Forces of the Union; or a member of a force to which provisions of the Army Act, 1950 are applicable) which is the Electronically Transmitted Postal Ballot System or ETPBS.

#### **Way Forward:**

- The postal ballot method has been recognised by the International Institute for Democracy and Electoral Assistance as a means to allow overseas voters to exercise their right to vote.
- Such system allows for proper authentication of the ballot at designated embassies and an efficient postal system should ease the process for NRIs.

## **Determination of Minority in India**

**News:** A plea has been filed in the Supreme Court seeking minority status for Hindus in Mizoram, Nagaland, Manipur, Meghalaya, Arunachal Pradesh, Punjab, Lakshadweep, Ladakh, Kashmir.

### What does the plea want?

- Minority status for Hindus: The plea contented that Hindus were minority in 6 states and 3 UTs of India but were unable to avail benefits of schemes for minorities.
- Referring to Article 30 of the Constitution, the plea said minorities whether based on religion or language shall have the right to establish/administer educational institutions.
- The plea claimed that NCMEI (National Commission for Minority Education Institution) Act 2004 gives unbridled power to the Centre and is “manifestly arbitrary, irrational, and offending”.

### What was Centre’s response?

- States too have the power to declare any religious or linguistic community, including Hindus, as ‘minority’.
- The centre pointed that Maharashtra had notified Jews as a minority community in 2016 and Karnataka had notified languages such as Urdu, Telugu, Gujarati, Tulu, Marathi etc as minority languages.
- Parliament and State legislatures have concurrent powers to enact law to provide for the protection of minorities and their interests.
- The TMA Pai ruling also “reveals that the SC has nowhere eroded the power of the Central Government to notify a community as a ‘minority’.

### What are the Constitutional Provisions for Minority?

#### Article 29

- It provides that any section of the citizens residing in any part of India having a distinct language, script or culture of its own, shall have the right to conserve the same.
- It grants protection to both religious minorities as well as linguistic minorities.

#### Article 30

- All minorities shall have the right to establish and administer educational institutions of their choice.
- The protection under Article 30 is confined only to minorities (religious or linguistic) and does not extend to any section of citizens (as under Article 29).

#### Article 350-B

- The 7<sup>th</sup> Constitutional (Amendment) Act 1956 inserted this article which provides for a Special Officer for Linguistic Minorities appointed by the President of India. It would be the duty of the Special Officer to investigate all matters relating to the safeguards provided for linguistic minorities under the Constitution.

**Minorities notified in India** – Muslims, Christians, Sikhs, Buddhists, Parsis and Jains.

**Note:** The term ‘Minorities’ appears in some articles of the Constitution, but is not defined explicitly anywhere.

## **Criminal Procedure (Identification) Bill, 2022**

**News:** Recently, the Criminal Procedure (Identification) Bill, 2022 was introduced in Lok Sabha.

### Provisions of the Bill:

- It authorises law enforcement agencies to collect, store and analyse physical and biological samples of convicts and other persons for the purposes of identification and investigation in criminal matters.
- The Bill also authorises police to record signatures, handwriting or other behavioural attributes referred to in section 53 or section 53A of the Code of Criminal Procedure, 1973, for the purposes of analysis.
- It seeks to repeal the Identification of Prisoners Act 1920. The said Act, in its present form, provides access to a limited category of persons whose body measurements can be taken.
- As per the Bill, any person convicted, arrested or held under any preventive detention law will be required to provide “measurements” to a police officer or a prison official.
- Any state government of Union Territory administration may notify an appropriate agency to collect, preserve and share the measurements of a person of interest in their respective jurisdictions.
- Resistance to or refusal to allow the taking of measurements under this Act shall be deemed to be an offence under section 186 of the Indian Penal Code (IPC).

### What does the bill seek to do?

- Define “measurements” to include finger impressions, palm-print and foot-print impressions, photographs, iris and retina scan, physical, biological samples and their analysis, etc.

- Empower the National Crime Records Bureau (NCRB) to collect, store and preserve the record of measurements and for sharing, dissemination, destruction and disposal of records.
- Empower a Magistrate to direct any person to give measurements; a Magistrate can also direct law enforcement officials to collect fingerprints, footprint impressions and photographs in the case of a specified category of convicted and non-convicted persons.
- Empower police or prison officers to take measurements of any person who resists or refuses to give measurements.

#### **Why do we need the Bill?**

- Boost to investigative agencies as the bill seeks to expand the 'ambit of persons' whose measurements can be taken which will help investigative agencies to gather sufficient legally admissible evidence.
- The bill makes provision for the use of modern techniques to capture and record appropriate body measurements.
- As the bill provides legal sanction for taking appropriate body measurements of persons, this will help make investigation of crime more efficient and quicker.

#### **Concerns associated with the Bill**

- It infringes upon right to privacy.
- It violated Article 20 (3) of the Constitution that safeguards the rights of citizens by providing that "no person accused of an offence shall be compelled to be a witness against himself".
- It proposes to collect samples even from protestors engaged in political protests.



# Social Justice

## WHO's Pandemic Treaty

**News:** Members of the World Health Organisation (WHO) held the first round of negotiations towards the pandemic treaty on February 24, 2022.

### What is the Pandemic Treaty?

- In December 2021, the World Health Assembly agreed to start a global process to draft the pandemic treaty. The need for an updated set of rules was felt after the COVID-19 pandemic exposed the shortcomings of global health systems. The Health Assembly adopted a decision titled "The World Together" at its second special session since it was founded in 1948.
- Under the decision, the health organization established an intergovernmental negotiating body (INB) to draft and negotiate the contents of the pandemic treaty in compliance with Article 19 of the WHO Constitution. The pandemic treaty is expected to cover aspects like data sharing and genome sequencing of emerging viruses and equitable distribution of vaccines and drugs and related research.
- Solutions to the COVID-19 pandemic have seen an inequitable distribution of vaccines so far, with poorer countries at the mercy of others to receive preventive medication.
- Most countries have followed the "me-first" approach which is not an effective way to deal with a global pandemic. A widely-accepted theory points that the novel coronavirus may have jumped from animals to humans in a wildlife market of China. Many nations want a ban on wildlife markets.
- While the EU wants the treaty to be legally binding, the U.S., Brazil and India have expressed reservations about the same. The legal nature of the treaty is yet to be defined.
- Article 19 of the WHO Constitution gives the World Health Assembly the authority to adopt conventions or agreements on matters of health. A two-third majority is needed to adopt such conventions or agreements.
- The WHO Framework Convention on Tobacco Control was set up under Article 19 and it came into force in 2005.

## UDISE+ 2020-21

**News:** The Ministry of Education has released a detailed report on Unified District Information System for Education Plus (UDISE+) 2020-21 on school education of India.

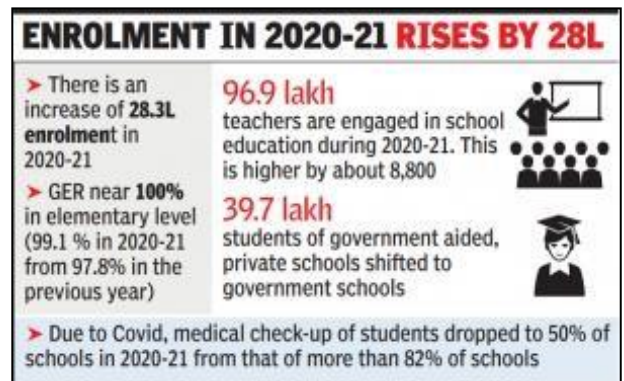
### About it

- The UDISE+ system of online data collection from the schools was developed by Department of School Education & Literacy in the year 2018-19. It was aimed to overcome the issues related to erstwhile practice of manual data filling in paper format and subsequent feeding on computer at the block or district level in the UDISE data collection system since 2012-13.

In UDISE+ system, improvements have been made particularly in the areas related to data capture, data mapping and data verification.

### Highlights of the report:

- In 2020-21 total students enrolled in school education from primary to higher secondary stood at 25.38 crore. There is an increase of 28.32 lakh enrolments as compared to the 25.10 crore enrolment in 2019-20.
- Gross Enrolment Ratio (GER) which measure the general level of participation has improved in 2020-21 at all levels of school education compared to 2019-20. Level wise GER in 2020-21 as compared to 2019-20 are: 92.2% from 89.7% in upper primary, 99.1 % from 97.8% in elementary, 79.8% from 77.9% in secondary and 53.8% from 51.4% in higher secondary respectively.
- 96.96 lakh teachers are engaged in school education during 2020-21.
- This is higher by about 8800 in comparison with number of teachers in school education in 2019-20.



- In 2020-21 the Pupil Teacher Ratio (PTR) stood at 26 for primary, 19 for upper primary, 18 for secondary and 26 for higher secondary, showing an improvement since 2018-19.
- The PTR for primary, upper primary, secondary and higher secondary was 28, 20, 21, and 30 respectively during 2018-19. In 2020-21 over 12.2 crore girls are enrolled in primary to higher secondary showing an increase of 11.8 lakh girls compared to the enrolment of girls in 2019-20.
- Schools with functional electricity have made impressive progress during 2020-21 with net addition of 57,799 schools provided electricity. Now 84% of the total schools have functional electricity facility in comparison with 73.85% in 2018-19 showing remarkable improvement of 10.15% during the period.
- Percentage of the schools with functional drinking water has increased to 95.2 % in 2020-21 from 93.7 % in 2019-20. Percentage of the school with functional girl's toilet facility has increased to 93.91 % in 2020-21 in comparison with 93.2 % in 2019-20 by adding the facility in additional 11,933 schools during the year. Number of schools having functional computers increased to 6 lakh in 2020-21 from 5.5 lakh in 2019-20 showing an increasing of 3 %. Now, 40% of the schools have functional computers. Number of schools having internet facility increased to 3.7 lakh in 2020-21 from 3.36 lakh in 2019-20 with an increase of 2.6%. During 2020-21, 39.7 lakh students of government aided, private school students shifted to Government schools.

## WHO Guidelines on Abortions

**News:** Recently, the World Health Organization (WHO) presented new guidelines on abortion care. These, it claimed, would prevent more than 25 million unsafe abortions annually. The new guidelines include recommendations on many simple interventions at the primary care level that improve the quality of abortion care provided to women and girls. The new guidelines will support interested countries to implement and strengthen national policies and programmes related to contraception, family planning and abortion services, helping them to provide the highest standard of care for women and girls.

### Background:

- Globally, between 13,865 and 38,940 lives are lost yearly due to the failure to provide safe abortion.
- Developing countries bear the burden of 97% of unsafe abortions. The proportion of abortions that are unsafe is also significantly higher in countries with highly restrictive abortion laws than in those with less restrictive laws. Over half (53.8%) of all unsafe abortions occur in Asia, the majority of those in south and central Asia. A quarter (24.8%) occur in Africa, mainly in eastern and western Africa and a fifth (19.5%) in Latin America and the Caribbean.
- Abortion rates were highest in low-income countries with the most legal restrictions to abortion care.
- There was also an increase of 12% in the number of abortions in countries with legal restrictions on the procedure, while it declined slightly in countries where abortion is broadly legal.

### Latest guidelines:

- These include task sharing by a wider range of health workers, ensuring access to medical abortion pills, which mean more women can obtain safe abortion services and making sure that accurate information on care is available to all those who need it.
- It also includes the recommendations for the use of telemedicine, which helped support access to abortion and family planning services during the Covid-19 pandemic.
- It also recommend removing medically unnecessary political barriers to safe abortion, such as criminalisation, mandatory waiting periods before receiving a requested abortion, third-party authorisation for abortion, restrictions on which health workers can provide abortion services.
- Such barriers can lead to critical delays in accessing treatment and put women and girls at greater risk of unsafe abortion, stigma and health complications, while increasing barriers to education and their ability to work. Restricting access to abortions does not reduce the number of abortions that take place. In fact, restrictions are more likely to push women and girls into unsafe practices.
- A person's environment plays a crucial role in shaping their access to care and influencing their health outcomes. An enabling environment is the foundation of quality comprehensive abortion care.
- The three cornerstones of an enabling environment for abortion care are:
  - Respect for human rights including a supportive framework of law and policy.
  - Availability and accessibility of information.

- A supportive, universally accessible, affordable and well functioning health system.

## Maternal Mortality in India

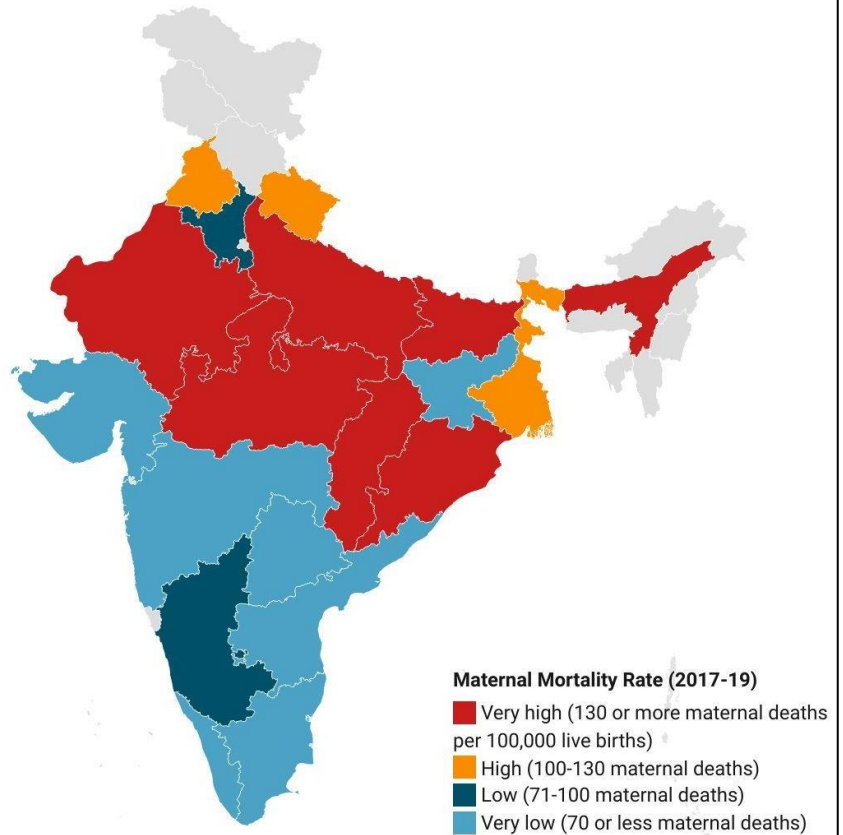
**News:** Kerala has yet again emerged on top when it comes to maternal and child health, with the State recording the lowest Maternal Mortality Ratio (MMR) of 30 (per one lakh live births) in the country.

### Details:

- Maternal mortality refers to deaths due to complications from pregnancy or childbirth.
- The maternal mortality ratio (MMR) is defined as the number of maternal deaths during a given time period per 100,000 live births during the same time period.
- It depicts the risk of maternal death relative to the number of live births and essentially captures the risk of death in a single pregnancy or a single live birth.
- India's maternal mortality ratio (MMR) has improved to 103 in 2017-19, from 113 in 2016-18.
- Seven Indian states have very high maternal mortality. These are Rajasthan, Uttar Pradesh, Madhya Pradesh, Chhattisgarh, Bihar, Odisha and Assam. The MMR is 'high' in Punjab, Uttarakhand and West Bengal. This means 100-130 maternal deaths per 100,000 live births. It is 'low' in Haryana and Karnataka.
- The states of Uttar Pradesh, Rajasthan and Bihar have seen the most drop in MMR.
- West Bengal, Haryana, Uttarakhand and Chhattisgarh have recorded an increase in MMR over the last survey.

### Seven states have very high maternal mortality

India's maternal mortality ratio (MMR) has improved from 113 in 2016-18 to 103 in 2017-19. The ratio has worsened in **West Bengal, Haryana, Uttarakhand and Chhattisgarh.**



## Caste-based payment for MGNREGA

**News:** A Parliamentary Standing Committee has asked the Rural Development Ministry to replace caste-based NREGS payment with the earlier mechanism of generation of single Fund Transfer Order

### Details:

- Parliament's Standing Committee on Rural Development and Panchayati Raj has asked the government to roll back the system of caste-based wages, under which NREGS workers are paid based on whether they belong to a Scheduled Caste, Scheduled Tribe, or Others.
- It wants government to revert back to the earlier system by which a single Fund Transfer Order was generated without "any sort of segregation on the basis of caste".

- Create caste rift: NREGS workers are part of the “economically weak populace and can come from any religion/caste, [and] creation of such payment system wherein one specific community is preferred over the other solely on the ground of caste will only give rise to resentment and create rift among the beneficiaries of MGNREGA”
- Under the new system, if 20 individuals (say, six SCs, four STs and 10 others) work together at a site under MG-NREGA, a single muster roll would be issued, but payment would be done by issuing three separate Fund Transfer Orders (FTOs), one for each of the three categories.
- It came into force on April 1, 2021. Beneficiaries in the ‘Others’ category, which includes the ‘General’ and Other Backward Classes (OBC) categories, especially complained of delays.
- According to the Ministry, the system of category-wise payment of wages was introduced to “accurately reflect on the ground flow of funds to various population groups”. Last October, a process of “streamlining” of the new system was taken up.

#### **About MGNREGA:**

- The scheme was introduced as a social measure that guarantees “the right to work”. The key tenet of this social measure and labour law is that the local government will have to legally provide at least 100 days of wage employment in rural India to enhance their quality of life.
- Key objectives of the scheme are as follows:
  - Generation of paid rural employment of not less than 100 days for each worker who volunteers for unskilled labour.
  - Proactively ensuring social inclusion by strengthening livelihood base of rural poor.
  - Creation of durable assets in rural areas such as wells, ponds, roads and canals.
  - Reduce urban migration from rural areas.
  - Create rural infrastructure by using untapped rural labour.
  - The following are the eligibility criteria for receiving the benefits under MGNREGA scheme:
    - Must be Citizen of India to seek NREGA benefits.
    - Job seeker has completed 18 years of age at the time of application.
    - The applicant must be part of a local household (i.e., application must be made with local Gram Panchayat).
    - Applicant must volunteer for unskilled labour.
- The Ministry of Rural Development (MRD), Govt of India is monitoring the entire implementation of this scheme in association with state governments.
- Individual beneficiary-oriented works can be taken up on the cards of Scheduled Castes and Scheduled Tribes, small or marginal farmers or beneficiaries of land reforms or beneficiaries under the Indira Awaas Yojana of the Government of India. Within 15 days of submitting the application or from the day work is demanded, wage employment will be provided to the applicant.
- Right to get unemployment allowance in case employment is not provided within fifteen days of submitting the application or from the date when work is sought.
- Social Audit of MGNREGA works is mandatory, which lends to accountability and transparency.
- The Gram Sabha is the principal forum for wage seekers to raise their voices and make demands. It is the Gram Sabha and the Gram Panchayat which approves the shelf of works under MGNREGA and fix their priority.

## **Prevention of Sexual Harassment at Workplace**

**News:** Kerala High Court has asked organisations associated with the film industry to take steps to constitute a joint committee to deal with cases of sexual harassment of women, in line with the Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act of 2013.

#### **Vishakha Guidelines:**

- The Vishakha guidelines (legally binding) were laid down by the Supreme Court in a judgment in 1997. This was in a case filed by women’s rights groups, one of which was Vishakha. The guidelines defined sexual harassment and imposed three key obligations on institutions — prohibition, prevention, redress.
- The Supreme Court directed that they should establish a Complaints Committee, which would look into matters of sexual harassment of women at the workplace. The 2013 Act broadened these guidelines.



### **About the act:**

- The law against sexual harassment is commonly known as the prevention of sexual harassment or POSH Act, passed by Parliament in 2013.
- Sexual Harassment of Women at Workplace (Prevention, Prohibition And Redressal) Act, 2013 defines sexual harassment: It includes “any one or more” of the following “unwelcome acts or behaviour” committed directly or by implication: Physical contact and advances, Sexually coloured remarks, Showing pornography, A demand or request for sexual favours, Any other unwelcome physical, verbal or non-verbal conduct of sexual nature.
- This Act lays down the procedures for a complaint and inquiry and the action to be taken.
- It mandates that every employer constitute an Internal Complaints Committee (ICC) at each office or branch with 10 or more employees.
- It lays down the procedures and defines various aspects of sexual harassment.
- A woman can be of any age, whether employed or not, who “alleges to have been subjected to any act of sexual harassment”, that means the rights of all the women working or visiting any workplace, in any capacity, are protected under the Act.
- The 2013 Act has entrusted the powers of a civil court to the Internal Complaints Committee (ICC) without specifying if the members need to have a legal background. This was a major lacuna given that the ICC formed an important grievance redressal mechanism under the framework of the act.
- The 2013 act only imposed a fine of ₹50,000 on employers for non-compliance with respect to the constitution of the ICC. This proved to be insufficient in ensuring that the employers constituted the ICC in a time-bound manner.

## **UGC's Common entrance test for Undergraduate Admissions**

**News:** The University Grants Commission (UGC) has announced that admission into undergraduate courses in all centrally-funded universities will henceforth be solely on the basis of a Common University Entrance Test (CUET).

### **What is CUET?**

- The CUET will be a computerised test to be conducted by the National Testing Agency (NTA)
- Following the exam, the NTA will prepare a merit list on the basis of which these universities will admit students.
- This entrance test is compulsory for all the central universities and may also be adopted by the state/private/deemed to be universities.
- The entrance exam will be offered in 13 languages.

### **Need for CUET**

- It helps students prevent from the ‘stress of impossibly high cut-offs for admission’
- Provides level playing field for students as different boards in states have their own methods of marking students in exams. Thus, it provides uniformity as far as evaluation is concerned.
- As students only need to write one exam, it reduces the financial burden on parents

### **About NTA:**

- In pursuance of the Budget Announcement 2017-18, the Union Cabinet, in November 2017, approved creation of the National Testing Agency (NTA) as an autonomous and self-sustained premier testing organization to conduct entrance examinations for Higher Education Institutions (HEIs) in the country.

### **Composition:**

- NTA will be chaired by an eminent educationist appointed by Ministry of Education
- The CEO will be the Director General to be appointed by the Government.
- There will be a Board of Governors comprising members from user institutions.
- The Director General will be assisted by 9 verticals headed by academicians/ experts.

**Finances:** NTA will be given a one-time grant of Rs.25 crore from the Government of India to start its operation in the first year. Thereafter, it will be financially self-sustainable.

# International Relations

## Millennium Challenge Corporation

**News:** Nepal's House of Representatives has ratified 500 million US Dollar grant assistance-Millennium Challenge Corporation (MCC) pact along with the "interpretative declaration".

### What is Millennium Challenge Corporation?

- The MCC was founded in 2004 as a US foreign aid agency that acts in accordance with governments that have demonstrated a commitment to good governance, economic freedom, and citizen investment.
- It was envisioned as an organisation that would follow the Paris Declaration on Aid Effectiveness' key principles. MCC works with countries that have been identified as being eligible for assistance to develop programmes that are based on MCC's purpose of decreasing poverty via economic growth.
- MCC's results framework, which is based on the fourth and fifth principles of the Paris Declaration, Results and Mutual Accountability. It provides a framework for applying the agency's rigorous methods for projecting, tracking, and evaluating the effects of its programmes.
- MCC uses this framework to address basic questions about aid effectiveness.
- Compact and threshold programmes are the two types of programmes in which MCC invests.
  - Compacts are large, five-year grants implemented by an accountable entity established by each partner nation.
  - Thresholds are smaller funds focusing on policy and institutional transformation in selected countries implemented by MCC.
- MCC's partnership with Nepal began in 2011, when the country requested assistance. MCC first chose Nepal for a smaller threshold grant, and subsequently in December 2014, for a larger compact.
- Three years later, in September 2017, the MCC-Nepal compact was signed, with the US committing \$500 million and Nepal committing \$130 million.
- Nepal is expected to generate an electricity infrastructure with 400kVA transmission lines through the MCC project, which will be used to distribute power both domestically and to India.
- Furthermore, the MCC's implementation could boost the Nepalese economy by increasing employment possibilities and increasing per capita income.

### Issues:

- It is estimated that if the agreement is not passed by Parliament, the power producers in the country are likely to lose a staggering Rs. 142 billion every year. As a result, PM Sher Bahadur Deuba is striving to get the MCC passed in Parliament as soon as possible, even if it means splitting the coalition government. In addition, if he fails to get it through Parliament, there is a possible risk of losing his international credibility.

### India's role:

- Few claim that the electricity generated by MCC will be only for export to India and will not be for the local public. As a result, it will not benefit the local economy directly.
- Nepal's hydroelectric generation potential is huge, with over 6,000 large and small rivers.
- However, through a series of barrages and dams, India has control over the majority of Nepal's major rivers.
- Nationalists in the Himalayan country have strongly objected to this.
- In Nepal, where India is still perceived as a meddling big brother, its goal of strengthening India's military capabilities through this agreement to counter China's was questioned.

## Montreux Convention

**News:** Turkey is set to implement the Montreux Convention, an international convention on naval passage through two of its strategic straits, which would allow them to limit the movement of Russian warships between the Mediterranean Sea and the Black Sea.

### About Montreux Convention:

- The Montreux Convention Regarding the Regime of the Straits, often known simply as the Montreux Convention, is an international agreement governing the Bosphorus and Dardanelles Straits in Turkey.
- Signed on 20 July 1936 at the Montreux Palace in Switzerland, it went into effect on 9 November 1936 and addressed the long-running Straits Question over who should control the strategically vital link between the Black and Mediterranean Seas.

### Present scenario:

- In the event of a war, the pact gives Ankara the right to regulate the transit of naval warships and to block the straits to warships belonging to the countries involved in the conflict.
- Turkey's foreign minister said that the situation in Ukraine had become a war. This declaration authorises Ankara to activate the Montreux Convention and ban Russian war vessels from entering the Black Sea through the Bosphorus and Dardanelles straits.
- The Bosphorus and Dardanelles straits, also known as the Turkish Straits or the Black Sea Straits, connect the Aegean Sea and the Black Sea via the Sea of Marmara.
- It is the only passage through which the Black Sea ports can access the Mediterranean and beyond.
- Over three million barrels of oil, about three per cent of the daily global supply, mostly produced in Russia, Azerbaijan, and Kazakhstan, pass through this waterway every day.
- The route also ships large amounts of iron, steel, and agricultural products from the Black Sea coast to Europe and the rest of the world.
- Russia's location on the Black Sea complicates the situation. Article 19 of the treaty contains an exception for the countries on the Black Sea that can effectively undermine Turkey's power in blocking the Russian warships entering or exiting the Black Sea: "Vessels of war belonging to belligerent powers, whether they are Black Sea Powers or not, which have become separated from their bases, may return thereto," it says.
- That means warships can return to their original bases through the passage and Turkey cannot prevent it.



## Economic Sanctions on Russia

**News:** A shift is taking place in the business of global dominance and hegemony, from the model of expressing force through troop presence to financial sanctions. It is led by the US and has become recently visible in the US and EU sanctions on Russia.

### Background:

- Sanctions are designed by the government and implemented by both profit-making and non-profit private enterprises, domestic and international NGOs (including the United Nations).
- From rule-bound globalism, there is a move to an understanding of the management of individual economies, bound together by multiple networks of investment and trade.
- This is a global economy of individual rivalries between countries and corporations, continually shifting alliances, and contingencies overtaking assumed structural certainties.
- A system of licencing: In Afghanistan, financial manipulations from afar in the form of sanctions may result in subjecting trading activities and investment ventures to the approval of the US Treasury through a system of licencing.
- This may give the US a say in who trades with whom, but already China has found ways of working with or around US sanctions in several countries, including Iran.

- Another way of exerting control from afar is through the confiscation of foreign exchange reserves in American banks.
- Following the withdrawal of the American troops on August 15, the US froze Afghanistan's foreign exchange reserves of \$7 billion deposited in the New York Federal Bank.

### Issues with sanctions

- Sanctions offer economic lever to China in its dealings with the Taliban, to the Chinese state-owned enterprises and private corporations with an opportunity to invest in Afghanistan's infrastructure, linking it to the Belt and Road project, and in its rich mineral resources of copper, cobalt, and lithium.
- China could also use this as an opportunity to unite investments in Afghanistan and Pakistan, isolating India.
- China and Russia, in concert, may provide a way out of the sanctions regime.
- Russian military and political escalation to re-institute control over former Soviet regions, including Ukraine, Belarus, and Kazakhstan, and the rapprochement between China and Russia against the West, may open up new possibilities for China in Middle Eurasia.
- Banning Russia from the SWIFT system of international payments is a problem for the global financial system. The Russian economy is more isolated, protected and less reliant on international funding than was the Afghan economy.
- The impact of any disruption in Russian exports of oil, gas, palladium, wheat and fertiliser at a time when those prices are barely recovering from inflationary pressures caused by Covid-19 disruptions, is likely to offset any leverage the Western sanctions may hope to gain.

## International Court of Justice

**News:** Recently, Ukraine has filed an application before the International Court of Justice (ICJ), instituting proceedings against Russia. Ukraine has accused Russia of falsely claiming that "acts of genocide have occurred in the Luhansk and Donetsk oblasts of Ukraine", and of using that as a pretext to recognise the independence of these regions and of going to war against Ukraine. The dispute is concerning 1948 Convention on the Prevention and Punishment of the Crime of Genocide (the "Genocide Convention").

### What is the International Court of Justice?

- The ICJ is the principal judicial organ of the United Nations (UN). It is the only one of the six principal organs of the UN that is not located in New York City.
- It was established in June 1945 by the Charter of the UN and began work in April 1946.
- The court is the successor to the Permanent Court of International Justice (PCIJ), which was brought into being through, and by, the League of Nations.
- PCIJ held its inaugural sitting at the Peace Palace in The Hague, Netherlands, in February 1922.
- After World War II, the League of Nations and PCIJ were replaced by the UN and ICJ respectively.
- The PCIJ was formally dissolved in April 1946, and its last president, Judge José Gustavo Guerrero of El Salvador, became the first president of the ICJ.
- Its role is to settle, in accordance with international law, legal disputes submitted to it by States and to give advisory opinions on legal questions referred to it by authorized UN organs and specialized agencies.
- The first case, which was brought by the UK against Albania and concerned incidents in the Corfu channel — the narrow strait of the Ionian Sea between the Greek island of Corfu and Albania on the European mainland — was submitted in May 1947.
- The judges of the court are assisted by a Registry, the administrative organ of the ICJ.
- All members of the UN are automatically parties to the ICJ statute, but this does not automatically give the ICJ jurisdiction over disputes involving them. The ICJ gets jurisdiction only if both parties consent to it.
- The judgment of the ICJ is final and technically binding on the parties to a case. However, the ICJ has no way to ensure compliance of its orders, and its authority is derived from the willingness of countries to abide by them.

### What is Genocide Convention?

- The Convention on the Prevention and Punishment of the Crime of Genocide (Genocide Convention) is an instrument of international law that codified for the first time the crime of genocide.



- The Genocide Convention was the first human rights treaty adopted by the General Assembly of the UN on 9 December 1948. It signified the international community's commitment to 'never again' after the atrocities committed during the Second World War.
- Its adoption marked a crucial step towards the development of international human rights and international criminal law as we know it today. According to the Genocide Convention, genocide is a crime that can take place both in time of war as well as in time of peace.
- The definition of the crime of genocide, as set out in the Convention, has been widely adopted at both national and international levels, including in the 1998 Rome Statute of the International Criminal Court (ICC).
- Importantly, the Convention establishes on State Parties the obligation to take measures to prevent and to punish the crime of genocide, including by enacting relevant legislation and punishing perpetrators, "whether they are constitutionally responsible rulers, public officials or private individuals" (Article IV).
- That obligation, in addition to the prohibition not to commit genocide, have been considered as norms of international customary law and therefore, binding on all States, whether or not they have ratified the Genocide Convention. India is a signatory to this convention.

## War Crime

**News:** The International Criminal Court (ICC) in The Hague announced that it would open an investigation into possible war crimes or crimes against humanity in Ukraine.

### What are War Crimes?

- War crimes are defined as serious violations of humanitarian laws during a conflict. There are specific international standards for war crimes, which are not to be confused with crimes against humanity.
- The definition is established by the Rome Statute of the International Criminal Court (ICC).
- It is derived from the 1949 Geneva Conventions and is based on the idea that individuals can be held liable for the actions of a state or its military. There is a long list of acts that can be considered war crimes.
- The taking of hostages, willful killings, torture or inhuman treatment of prisoners of war, and forcing children to fight are some of the more obvious examples.
- To decide whether an individual or a military has committed a war crime, international humanitarian law lays down three principles:
  - This principle says that you have to be constantly trying to distinguish between civilian and belligerent populations and objects.
  - It prohibits armies from responding to an attack with excessive violence. If a soldier is killed, for example, you cannot bomb an entire city in retaliation.
  - It requires parties to a conflict to avoid or minimize the harm done to the civilian population. For example, attacking a barrack where there are people who have said they no longer participate in the conflict can be a war crime.
- The UN Office on Genocide Prevention and the Responsibility to Protect separates war crimes from genocide and crimes against humanity. War crimes are defined as occurring in a domestic conflict or a war between two states. However, genocide and crimes against humanity can happen in peacetime or during the unilateral aggression of a military towards a group of unarmed people.
- In practice, there is a lot of gray area within that list. The laws of war do not always protect civilians from death. Not every civilian death is necessarily illegal.
- Raids on a cities or villages, bombing residential buildings or schools, and even the killing of groups of civilians do not necessarily amount to war crimes — not if their military necessity is justified.
- The same act can become a war crime if it results in unnecessary destruction, suffering and casualties that exceed the military gain from the attack. Also, civilian and military populations have become increasingly hard to distinguish

## AIIB Sanctions on Russia and Belarus

**News:** Asian Infrastructure Investment Bank (AIIB) has put all activities relating to Russia and Belarus on hold and under review in the wake of the current conflict in Ukraine. The AIIB referred to the situation as "war in

Ukraine”, the closest to “invasion” that any Chinese government-affiliated institution has until now described the situation in the east European country.

**Details:**

- After years of life in a growing, globally connected economy, Russians find themselves in a country increasingly unplugged from the world.
- Following President Vladimir Putin’s invasion of Ukraine, a sweeping wave of sanctions by the European Union and the U.S. has combined with an exodus of foreign companies and investors, leaving Russia more isolated and economically restricted.
- For several days, long lines formed near ATMs around Russia as people rushed to withdraw cash — both foreign currency and rubles — amid fears of a breakdown in electronic banking.
- The value of the ruble has plummeted to a record low, less than 1 cent, as many people watched their savings erode. The Kremlin has banned all Russians from transferring foreign currency abroad and ordered exporters to exchange 80% of their foreign currency proceeds for rubles.
- On social media, Russian shoppers are noting early price increases for some products, particularly electronics and appliances. Many people in Russia who work for foreign companies have been anxious about being able to receive pay, as the first batch of key Russian banks has been booted from the interbank SWIFT system to target oil and gas profits.
- International artists and cultural organizations have also imposed their own restrictions.
- Impact on oil prices: Russia is not only the world’s third biggest oil (after the US and Saudi Arabia) and the second biggest natural gas (after the US) producer, besides the No. 3 coal exporter (behind Australia and Indonesia). Russia is the largest exporter of wheat in the world

**What is AIIB?**

- Asian Infrastructure Investment Bank (AIIB) is a multilateral development bank with a mission to improve social and economic outcomes in Asia and beyond.
- The Parties (57 founding members) to agreement comprise the Membership of the Bank.
- It is headquartered in Beijing. The bank started operation after the agreement entered into force on 25 December 2015, after ratifications were received from 10 member states holding a total number of 50% of the initial subscriptions of the Authorized Capital Stock.
- By investing in sustainable infrastructure and other productive sectors today, it aims to connect people, services and markets that over time will impact the lives of billions and build a better future.
- There are more than 100 members now.
- China is the largest shareholder with 26.61 % voting shares in the bank followed by India (7.6%), Russia (6.01%) and Germany (4.2 %). The regional members hold 75% of the total voting power in the Bank.
- The Board of Governors consists of one Governor and one Alternate Governor appointed by each member country. Governors and Alternate Governors serve at the pleasure of the appointing member.
- Non-resident Board of Directors is responsible for the direction of the Bank’s general operations, exercising all powers delegated to it by the Board of Governors.
- The Bank has established an International Advisory Panel (IAP) to support the President and Senior Management on the Bank’s strategies and policies as well as on general operational issues.

## Iran Nuclear Deal

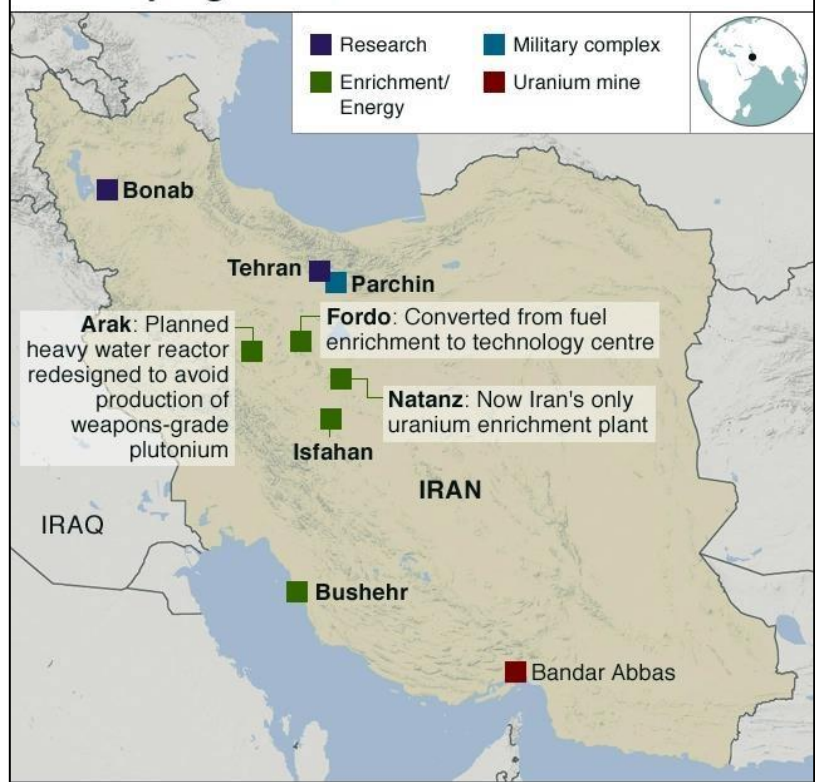
**News:** Recently, the diplomats from Iran and world powers reconvened in Vienna (Austria) to seek a deal reviving Iran’s (Tehran’s) 2015 Nuclear Accord. The 2015 Iran nuclear deal, signed under President Barack Obama, and dismantled in 2018 by President Donald Trump. The US said it will rejoin the agreement if Iran complies with the terms of the original deal, and if it addresses other issues related to alleged ballistic missile stockpiles and the proxy conflicts that it backs across the region.

**Details:**

- The deal, formally known as Joint Comprehensive Plan of Action (JCPOA).
- The JCPOA was the result of prolonged negotiations from 2013 and 2015 between Iran and P5+1 (China, France, Russia, the United Kingdom, the United States + Germany).

- Under the deal, Iran agreed to significantly cut its stores of centrifuges, enriched uranium and heavy-water, all key components for nuclear weapons. Iran also agreed to implement a protocol that would allow inspectors from the International Atomic Energy Agency (IAEA) to access its nuclear sites to ensure Iran would not be able to develop nuclear weapons in secret.
- While the West agreed to lift sanctions related to Iran's nuclear proliferation, other sanctions addressing alleged abuses of human rights and Iran's ballistic missile programme remained in place.
- The US committed to lifting sanctions on oil exports, but continued to restrict financial transactions, which have deterred international trade with Iran. Nonetheless, Iran's economy, after suffering years of recessions, currency depreciation, and inflation, stabilized significantly after the deal took effect, and its exports skyrocketed.
- Israel, America's closest ally in the Middle East, strongly rejected the deal, and other countries like Iran's great regional rival Saudi Arabia, complained that they were not involved in the negotiations even though Iran's nuclear programme posed security risks for every country in the region.
- After Trump abandoned the deal and reinstated banking and oil sanctions, Iran ramped up its nuclear programme in earnest, returning to approximately 97% of its pre-2015 nuclear capabilities.

### Changes agreed under Iran deal to limit nuclear programme



#### What happened after the US pulled out of the deal?

- In April 2020 the US announced its intention to snap back sanctions. However, the other partners objected to the move, stating that since the US was no longer part of the deal, it could not unilaterally reimpose sanctions. Initially following the withdrawal, several countries continued to import Iranian oil under waivers granted by the Trump administration. A year later, the US ended the waivers to much international criticism and, by doing so, significantly curbed Iran's oil exports.
- The other powers, in an attempt to keep the deal alive, launched a barter system known as INSTEX to facilitate transactions with Iran outside the US banking system. However, INSTEX only covered food and medicine, which were already exempt from US sanctions. In January 2020, after the US assassinated the top Iranian general Qasem Soleimani, Iran announced that it would no longer limit its uranium enrichment.

#### Challenges:

- The regional cold war between Saudi Arabia and Iran is a major hurdle to the restoration. The US and Saudi Arabia have strengthened their relationship per US's Middle East policy and to counter Iran as well.
- The traditional Shia vs Sunni conflict between these countries has made it difficult to negotiate peace in the region. Iran is currently in violation of several of its important commitments, such as the limits on stockpiles of enriched uranium, and the farther it goes, the more challenging the deal becomes.
- Iran is blaming US sanctions for its economic losses due to the Trump administration's pullout from the deal and imposing sanctions again.

#### Significance:

- Removing sanctions may revive India's interest in the Chabahar port, Bandar Abbas port, and other plans for regional connectivity. This would further help India to neutralize the Chinese presence in Gwadar port, Pakistan.

- Apart from Chabahar, India's interest in the International North-South Transit Corridor (INSTC), which runs through Iran, which will improve connectivity with five Central Asian republics, may also get a boost.
- Due to the pressure linked to the US' Countering America's Adversaries Through Sanctions Act (CAATSA), India has to bring down oil imports to zero. Restoration of ties between the US and Iran will help India to procure cheap Iranian oil and aid in energy security.

## India abstained from voting in UNHRC

**News:** Recently, India abstained on a vote at the UN Human Rights Council in Geneva. The Council moved the resolution to set up an international commission of enquiry into Russia's actions in Ukraine.

### Details:

- The move is significant in the terms that the vote followed even after India's meeting with Quad countries.
- India has also abstained from similar resolutions in the United Nations General Assembly and United Nations Security Council.
- India also abstained from the International Atomic Energy Agency (IAEA) resolution that was related to safety at four nuclear power stations and a number of nuclear waste sites including Chernobyl, as the Russians seized control of them.

### What is the UN Human Rights Council?

- The Human Rights Council is an inter-governmental body within the United Nations system responsible for strengthening the promotion and protection of human rights around the world.
- The Council was created by the United Nations General Assembly in 2006. It replaced the former United Nations Commission on Human Rights. The Office of the High Commissioner for Human Rights (OHCHR) serves as the Secretariat of the Human Rights Council. OHCHR is headquartered in Geneva, Switzerland.
- It is made up of 47 United Nations Member States which are elected by the UN General Assembly (UNGA).
- The UNGA takes into account the candidate States' contribution to the promotion and protection of human rights, as well as their voluntary pledges and commitments in this regard.
- The Council's Membership is based on equitable geographical distribution. Seats are distributed as follows:
  - African States: 13 seats
  - Asia-Pacific States: 13 seats
  - Latin American and Caribbean States: 8 seats
  - Western European and other States: 7 seats
  - Eastern European States: 6 seats
- Members of the Council serve for a period of three years and are not eligible for immediate re-election after serving two consecutive terms.

### Procedures and Mechanisms:

- Universal Periodic Review serves to assess the human rights situations in all United Nations Member States.
- Advisory Committee serves as the Council's "think tank" providing it with expertise and advice on thematic human rights issues.
- Complaint Procedure allows individuals and organizations to bring human rights violations to the attention of the Council.
- UN Special Procedures are made up of special rapporteurs, special representatives, independent experts and working groups that monitor, examine, advise and publicly report on thematic issues or human rights situations in specific countries.

### Issues:

- Related to the Membership: A key concern for some critics has been the composition of Council membership, which sometimes includes countries widely perceived as human rights abusers.
- China, Cuba, Eritrea, Russia and Venezuela, all of which have been accused of human rights abuses.
- Disproportionate Focus: US pulled out of the Agency in 2018 due to its disproportionate focus on Israel, which has received by far the largest number of critical council resolutions against any country.
- The US has joined the organization again.



## India and UN Human Rights Council:

- Recently, a group of Special Rapporteurs to the United Nations (UN) has written to the Indian government expressing concerns over the draft Environment Impact Assessment (EIA) notification 2020.
- In 2020, India's National Human Rights Commission submitted its mid-term report to the Council as a part of the third round of the Universal Periodic Review (UPR) process.
- India was elected to the Council for a period of three years beginning 1st January 2019.

## No-Fly Zone

**News:** The North Atlantic Treaty Organization (NATO) Secretary General stated that the organisation would not designate the Ukrainian airspace as a 'No Fly Zone' which he said would lead to a full-fledged war in Europe, involving many more countries and resulting in greater human suffering.

### What is a No-Fly Zone?

- In simple terms, a No-Fly Zone refers to a particular airspace wherein aircraft, excluding those permitted by an enforcement agency, are barred from flying.
- Articles under Chapter VII of the United Nations Charter dealing with Action with Respect to Threats to the Peace, Breaches of the Peace, and Acts of Aggression' are invoked to authorise a potential no-fly zone.
- Article 39 dictates the United Nations Security Council (UNSC) to determine the probable existence of any threat to peace or an act of aggression. It suggests further measures, if required, are to be carded out in accordance to Article 41 and 42 to restore international peace and security.
- No fly zones have been implemented without UN mandate too.
- In 1991 after the first Gulf War, U.S. and its coalition partners imposed two no fly zones over Iraq to prevent Saddam Hussain from attacking ethnic groups. In non-combat situations, No fly zones can be imposed permanently and temporarily over sensitive installations or for high profile events like Olympics.

### Feasibility of 'No fly zone over Ukraine:

- No-fly zone declarations are essentially a compromise in situations demanding a response to ongoing violence, but full military intervention is politically untenable.
- NATO has previously imposed No-Fly Zones in non-member states like Libya and Bosnia. With Russia it fears a full-fledged war in Europe. It has been demanding that NATO scale back to the pre-1997 arrangements. Both Russia and Ukraine are not members of NATO.
- Due to this the idea of imposing a no-fly zone' over Ukraine has been rejected outright. If implemented, it means NATO deploying aircraft and assets which would result in a direct confrontation with Russia.

### Implications:

- The UNSC had banned all flights in the Libyan airspace post adoption of Resolution 1973 in 2011 in response to the Libyan Civil War. Member states were asked to deny permission to any Libyan registered aircraft to use the territory without requisite approval.
- Further, the member states could bar any entity from flying if they found reasonable grounds to believe the aircraft is ferrying lethal or non-lethal military equipment.
- Member states were permitted to allow flights whose sole purpose was humanitarian, such as delivery of medical supplies and food, chauffer humanitarian workers and related assistance, or evacuating foreign nationals from the territory.

## BBIN Motor Vehicle Agreement

**News:** With Bhutan continuing to sit out the Motor Vehicles Agreement (MVA) of the sub-regional Bangladesh-Bhutan-India-Nepal (BBIN) grouping, a meeting of the other three countries was held to discuss the next steps in operationalizing the agreement for the free flow of goods and people between them.

### Bangladesh, Bhutan, India, Nepal (BBIN)

- BBIN Initiative is a sub-regional architecture of countries in Eastern South Asia, a sub-region of South Asia.

- The group meets through the official representation of member states to formulate, implement and review quadrilateral agreements across areas such as water resources management, connectivity of power, transport, and infrastructure.

### **What is Motor Vehicles Agreement (MVA)?**

- India, Nepal, Bhutan and Bangladesh signed a Motor Vehicles Agreement (MVA) for the Regulation of Passenger, Personal and Cargo Vehicular Traffic among the four South Asian neighbours.
- It was signed on 15 June 2015 at the BBIN transport ministers meeting in Thimpu, Bhutan.
- The act will facilitate a way for a seamless movement of people and goods across their borders for the benefit and integration of the region and its economic development.
- Cargo vehicles will be able to enter any of the four nations without the need for trans-shipment of goods from one country's truck to another's at the border.
- The agreement would permit the member states to ply their vehicles in each other's territory for transportation of cargo and passengers, including third-country transport and personal vehicles.
- As per the agreement each vehicle would require an electronic permit to enter another country's territory, and border security arrangements between nations' borders will also remain.
- Vehicles are fitted with an electronic seal that alerts regulators every time the container door is opened.

### **Implementation:**

- The agreement will enter into force after it is ratified by all four member nations. The agreement has been ratified by Bangladesh, India and Nepal. The lower house of the Bhutanese parliament approved the agreement in early 2016, but it was rejected by the upper house in November 2016.
- Bhutan has requested for a cap to be fixed on the number of vehicles entering its territory
- India remains "hopeful" that Bhutan could change its position on the project, it was decided at a meeting in November 2021 to go ahead for now, given that there are no new signals from Thimphu on the project.
- Progress on the seven-year-old project has been slow, despite several trial runs being held along the Bangladesh-India-Nepal road route for passenger buses and cargo trucks.
- There are still some agreements holding up the final protocols.

## **Temporary Protection Directive**

**News:** Over 1.5 million people fled Ukraine in the first 10 days of fighting, according to the United Nations High Commissioner for Refugees, which has described the displacement as the "fastest growing refugee crisis since the Second World War". Responding to the crisis, EU Member States on March 3 made the unprecedented decision to activate the European Union's Council Directive 2001/55/EC of 20 July 2001, known as the Temporary Protection Directive (TPD). The war in Ukraine is the first time that the EU has invoked the TPD. It is being seen as another sign of European unity against Russia.

### **What is TPD?**

- The European Commission describes "temporary protection" under the TPD as an "exceptional measure to provide immediate and temporary protection to displaced persons from non-EU countries and those unable to return to their country of origin".
- The directive applies when "there is a risk that the standard asylum system is struggling to cope with demand stemming from a mass influx risking a negative impact on the processing of claims".
- Having proper standards will reduce the disparities between the policies of European Union (EU) countries on the treatment of potential refugees during mass influx.
- The standards also promote burden-sharing among EU countries regarding receiving a large number of displaced persons in a short duration and bearing the consequences of receiving such persons.
- After the end of the cold war and the disintegration of the USSR, Europe witnessed multiple armed conflicts. Due to these conflicts, many people got displaced and sought refuge in other countries. Thus, European Union (EU) brought Temporary Protection Directive in 2001 to address the situation of a mass influx of displaced persons.
- Obligations on EU countries:
  - The directive gives certain rights to the beneficiaries of temporary protection. They include:
  - A residence permit for the duration of the protection (1-3 years).

- Access to jobs, housing, social welfare, medical treatment, education for minors.
- Opportunities for families to reunite in some circumstances.
- Guarantees for access to the normal asylum procedure.

## Biological and Toxin Weapons Convention

**News:** India has emphasized on following the Biological and Toxin Weapons Convention (BTWC) at the UNSC meeting on Ukraine.

### Details:

- The meeting came after a request from Russia, who claimed that the US is involved in bioweapon manufacture in war-torn Ukraine. However, Washington has strongly dismissed this claim.
- The Biological and Toxin Weapons Convention (BTWC) was the first multilateral treaty categorically banning a class of weapon. It is a treaty that came into force in 1975 and prohibits the development, production, acquisition, transfer, stockpiling and use of biological weapons.
- A total of 183 countries are party to the treaty that outlaws bioweapons, including US, Russia and Ukraine.
- The treaty prohibits the development, stockpile, production, or transfer of biological agents and toxins of “types and quantities” that have no justification for protective or peaceful use.
- Furthermore, the treaty bans the development of weapons, equipment, or delivery systems to disseminate such agents or toxins. Should a state possess any agent, toxin, or delivery system for them, they have nine months from entry into force of the treaty to destroy their stockpiles, or divert them for peaceful use.
- The convention stipulates those states shall cooperate bilaterally or multilaterally to solve compliance issues.
- States may also submit complaints to the UNSCR should they believe another state is violating the treaty.
- There is no implementation body of the BTWC, allowing for blatant violations as seen in the past.
- There is only a review conference that too every five years to review the convention’s implementation, and establish confidence-building measures.

## Geneva Conventions Guidelines

**News:** As the evidence of casualties in the civilian population continues to mount, the world will increasingly look to the Geneva Conventions in the Russia-Ukraine conflict.

### Background:

- These are a set of four treaties, formalized in 1949, and three additional protocols, which codify widely accepted ethical and legal international standards for humanitarian treatment of those impacted by war.
- The focus of the Conventions is the:
  - Treatment of non-combatants and prisoners of war, and
  - Not the use of conventional or biological and chemical weapons

### What are the four Geneva Conventions?

- **First Geneva Convention: Health and Medical Issues**
  - It protects wounded and sick soldiers on land during war.
  - This convention extends to medical and religious personnel, medical units, and medical transport.
  - It has two annexes containing a draft agreement relating to hospital zones and a model identity card for medical and religious personnel.
- **Second Geneva Convention: Offshore Protection**
  - It protects wounded, sick and shipwrecked military personnel at sea during war.
  - This convention also extends to hospital ships and medical transports by sea, with specific commentary on the treatment and protections for their personnel.
- **Third Geneva Convention: Treatment of Prisoners of War (PoW)**
  - It applies to prisoners of war, including a wide range of general protections such as humane treatment, maintenance and equality across prisoners, conditions of captivity, questioning and evacuation of prisoners, transit camps, food, clothing, medicines, hygiene and right to religious, intellectual, and physical activities of prisoners.

- Fourth Geneva Convention: Civilian protection of occupied territory
  - It particularly applies to the invasion of Ukraine by Russian military forces.
  - It protects civilians, including those in occupied territory.
  - Comprising 159 articles, it outlines the norms for this critical dimension of conflict.

#### **Present context:**

- Along with the Additional Protocols of 1977, the Fourth Convention expounds upon the:
  - General protection of populations against certain consequences of war
  - Conduct of hostilities and the status and
  - Treatment of protected persons
  - Distinguishing between the situation of foreigners on the territory of one of the parties to the conflict and that of civilians in occupied territory
- This convention also spells out the obligations of the occupying power vis-à-vis the civilian population and outlines detailed provisions on humanitarian relief for populations in occupied territory.

## **Most Favoured Nation status**

**News:** US and other members of the Group of Seven (G7) will revoke Russia's "Permanent Normal Trade Relations (PNTR)" status to punish Russia for war over Ukraine. The move would pave the way for the US to impose tariffs on a wide range of Russian goods, heightening pressure on an economy on the brink of deep recession.

#### **What is PNTR?**

- The status of Permanent Normal Trade Relations (PNTR) is a legal designation in the United States for free trade with a foreign nation. In the United States, the name was changed from Most Favored Nation (MFN) to PNTR in 1998.

#### **What is MFN Status?**

- World Trade Organization (WTO) members commit to treating other members equally so they can all benefit from each other's lowest tariffs, highest import quotas and fewest trade barriers for goods and services.
- This principle of non-discrimination is known as Most Favoured Nation (MFN) treatment.
- This is one of the measures which ensures trade without discrimination. Another one is 'National Treatment'.
- Article 1 of the General Agreement on Tariffs and Trade (GATT), 1994, requires every WTO member country to accord MFN status to all other member countries.
- There are some exceptions, such as when members strike bilateral trade agreements or when members offer developing countries special access to their markets.
- For countries outside the WTO, such as Iran, North Korea, Syria or Belarus, WTO members can impose whatever trade measures they wish without flouting global trading rules.
- In international trade, MFN status (or treatment) is awarded by one nation to another.
- For example, India accorded MFN status to all WTO member countries, including Pakistan, from the date of entry into force of the so called Marrakesh Agreement, establishing the WTO.
- A nation with MFN status will not be discriminated against and will not be treated worse than any other nation with MFN status. Grant someone a special favour (such as a lower customs duty rate for one of their products) and you have to do the same for all other WTO members.
- There is no formal procedure for suspending MFN treatment and it is not clear whether members are obliged to inform the WTO if they do so. India suspended Pakistan's MFN status in 2019 after a suicide attack by a Pakistan-based Islamist group killed 40 police. Pakistan never applied MFN status to India.

#### **Implication of Revocation:**

- Revoking Russia's MFN status sends a strong signal that the United States and its Western allies do not consider Russia a economic partner in any way, but it does not in itself change conditions for trade.
- It does formally allow the Western allies to increase import tariffs or impose quotas on Russian goods, or even ban them, and to restrict services out of the country.
- They could also overlook Russian intellectual property rights. Ahead of MFN status removal, the United States had already announced a ban on imports of Russian oil and gas.



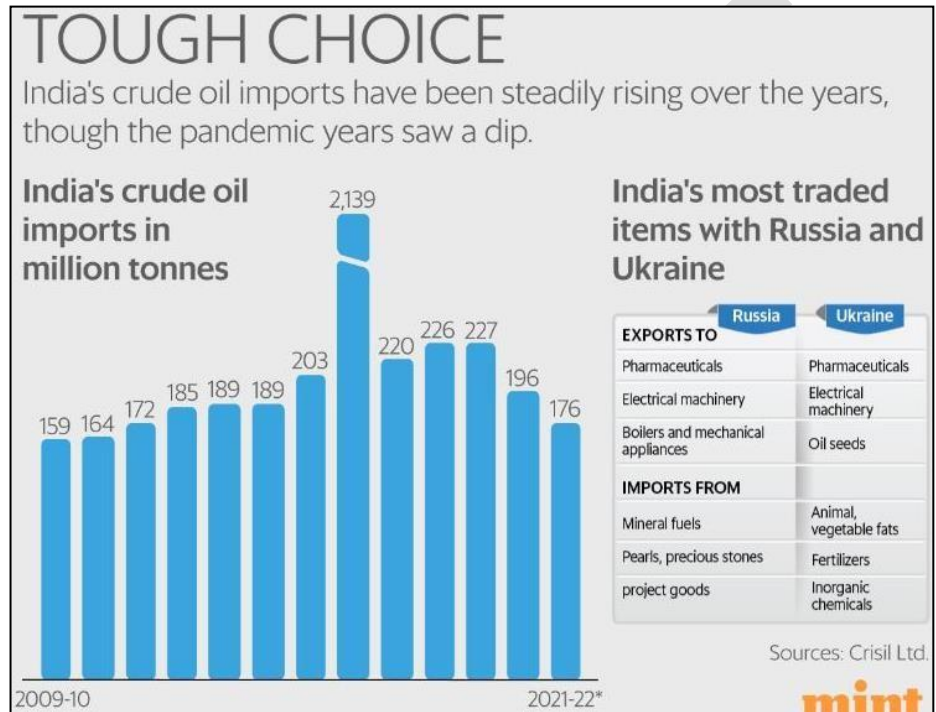
- Further, the European Union has already banned about 70% of all imports, such as tobacco, potash and products made of wood or steel, from non-WTO member Belarus (Russia's ally in war with Ukraine).

## Import of Russian Crude Oil

**News:** The Indian Oil Corporation (IOC), Hindustan Petroleum Corporation Ltd (HPCL) has bought two million barrels of Russian crude oil as Indian energy majors forge ahead with attempts to secure a part of the Russian energy supply.

### Details:

- India is exploring alternative payment channels for trade with Russia and the possibility of sourcing additional oil at a discount, even as the West reduces its exposure to Russian oil. Now India needs to make some necessary adjustments in the financial front because of the challenges posed by the American sanctions.
- India is heavily dependent on oil imports, the bulk of which comes from the Middle East, Africa, Europe, North America, South America, and South-East Asia.
- Russia's oil-related exports to India are only about \$1 billion.
- However, Russia is keen to scale this up even as the US has announced a ban on oil imports from the country and the UK has adopted a more gradual reduction.
- This offers the opportunity for a lucrative supply deal with the second largest oil exporter after Saudi Arabia.
- India's nuclear power project in Kudankulam in Tamil Nadu is built with Russian collaboration.
- India, however, needs to find alternative payment channels due to the evolving crisis. This is also crucial for bilateral non-oil trade.



### Risks associated:

- Western curbs cutting off some Russian banks from the SWIFT payment system has proven to be a setback for bilateral trade.
- Many payments worth \$500 million to Indian exporters for goods already shipped reportedly being stuck.
- A steady supply of critical commodities such as fuel and fertilizer from Europe is crucial in India's efforts to manage inflation. A spike in natural gas in global markets is pushing up the cost of procuring commonly used urea, which is sold at a subsidized price to farmers.
- As much as 85% of India's oil requirement is met through imports. The government has tried diversifying its supply sources. This would add more gas into the energy basket, giving a strong push to electric mobility, building strategic reserves and blending ethanol in auto fuel to reduce oil import dependence. Extra oil supplies from Russia could aid in this effort.

### Present scenario:

- India and Russia are exploring a Rupee-Rouble trade mechanism using currency of a third country as a reference. This would allow Indian exporters to be paid in rupees.
- This would need an Indian and a Russian bank opening shop on each other's soil.

- Another option is routing payments via a bank with limited overseas exposure so that it will not attract curbs.
- For additional Russian oil shipments, India needs access to more vessels and containers.
- Indian refiners' ability to process larger quantities of crude oil also needs to be assessed.
- New Delhi has for long followed the policy of acquiring energy assets abroad to reduce risks related to heavy import dependence on oil. Oil and Natural Gas Corp. Ltd's investment in Russia's Sakhalin project is one example. Besides, Russian company PJSC Rosneft Oil Co. is a stakeholder in Nayara Energy Ltd that runs the second largest single-site refinery in Gujarat.

## Finlandization

**News:** The French President, Emmanuel Macron has suggested Finlandization might be possible outcome for Ukraine if at all the Russia-Ukraine war ends.

### What does Finlandization mean?

- It refers to the policy of strict neutrality between Russia and the West which Finland followed during the era of Cold war. The principle of neutrality was rooted in the Agreement of Friendship, Cooperation, and Mutual Assistance (or YVA Treaty) that Finland signed with the USSR in April 1948.

### What does the YVA treaty imply?

- Article 1 of the treaty reads: "In the eventuality of Finland, or the Soviet Union through Finnish territory, becoming the object of an armed attack by Germany or any state allied with the latter (meaning, essentially, the United States), Finland will, true to its obligations as an independent state, fight to repel the attack.
- Finland will in such cases use all its available forces for defending its territorial integrity by land, sea, and air, and will do so within the frontiers of Finland in accordance with obligations defined in the present agreement and, if necessary, with the assistance of or jointly with, the Soviet Union.
- Thus, The Soviet Union will give Finland the necessary help it requires, subject to mutual agreement between the contracting parties.

### What would Finlandization mean for Ukraine?

- Ukraine, former part of Soviet Union, has increasingly drifted towards the West, economically and politically, while resisting Russian influence. Finlandization will allow Moscow a heavy hand in Ukrainian affairs. It eventually will result in going against what Ukraine has been advocating for, that is joining NATO and EU.

### Way Forward

- Just as any other sovereign nation, Ukraine must also have the right to independently choose its economic and political associations. However, Ukraine can learn a lesson or two from Finland which continues to pursue fierce independent policies including cooperation with the West but without increasing hostility towards Russia.

## BRICS Media Forum

**News:** Leading media groups from the five BRICS countries (Brazil, Russia, India, China and South Africa) have put together a three-month long training programme for journalists.

### About BRICS Media Forum:

- The Forum was established in 2015 by media organisations from the five countries, including The Hindu, Brazil's CMA Group, Russia's Sputnik, China's Xinhua and South Africa's Independent Media.
- The Forum was "conceived and developed so that it can function as an independent initiative and set of practical activities undertaken within the broad framework of BRICS cooperation".

### About BRICS:

- The acronym "BRICS" was initially formulated in 2001 by economist Jim O'Neill, of Goldman Sachs, in a report on growth prospects for the economies of Brazil, Russia, India and China – which together represented a significant share of the world's production and population.

- The grouping was formalised during the first meeting of BRIC Foreign Ministers in 2006.
- South Africa was invited to join BRIC in December 2010, after which the group adopted the acronym BRICS.

### Key Initiatives:

- Establishing the New Development Bank (NDB)
- BRICS contingency reserve agreement to provide short-term liquidity to members

### Significance

- The BRICS nation comprises of 42% of world's population, 30% of land area, 24% of global Gross Domestic Product and 16% of international trade.
- They call for reform of multilateral institutions such that they reflect the structural changes in world economy.
- While it has already established the NDB, provided financial stability net in the form of Contingency reserve agreement. Now, it is on the verge of setting up a Vaccine research and Development Virtual centre.

## BIMSTEC

**News:** The Bay of Bengal initiative for Multi-Sectoral Technical and Economic cooperation (BIMSTEC) grouping's fifth summit took place in Colombo, Sri Lanka.

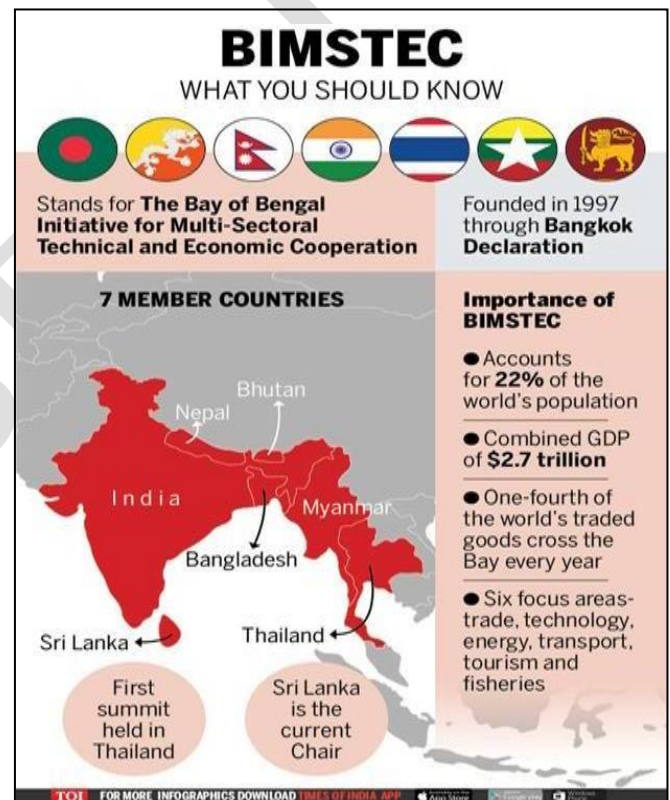
The summit saw the declaration of the Master Plan for Transport Connectivity that would provide a framework for regional and domestic connectivity.

### Highlights of the Summit:

- Signing of the BIMSTEC charter was main outcome of the summit where members are expected to meet once every two years.
- The summit saw the declaration of the Master Plan for Transport Connectivity that would provide a framework for regional and domestic connectivity.
- Member countries also signed a treaty on mutual legal assistance on criminal matters.
- The leaders of the member-countries have agreed to divide the working of the grouping into seven segments, with India providing leadership to the security pillar.

### Way Forward:

- BIMSTEC paves way for regional integration and to a certain extent is looked upon as an alternative to SAARC. BIMSTEC countries had supported India's call for a boycott of the SAARC summit schedules in Islamabad in 2016.
- The recent summit is a step towards the right direction, however much needs to be done to realise its true potential. A need for finalisation of BIMSTEC Free Trade Agreement among countries can be useful as it will act as bridge of connectivity, prosperity. Also, there is necessity for evolving a coastal shipping ecosystem and electricity grid connectivity.



# General Studies – 3

## **Economic Development**

1. Indian Economy and issues relating to planning, mobilization, of resources, growth, development and employment.
2. Inclusive growth and issues arising from it.
3. Government Budgeting.
4. Major crops-cropping patterns in various parts of the country, - different types of irrigation and irrigation systems storage, transport and marketing of agricultural produce and issues and related constraints; e-technology in the aid of farmers.
5. Issues related to direct and indirect farm subsidies and minimum support prices; Public Distribution System- objectives, functioning, limitations, revamping; issues of buffer stocks and food security; Technology missions; economics of animal-rearing.
6. Food processing and related industries in India- scope' and significance, location, upstream and downstream requirements, supply chain management.
7. Land reforms in India.
8. Effects of liberalization on the economy, changes in industrial policy and their effects on industrial growth.
9. Infrastructure: Energy, Ports, Roads, Airports, Railways etc.
10. Investment models.

## **Technology**

11. Science and Technology- developments and their applications and effects in everyday life.
12. Achievements of Indians in science & technology; indigenization of technology and developing new technology.
13. Awareness in the fields of IT, Space, Computers, robotics, nano-technology, bio-technology and issues relating to intellectual property rights.

## **Environment & Bio-diversity**

14. Conservation, environmental pollution and degradation, environmental impact assessment.

## **Disaster Management & Security**

15. Disaster and disaster management.
16. Linkages between development and spread of extremism.
17. Role of external state and non-state actors in creating challenges to internal security.
18. Challenges to internal security through communication networks, role of media and social networking sites in internal security challenges, basics of cyber security; money-laundering and its prevention.
19. Security challenges and their management in border areas - linkages of organized crime with terrorism.
20. Various Security forces and agencies and their mandate.



# Economic Development

## Market Infrastructure Institution

**News:** Recently, Securities and Exchange Board of India (SEBI) noted that the National Stock Exchange (NSE), the country's largest equities and derivatives exchange is a systemically important market infrastructure institution (MII).

### What are MIIs?

- Stock exchanges, depositories and clearing houses are all Market Infrastructure Institutions and constitute a key part of the nation's vital economic infrastructure. According to a panel set up (in 2010) under the chairmanship of former Reserve Bank of India Governor Bimal Jalan, the term 'market infrastructure' denotes such fundamental facilities and systems serving this capital market.
- The primary purpose of the securities /capital market is to enable allocation/reallocation of capital/financial resources. MIIs help in optimal use of money in the economy and fostered economic development. They constitute the nucleus of the capital allocation system and are indispensable for economic growth and have a net positive effect on society like any other infrastructure institution.

### Why are they considered to be systemically important?

- MIIs are systemically important in India is clear from the phenomenal growth of these institutions in terms of market capitalization of listed companies, capital raised and the number of investor accounts and the value of assets held in the depositories' account. Any failure of such an MII could lead to even bigger cataclysmic collapses that may result in an overall economic downfall that could potentially extend beyond the boundaries of the securities market and the country.
- Given the potential for a domino effect that a failure of an MII could have on the wider market and economy, governance and oversight are absolutely critical and need to be of the highest standards.

### Some Indian Institutions qualifying for MII:

- Among stock exchanges, the SEBI lists seven, including the BSE, the NSE, the Multi Commodity Exchange of India and the Metropolitan Stock Exchange of India.
- There are two depositories — charged with the safekeeping of securities and enabling their trading and transfer — that are tagged MIIs: the Central Depository Services Ltd. and the National Securities Depository Ltd. The regulator also lists seven clearing houses including the Multi Commodity Exchange Clearing Corporation. Clearing houses, for their part, help validate and finalise securities trades and ensure that both buyers and sellers honour their obligations.

### What is the National Stock Exchange?

- The National Stock Exchange of India Limited (NSE) is India's largest financial market.
- Incorporated in 1992, the NSE has developed into a sophisticated, electronic market, which ranked fourth in the world by equity trading volume.
- NSE was the first exchange in India to provide modern, fully automated electronic trading.
- The NSE is the largest private wide-area network in India.
- The NIFTY 50 is the flagship index on the National Stock Exchange of India Ltd. (NSE).
- The Index tracks the behaviour of a portfolio of blue chip companies, the largest and most liquid Indian securities. It includes 50 of the approximately 1600 companies listed on the NSE.

## PFRDA's MARS

**News:** The Pension Fund Regulatory and Development Authority (PFRDA) has proposed a guaranteed return scheme, Minimum Assured Return Scheme (MARS), which will provide savers and people from the salaried class an option for their investments. This will be the first scheme from the pension regulator that will offer a guaranteed return to investors. India's pension assets under management have already crossed the Rs 7-lakh crore mark and are expected to touch RS 7.5-lakh crore by end March this fiscal 2021-22. PFRDA is aiming for an AUM (Assets Under Management) of Rs 30-lakh crore by 2030.

### Details:

- To have a separate scheme that can offer a guaranteed minimum rate of return to NPS (National Pension System) subscribers, especially those who are risk averse.
- Currently, the NPS gives returns annually, based on prevailing market conditions.
- The actual returns will depend on the market conditions. Any shortfall will be made good by the sponsor, and the surplus will be credited to the subscribers' account.
- Under the fixed guarantee option, the guaranteed return is fixed along the accumulation phase.
- Under the floating guarantee option, the guaranteed rate of return is not fixed along the savings phase.
- The floating guarantee depends on the development of the 1-year interest rate until retirement.
- The Lock-in may be applicable on each contribution, and will be applied based on the period since that contribution has been made. It may also consider multiple lock-in period options (or staggered guarantee periods) for flexibility.
- Withdrawals are likely to be directly linked to the lock-in period. The subscriber may have the option to withdraw or to stay invested after the lock-in period. However, there won't be any guarantee applied on the investment after lock-in.
- Minimum and maximum monetary limits on contributions may be prescribed. The attraction for investors will be the minimum guaranteed return.

### What is the National Pension System?

- The Central Government introduced the NPS with effect from January 2004 (except for armed forces).
- In 2018 to streamline the NPS and make it more attractive, the Union Cabinet approved changes in the scheme to benefit central government employees covered under NPS.
- NPS is implemented and regulated by PFRDA. National Pension System Trust (NPST) established by PFRDA is the registered owner of all assets under NPS.
- NPS is structured into two tiers:
  - Tier-I account: This is the non-withdrawable permanent retirement account into which the accumulations are deposited and invested as per the option of the subscriber.
  - Tier-II account: This is a voluntary withdrawable account which is allowed only when there is an active Tier I account in the name of the subscriber.
- The withdrawals are permitted from this account as per the needs of the subscriber as and when claimed.
- NPS was made available to all Citizens of India from May 2009. Any individual citizen of India (both resident and Non-resident) in the age group of 18-65 years can join NPS.
- However, OCI (Overseas Citizens of India) and PIO (Person of Indian Origin) card holders and Hindu Undivided Family (HUFs) are not eligible for opening of NPS accounts.

### Pension Fund Regulatory and Development Authority

- It is the statutory Authority established by an enactment of the Parliament, to regulate, promote and ensure orderly growth of the National Pension System (NPS). It works under the Department of Financial Services under the Ministry of Finance. It performs the function of appointing various intermediate agencies like Pension Fund Managers, Central Record Keeping Agency (CRA) etc.
- It develops, promotes and regulates the pension industry under the NPS and also administers the APY.

## Amendment in FDI Policy

**News:** Recently, the Union Cabinet cleared an amendment to the FDI Policy to allow Foreign Direct Investment (FDI) up to 20% under the "automatic route" in Life Insurance Corporation (LIC) ahead of its proposed Initial Public Offer (IPO).

### Details:

- The government expects to mobilize Rs 63,000-66,000 crore from the proposed share sale to meet its disinvestment target of Rs 78,000 crore for FY 2021-22. LIC is fully owned by the government. It was set up in 1956. It has the biggest share in India's insurance business.

- In most contexts, disinvestment typically refers to sale from the government, partly or fully, of a government-owned enterprise. A company or a government organisation will typically disinvest an asset either as a strategic move for the company, or for raising resources to meet general/specific needs.
- At present, the FDI policy does not prescribe any specific provision for foreign investment in LIC which is a statutory corporation established under LIC Act, 1956. The policy permits FDI in insurance companies and intermediaries or insurance intermediaries in the insurance sector.
- The FDI ceiling for public sector banks is 20% on the government approval route.
- While the government had last year raised the FDI limit in the insurance sector to 74% from 49%, it did not cover LIC that is governed by a specific legislation.
- Since LIC does not fall in any of these categories and no limit is prescribed for foreign investment in LIC under the LIC Act, the government has decided to allow foreign investment up to 20% for LIC and other corporate bodies. In order to expedite the capital raising process, such FDI has been kept on the automatic route, as is in the case of the rest of the insurance sector.

**Significance:**

- The reform in the FDI policy will facilitate foreign investment in LIC and other corporate bodies, for which the government may have a requirement for disinvestment purposes. The change in the FDI policy for LIC will ensure that foreign investors do not face any hurdles while subscribing for the public offer.
- The reform will also facilitate ease of doing business and lead to greater FDI inflows, and at the same time, ensure alignment with the overall intent or objective of FDI policy.
- Increased FDI inflows will supplement domestic capital, technology transfer, skill development for accelerated economic growth and development across sectors, to support the implementation of Atmanirbhar Bharat. Allowing FDI will ensure that foreign portfolio investors are able to purchase shares in the secondary market. It also sends a positive signal to investors.

**Inland Waterways**

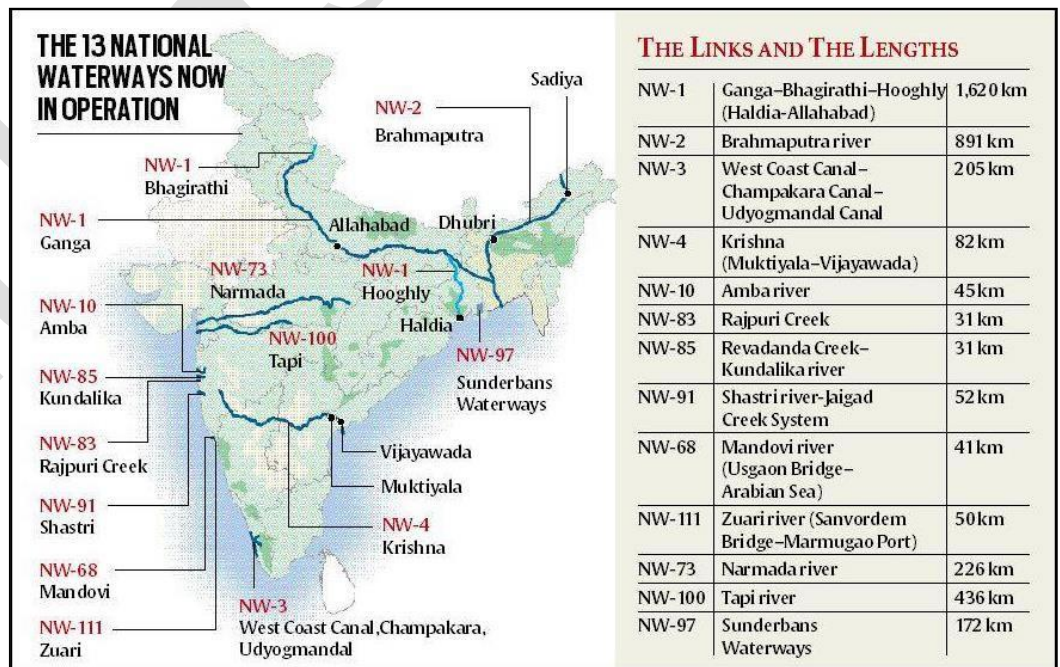
**News:** Recently, the Union Minister of Ports, Shipping & Waterways received the maiden voyage of food-grains from Patna to Pandu port via Bangladesh in Guwahati (Assam).

**Background:**

- Inland Waterways Authority of India (IWAI) is planning to run a fixed schedule sailing between NW1 and NW2 heralding a new age of inland water transport for Assam & the Northeast India.
- The Inland Vessels Bill, 2021, was also approved to regulate safety, security and registration of inland vessels.

**What is the Significance of this Achievement?**

- The start of cargo movement through ships through Indo Bangladesh Protocol Route (IBRP) marks the beginning of a new age of economic prosperity for the whole region of Northeast.
- This will pave the way for growth & development of inland water transport.



- This will also provide the business community a viable, economic & ecological alternative and will also play a pivotal role in energising India's northeast as the engine of growth. The sustained effort to rejuvenate the historical trade routes via Bangladesh got a fillip under PM Gati Shakti.
- It has been envisioned that Northeast will slowly turn & convert into a connectivity hub.
- The integrated development plan, under PM Gati Shakti, has been envisioned in order to amp up swift movement of cargo over Brahmaputra.

#### **Inland Waterways:**

- India has about 14,500 km of navigable waterways which consist of rivers, canals, backwaters, creeks, etc.
- As per the National Waterways Act 2016, 111 waterways have been declared as National Waterways (NWs).
- NW-1: Ganga-Bhagirathi-Hooghly River System (Prayagraj-Haldia) with length 1620 km is the longest National Waterway in India.
- The Inland Waterways Authority of India (IWAI) is implementing the Jal Marg Vikas Project (JMVP) for capacity augmentation of navigation on the Haldia-Varanasi stretch of Ganga (part of NW-1) with the technical and financial assistance of the World Bank.
- The waterways have also been proposed to be linked to the eastern and western Dedicated Freight Corridors (DFCs), as well as the Sagarmala Project, which aims to promote port-led direct and indirect development. Further, the provisions of the Indo-Bangladesh (Sonamura-Daudkandi) and Indo-Myanmar protocol (Kaladan) permitting transshipment of goods through Bangladesh and Myanmar waters – which, in many cases, are a continuum of India's inland waterways – enabling quicker shipments and deeper market penetration in India's North East.
- About 55 million tonnes of cargo is being moved annually by IWT (Inland Water Transport), a fuel-efficient and environment-friendly mode. However, freight transportation by waterways is highly underutilized in the country as compared to developed countries.
- Its operations are currently restricted to a few stretches in the Ganga-Bhagirathi-Hooghly rivers, the Brahmaputra, the Barak river (northeastern India), the rivers in Goa, the backwaters in Kerala, inland waters in Mumbai and the deltaic regions of the Godavari - Krishna rivers.
- Besides these organized operations by mechanized vessels, country boats of various capacities also operate in various rivers and canals and substantial quantum of cargo and passengers are transported in this unorganized sector as well.
- In India, IWT has the potential to supplement the overburdened railways and congested roadways. In addition to cargo movement, the IWT sector also provides a convenient function in related activities such as carriage of vehicles {on Roll-on-Roll-off (Ro-Ro) mode of cross ferry} and tourism.

#### **Advantages:**

- Waterways are a cheaper mode of transportation vis-à-vis the available alternatives, significantly reducing the point-to-point cost of goods transportation. It also reduces time, cost of transportation of goods and cargos, as well as congestion and accidents on highways. The network requires no green field investment, but only capex (capital expenditure) for improvement/upgradation.
- They are expected to also “help create seamless interconnectivity connecting hinterlands along navigable river coasts and coastal routes” and “are likely to play a crucial role in connecting the north-eastern states to the mainland.”

#### **Challenges:**

- Some rivers are seasonal and do not offer navigability through the year. Around 20 out of the 111 identified national waterways have reportedly been found unviable.
- All the identified waterways require intensive capital and maintenance dredging, which could be resisted by the local community on environmental grounds, including displacement fears, thereby posing implementation challenges. Water also has important competing uses, viz. need for living as well as for irrigation, power generation etc. It would not be possible for the local government/others to overlook these needs. The exclusive jurisdiction of the Central Government is only in regard to shipping and navigation on inland waterways declared to be ‘national waterways’ by an act of Parliament.
- Utilisation/sailing of vessels, in other waterways, is within the ambit of the concurrent list or is in the jurisdiction of the respective state governments.



## Equalisation Levy

**News:** Justifying the 2 per cent equalisation levy (EL) imposed by India on the supply of services by multinational enterprises, finance minister Nirmala Sitharaman has said it is a sovereign right to tax revenues earned from operations in the country.

### Equalisation Levy:

- India was the one of the first countries to introduce a 6 per cent equalisation levy in 2016, but the levy was restricted to online advertisement services.
- However, India introduced the digital tax in April 2020 for foreign companies selling goods and services online to customers in India and showing annual revenues more than INR 20 million.
- India has expanded the scope of the equalisation levy over the last few years, to tax non-resident digital entities. While the levy applied only to digital advertising services till 2019-20 at the rate of 6 percent, the government in April 2020 widened the scope to impose a 2 per cent tax on non-resident e-commerce players with a turnover of Rs 2 crore.
- The scope was further widened in the Finance Act 2021-22 to cover e-commerce supply or service when any activity takes place online. Since May 2021, this also includes any entity that systematically and continuously does business with more than 3 lakh users in India.
- Offshore e-commerce firms that sell through an Indian arm will not have to pay. This means if the goods and services sold on a foreign e-commerce platform are owned or provided by an Indian resident or Indian permanent establishment, they will not be subject to the two percent equalization levy.
- The equalisation levy was imposed “to give level playing field between Indian businesses who pay tax in India and foreign e-commerce companies who do business in India but do not pay any income tax here.
- France imposes a three percent digital services tax. In the ASEAN region, Singapore, Indonesia, and Malaysia impose a digital service tax with Thailand announcing forthcoming plans to tax its foreign digital service providers.

### Stand of US:

- First, it states that the DST discriminates against US digital businesses because it specifically excludes from its ambit domestic (Indian) digital businesses.
- USTR also says the DST is discriminatory because it does not extend to identical services provided by non-digital service providers.

### India's Stand:

- Business models employed by non-resident digital service providers obviate the need for a physical presence in India and profits earned here could easily escape the Indian income tax net. Hence, this kind of taxation is necessary.
- Changing International Economic Order: Countries such as India which provide large markets for digital corporations seek a greater right to tax incomes.

### Associated Concerns:

- Eventually the tax may become a burden for Digital Consumers.
- It could invite retaliatory tariffs (such as the latest one), as similar tariffs were imposed by the US on France. It would also result in double taxation.

## Start-Up Village Entrepreneurship Program

**News:** Recently, the National Institute of Entrepreneurship and Small Business Development (NIESBUD) has signed a Memorandum of Understanding (MoU) with the Ministry of Rural Development (MoRD) to develop a sustainable model for promoting entrepreneurship at the grass roots by initiating the Start-up Village Entrepreneurship Programme (SVEP).

### Details:

- Rural entrepreneurs will be able to access banking systems for receiving financial support for starting their enterprises, including support from MUDRA bank.

- Integrated ICT techniques and tools will also be provided for training and capacity building along with enterprise advisory services to augment the entrepreneurship ecosystem in India's villages.
- The beneficiaries of the project are from the Self-Help Group (SHG) ecosystem of DAY-NRLM and the scheme not only supports existing enterprises but new enterprises as well.
- The partnership will enable the rural community by helping them set up their trades and provide complete support till they are stabilised.
- This pragmatic intervention will provide knowledge, advisory and financial support to the public and will help create village-level community cadre.

#### **About SVEP:**

- SVEP is a sub-scheme of the Deendayal Antyodaya Yojana-National Rural Livelihood Mission (DAY-NRLM), Ministry of Rural Development and has been implemented since 2016.
- Its key objectives are:
  - Support the rural poor to come out of poverty.
  - Providing self-employment opportunities with financial assistance and training in business management and soft skills.
  - Create local community cadres for promotion of enterprises.
- It addresses three major pillars of rural start-ups namely finances, incubation and skill ecosystems.
- It promotes both individual and group enterprises, majorly in manufacturing, trading and service sectors.
- It invests on building the capacities of the entrepreneurs to run the businesses profitably based on the local demand and ecosystem. Investments are also made on the use of the Information and Communication Technology (ICT) to create standard E-learning modules for minimizing the transmission loss in technical aspects like a business plan and profit and loss account preparations.
- Activities under SVEP are strategically designed to promote rural enterprises with a few key areas.
- One of the key areas is to develop a pool of Community Resource Persons-Enterprise Promotion (CRP-EP) who are local and support entrepreneurs setting-up rural enterprises.
- Another key area is to promote the Block Resource Center (BRC) in SVEP blocks, to monitor and manage the community resource persons, appraise SVEP loan applications and act as the repository of enterprise-related information in the concerned block.
- BRCs play the role to support a sustainable revenue model to operate effectively and independently.
- SVEP established local markets/rural haat which motivated entrepreneurs to take up demand-based production, advertise their enterprise and increase earning opportunities.
- A typical rural haat is mostly indigenous, flexible and multi-layered structure which accommodates the economic activities of various nature.
- Local market/haat/bazaar serves as an important economic platform where a range of products is traded.

#### **Achievements:**

- A mid-term review of SVEP which was conducted in September 2019 by Quality Council of India shows about 82% of the sampled entrepreneurs across the blocks reported being from SC, ST and OBC categories which signifies social inclusion - one of the pillars of NRLM.
- 75% of the enterprises were owned and managed by women and average monthly revenue of enterprises was Rs.39,000 - Rs.47,800 in case of manufacturing, Rs. 41,700 in case of services and Rs.36,000 in case of trading. The study also shows that about 57% of the total household income of the entrepreneurs is through SVEP enterprises.

## **National Land Monetisation Corporation**

**News:** The Union Cabinet has approved the setting up of a new government-owned firm National Land Monetisation Corporation (NLMC) for pooling and monetizing sovereign and public sector land assets.

#### **What is NLMC?**

- The National Land Monetisation Corporation (NLMC) is being formed with an initial authorised share capital of ₹5,000 crore and paid-up capital of ₹150 crore.

- The government will appoint a chairman to head the NLMC through a “merit-based selection process” and hire private sector professionals with expertise.
- The NLMC will undertake monetization of surplus land and building assets of Central public sector enterprises (CPSEs) as well as government agencies.

**National Land Monetization Corporation (NLMC)**

**Benefits:**

- NLMC will **undertake monetization of surplus land and building** assets of CPSEs and other Government agencies
- Will help generate substantial revenues by **monetizing unused and under-used assets**

#### Functions:

- NLMC will own, hold, manage and monetise surplus land and building assets of CPSEs under closure and surplus non-core land assets of Government-owned CPSEs under strategic disinvestment.
- This will speed up the closure process of CPSEs and smoothen the strategic disinvestment process of Government-owned CPSEs, the statement said. NLMC will undertake surplus land asset monetisation as an agency function, and assist and provide technical advice to the Centre in this regard.
- The NLMC board will comprise senior Government officers and eminent experts, while its chairman and non-Government directors will be appointed through a merit-based selection process, the statement said.
- The Corporation will have minimal full-time staff, hired directly from the market on a contract basis.
- CPSEs have referred around 3,400 acres of land and other non-core assets to the Department of Investment and Public Asset Management (DIPAM) for monetisation.
- Monetisation of non-core assets of MTNL, BSNL, BPCL, BEML, HMT, is currently at various stages of the transaction, as per latest data in the Economic Survey 2021-22.

#### Significance:

- The government would be able to generate substantial revenues by monetizing unused and under-used assets. The new corporation will also help carry out monetization of assets belonging to public sector firms that have closed or are lined up for a strategic sale.

## MSME Innovation Scheme

**News:** Recently, the Ministry of MSME (Medium, Small and Micro Enterprises) has launched the MSME Innovative Scheme (Incubation, Design and IPR) along with the MSME IDEA HACKATHON 2022.

#### Details:

- It is the combination of existing sub-schemes around incubation, design, and Intellectual Property Rights (IPR) for MSMEs. The government also announced equity support of up to Rs 1 crore for commercialisation of ideas, designs and patents across all three sub-schemes and also to help MSMEs further scale up to raise subsequent funding. For this, a separate corpus will be created and managed by SIDBI (Small Industries Development Bank of India) as the fund manager.
- SIDBI set up on 2<sup>nd</sup> April 1990 under an Act of Indian Parliament, acts as the Principal Financial Institution for Promotion, Financing and Development of the MSME sector as well as for co-ordination of functions of institutions engaged in similar activities. The new scheme will ensure support through guidance, financial support, technical support, and more to MSMEs to scale up.
- The new scheme would act as a hub for innovation activities facilitating and guiding the development of ideas into viable business propositions that can benefit society directly and can be marketed successfully.

#### Components:

- The primary objective of the scheme is to promote and support untapped creativity and to promote adoption of latest technologies in MSMEs that seek the validation of their ideas at the proof-of-concept level.
- As part of the incubation scheme, the government announced the launch of an MSME Idea Hackathon to invite ideas from MSMEs, innovators and students through host institutes.

- Financial assistance up to Rs. 15 lakh per idea and up to Rs. 1.00 crore for relevant plants and machines will be provided.
- The objective of this component is to bring the Indian manufacturing sector and Design expertise/ Design fraternity on to a common platform.
- It aims to provide expert advice and cost-effective solutions on real time design problems for new product development, its continuous improvement and value addition in existing/new products.
- IPR (Intellectual Property Rights): The objective of the scheme is to improve the IP culture in India with a view to enhance the awareness of Intellectual Property Rights (IPRs) amongst the MSMEs and to encourage creative intellectual endeavor in the Indian economy.
- It also aims to take suitable measures for the protection of ideas, technological innovation and knowledge-driven business strategies developed by the MSMEs for their commercialization and effective utilization of IPR tools through IP Facilitation Centre.
- Financial assistance upto Rs. 5 lakh for Foreign Patent, Rs. 1.00 lakh Domestic Patent, Rs. 2.00 lakh for GI (Geographical Indication) Registration, Rs. 15,000/- for Design Registration, Rs.10,000/- for Trademark in the form of reimbursement.

## Dollar-Rupee Swap

**News:** Recently, the Reserve Bank of India (RBI) conducted a USD 5 billion dollar-rupee swap auction as part of its liquidity management initiative. This move will lead to infusion of dollars and sucking out of the rupee from the financial system. This will reduce the pressure on inflation and strengthen the rupee.

### What is a Dollar-Rupee Swap auction?

- It's a forex tool whereby the central bank uses its currency to buy another currency or vice versa. Dollar-Rupee Buy/Sell Swap: The central bank buys dollars (US dollars or USD) from banks in exchange for Indian Rupees (INR) and immediately gets into an opposite deal with banks promising to sell dollars at a later date.
- When the central bank sells dollars, it sucks out an equivalent amount in rupees, thus reducing the rupee liquidity in the system. These swap operations carry no exchange rate or other market risks as transaction terms are set in advance.
- The RBI sold USD 5.135 billion to banks and simultaneously agreed to buy back the dollars at the end of the swap settlement period. The intent here is that the central bank acquires dollars from the seller, charging the lowest premium possible for the two-year tenor.
- Accordingly, banks that bid at the lower range of the auction are successful at the auction.
- Assuming a dollar rate of Rs 75, the system liquidity will shrink by Rs 37,500 crore.

### Significance in present scenario:

- Surplus liquidity in the system is pegged at Rs 7.5 lakh crore, which needs to be curbed to keep a tab on inflation. Usually, the central bank will resort to traditional tools such as increasing the repo rate or increasing the Cash Reserve Ratio (CRR), but this can have a negative implication on the economy.
- This negative implication can be seen in incomplete transmission of monetary policy.
- Therefore, the RBI used a different toolkit - Variable Rate Reverse Repo Auction (VRRR) last year.
- However, the recent VRRR auctions were undersubscribed by banks, as the cash market offered instant and better yields, forcing the RBI to consider a longer-term liquidity adjustment tool such as forex auctions.

### Impact:

- The major impact will be that liquidity which currently averages around Rs 7.6 lakh crore will shrink.
- Dollar inflow into the market will strengthen the rupee which has already hit the 77 level against the dollar.
- The RBI normally brings down liquidity in the system when inflation threatens to rise sharply. Inflation is set to rise due to following factors:
- With crude oil prices rising sharply in the wake of the Russia-Ukraine war, inflation is set to rise in the coming days.
- Foreign portfolio investors have been pulling out funds from India. They have withdrawn Rs 34,000 crore from Indian stocks in March 2022 so far, putting severe pressure on the rupee.



## Model Tenancy Act

**News:** The long-awaited Chandigarh Tenancy Act will now be in queue for enactment by the Parliament. The UT administration has decided to send the proposed Act, based on Centre's Model Tenancy Act, 2021, to the Union government for approval and enactment.

### Background:

- The Union Cabinet, in June 2021, approved the Model Tenancy Act (MTA). States and Union territories can now adopt the Model Tenancy Act by enacting fresh legislation or they can amend their existing rental laws suitably.

### Highlights of the Model Law:

- Applicable prospectively and will not affect the existing tenancies. Written agreement is a must for all new tenancies. The agreement will have to be submitted to the concerned district 'Rent Authority'.
- The law also speaks about roles and responsibilities of landlord and tenants.
- No landlord or property manager can withhold any essential supply to the premises occupied by the tenant.
- If tenancy has not been renewed, the tenancy shall be deemed to be renewed on a month-to-month basis on the same terms and conditions as were in the expired tenancy agreement, for a maximum period of six months.
- Compensation in case of non-vacancy: On the expiry of extended period of six months of agreed tenancy period or the termination of tenancy by order or notice, the tenant shall be a tenant in default and liable to pay compensation of double of the monthly rent for two months and four times of the monthly rent thereafter.
- A landowner or property manager may enter a premise in accordance with written notice or notice through electronic medium served to the tenant at least twenty-four hours before the time of entry.

### Significance:

- It is an important piece of legislation that promises to ease the burden on civil courts, unlock rental properties stuck in legal disputes, and prevent future tangles by balancing the interests of tenants and landlords.
- Young, educated job seekers migrating to large metropolises often complain of onerous tenancy conditions and obscene sums of money as security deposits that they are asked to fork out to lease accommodation. In some cities, tenants are asked to pay security deposits amounting to 11 months of rent.
- Also, some house owners routinely breach tenants' right to privacy by visiting the premises unannounced for sundry repair works. Whimsical rent raises are another problem for tenants, many of whom complain of being squeezed as "captive customers".
- Besides, Tenants are often accused of "squatting" on the rented premises, or trying to grab the property.

## Scheme for Strengthening Pharmaceutical industry

**News:** Recently, the Ministry of Chemicals and Fertilizers has released the guidelines for the scheme "Strengthening of Pharmaceutical Industry (SPI)", with a total financial outlay of Rs.500 Cr for the period from FY 21-22 to FY 25-26.

### Details:

- Under the Scheme, financial assistance to pharma clusters will be provided for creation of Common Facilities.
- In order to upgrade the production facilities of SMEs and MSMEs (Micro, Small and Medium Enterprises) so as to meet national and international regulatory standards (World Health Organization-Good Manufacturing Practice (WHO-GMP) or Schedule-M), interest subvention or capital subsidy on their capital loans will be provided, which will further facilitate the growth in volumes as well as in quality.
- WHO-GMP is the aspect of quality assurance that ensures that medicinal products are consistently produced and controlled to the quality standards appropriate to their intended use and as required by the

product specification. Schedule M of drugs and cosmetics rules define the GMP requirements for the pharmaceutical industry in India.

#### **Components:**

- Assistance to Pharmaceutical Industry for Common Facilities (APICF), to strengthen the existing pharmaceutical clusters' capacity for their sustained growth by creating common facilities.
- Under this, support for clusters for creation of common facilities with the focus on R&D (Research and Development) Labs, Testing Laboratories, Effluent Treatment Plants, Logistic Centers and Training Centres in this order of priority with an outlay of 178 Cr is proposed.
- Pharmaceutical Technology Upgradation Assistance Scheme (PTUAS) to facilitate Micro, Small and Medium Pharma Enterprises (MSMEs) of proven track record to meet national and international regulatory standards.
- Under the PTUAS sub-scheme, support for SME Industries is proposed, either through up to a maximum of 5% per annum (6% in case of units owned and managed by SC/STs) of interest subvention or through Credit linked Capital subsidy of 10%.
- An outlay of 300 Cr has been earmarked for sub scheme for the scheme period of five years.
- Pharmaceutical & Medical Devices Promotion and Development Scheme (PMPDS) to facilitate growth and development of Pharmaceutical and Medical Devices Sectors through study/survey reports, awareness programs, creation of databases, and promotion of industry.
- Under the PMPDS sub-scheme, knowledge and awareness about the Pharmaceutical and MedTech Industry will be promoted.

#### **Significance:**

- It will strengthen the existing infrastructure facilities and will make India a global leader in the Pharma Sector. This will not only improve the quality but also ensure the sustainable growth of clusters.
- The scheme will address the rising demand in terms of support required to existing Pharma clusters and MSMEs across the country to improve their productivity, quality and sustainability.

## **Retail Inflation**

**News:** India's retail inflation inched up to an eight-month high of 6.07% in February from 6.01% in January, with rural India experiencing a sharper price rise at 6.38%.

#### **Details:**

- When we generally talk about retail inflation, it often refers to the rate of inflation based on the consumer price index (CPI). The CPI tracks the change in retail prices of goods and services which households purchase for their daily consumption. The CPI monitors retail prices at a certain level for a particular commodity; price movement of goods and services at rural, urban and all-India levels.
- The change in the price index over a period of time is referred to as CPI-based inflation, or retail inflation.

#### **What is 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. 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. The base year for CPI is 2012.
- To calculate CPI, multiply 100 to the fraction of the cost price of the current period and the base period.

#### **Significance:**

- Generally, CPI is used as a macroeconomic indicator of inflation, as a tool by the central bank and government for inflation targeting and for inspecting price stability, and as deflator in the national accounts.

- CPI also helps understand the real value of salaries, wages, and pensions, the purchasing power of the nation's currency, and regulating rates. CPI, one of the most important statistics to ascertain economic health, is generally based on the weighted average of the prices of commodities.
- It basically gives an idea of the cost of the standard of living.

## Guidelines for Microfinance Institutions

**News:** Recently, the Reserve Bank of India (RBI) allowed Microfinance Institutions (MFI) the freedom to set interest rates they charge borrowers, with a caveat that the rates should not be usurious. The guidelines will take effect 1<sup>st</sup> April 2022. Earlier in 2021, the RBI proposed to lift the interest rate cap on MFI.

### Details:

- The RBI revised the definition of a microfinance loan to indicate a collateral-free loan given to a household having annual income of up to Rs. 3 lakh. Earlier, the upper limits were Rs.1.2 lakh for rural borrowers and Rs.2 lakh for urban borrowers.
- As per the revised norms, Regulated Entities (REs) should put in place a board-approved policy regarding pricing of microfinance loans, a ceiling on interest rate and all other charges applicable to microfinance loans.
- Each RE shall disclose pricing-related information to a prospective borrower in a standardised, simplified factsheet.
- There shall be no prepayment penalty on microfinance loans. Penalty, if any, for delayed payment shall be applied on the overdue amount and not on the entire loan amount. Any change in interest rate or any other charge shall be informed to the borrower well in advance and these changes shall be effective only prospectively.
- RE would have to put in place a mechanism for identification of the borrowers facing repayment-related difficulties, engagement with such borrowers and providing them necessary guidance about the recourse available. To ensure due notice and appropriate authorisation, the RE will provide the details of recovery agents to the borrower while initiating the process of recovery.
- Guidelines will be applicable for:
  - All Commercial Banks (including Small Finance Banks, Local Area Banks, and Regional Rural Banks) excluding Payments Banks.
  - All Primary (Urban) Co-operative Banks/ State Co-operative Banks/ District Central Co-operative Banks.
  - All Non-Banking Financial Companies (including Microfinance Institutions and Housing Finance Companies).

### Benefits:

- The revision of the income cap to Rs. 3 lakh will expand the market opportunity and interest rate cap removal will promote risk-based underwriting.
- It will go a long way in harmonising the regulatory framework for different types of lenders, encouraging healthy competition and enabling customers to make an informed choice regarding their credit needs.
- The new framework will help scale the industry further, ensure better risk mitigation and financial inclusion.
- It will create a level playing field and both borrowers and lenders will now have options.
- It will safeguard the interests of the borrowers and help the sector to cater to the needy borrowers.

## Agristack

**News:** The government is working on a digital 'stack' of agricultural datasets, with its core as land records. But, such a centralised stack will use old and inaccurate land records; farmers' personal and financial details will be used without a strong data protection law; and rural areas have a low level of digital literacy. Hence, experts say such an 'AgriStack' is problematic.

## What is AgriStack?

- The AgriStack is a collection of technologies and digital databases proposed by the Central Government focusing on India's farmers and the agricultural sector. The central government has claimed that these new databases are being built to primarily tackle issues such as poor access to credit and wastage in the agricultural supply chain.
- Under AgriStack, the government aims to provide 'required data sets' of farmers' personal information to Microsoft to develop a farmer interface for 'smart and well-organized agriculture'.
- The digital repository will aid precise targeting of subsidies, services and policies, the officials added.
- Under the programme, each farmer of the country will get what is being called an FID, or a farmers' ID, linked to land records to uniquely identify them. India has 140 million operational farm-land holdings.

## Issues:

- Agriculture has become the latest sector getting a boost of 'techno solutionism' by the government.
- But it has, since then, also become the latest sector to enter the whole debate about data privacy and surveillance. Since the signing of the MoUs, several concerns related to sharing farmers' data with private companies are raised. The development has raised serious concerns about information asymmetry, data privacy and consent, profiling of farmers, mismanaged land records and corporatization of agriculture.
- The formation of 'Agristack' also implies commercialization of agriculture extension activities as they will shift into a digital and private sphere.
- The project was being implemented in the absence of a data protection legislation.
- It might end up being an exercise where private data processing entities may know more about a farmer's land than the farmer himself. Without safeguards, private entities would be able to exploit farmers' data to whatever extent they wish to. This information asymmetry, tilted towards the technology companies, might further exploit farmers, especially small and marginal ones.
- At present, the majority of farmers across India are small and marginal farmers with limited access to advanced technologies or formal credit that can help improve output and fetch better prices.
- Among the new proposed digital farming technologies and services under the programme include sensors to monitor cattle, drones to analyse soil and apply pesticide, may significantly improve the farm yields and boost farmers' incomes.

## Draft National Policy for Medical Devices 2022

**News:** The government is proposing a new Draft National Policy for Medical Devices, 2022 to reduce India's dependence on import of high-end medical devices.

### Background:

- In February 2020, the government notified changes in the Medical Devices Rules, 2017 to regulate medical devices on the same lines as drugs under the Drugs and Cosmetics Act, 1940.
- This was necessitated after revelations about faulty hip implants marketed by Johnson & Johnson, exposing the lack of regulatory teeth when it came to medical devices.
- The government said the transition from partial regulation of selected medical services to the complete regulation and licensing of all medical devices is underway.

### Details:

- Adopting public-private partnerships to reduce the cost of healthcare, drive efficiency, and aid quality improvements in medical devices manufactured in the country. The key proposals include the following.
- Incentivising the export of medical devices and related technology projects through tax rebates and refunds
- Increasing government spending in "high-risk" projects in the medical devices sector
- Single-window clearance system for licencing medical devices
- Pricing environment with no price control on newly developed innovation in the sector
- Allot a dedicated fund for encouraging joint research involving existing industry players, reputed academic institutions and start-ups
- Incorporate a framework for a coherent pricing regulation, to make available quality and effective medical devices to all citizens at affordable prices



- NPPA (National Pharmaceutical Pricing Authority) shall be strengthened with adequate manpower of suitable expertise to provide effective price regulation balancing patient and industry needs.
- Pharmaceuticals Department will also work with industry to implement a Uniform Code for Medical Device Marketing Practices (UCMDMP)

**Significance:**

- India’s medical devices sector has so far been regulated as per provisions under the Drugs and Cosmetics Act of 1940, and a specific policy on medical devices has been a long standing demand from the industry.
- The policy also aims to increase India’s per capita spend on medical devices. India has one of the lowest per capita spend on medical devices at \$3, compared to the global average of per capita consumption of \$47.
- With the new policy, the government aims to reduce India’s import dependence from 80 per cent to nearly 30 per cent in the next 10 years.
- It aims to become one of the top five global manufacturing hubs for medical devices by 2047.
- Indian players in the space have so far typically focussed on low-cost and low-tech products, like consumables and disposables, leading to a higher value share going to foreign companies.

## Social Security Exchanges

**News:** Government has come out in support of Securities and Exchange Board of India’s (SEBI) crackdown on unregistered advisors making stock-related suggestions on social media platforms.

**Background:**

- Many social media platforms including YouTube, Twitter, telegram where advisors which are not registered with SEBI are offering advice on stock markets. Now, SEBI is going to tighten its hold on such advisors as this often misleads the investors and harm the market.
- The proposal to set up SSEs in the country was first floated during the Union Budget in 2019.
- In September 2019, Sebi constituted a working group under the chairmanship of Tata group veteran Ishaat Hussain. In September 2020, Sebi set up the TG as it felt further expert advice and clarity was needed on the WG’s recommendation.

**Recommendations made by SEBI’s technical group (TG) on social stock exchanges (SSEs):**

- Both for-profit (FP) and not-for-profit organisations (NPO) should be allowed to tap the SSE provided they are able to demonstrate that social intent and impact.
- Corporate foundations, political and religious organisations should be made ineligible to raise funds using the SSE mechanism.
- For NPOs, it shall be equity, zero coupon zero principal bond (ZCZP), development impact bonds, social impact fund, currently known as social venture fund (SVP) with 100 per cent grants-in grants out provision, and donations by investors through mutual funds.
- For FP enterprises, it will be equity, debt, development impact bonds, and social venture funds.
- Minimum corpus size for such funds be reduced from Rs 20 crore to Rs 5 crore and the minimum subscription amount be reduced from Rs 1 crore to Rs. 2 lakh.
- It should have a corpus of Rs 100 crore. This fund should be housed under Nabard. Exchanges and other developmental agencies such as SIDBI should be asked to contribute towards this fund.

**ANOTHER SHOT AT SUCCESS**  
This is the second expert panel report on setting up SSEs in the country  
Source: Sebi report

	Exchange	Instrument	Disclosures
<b>FOR-PROFIT</b>	IGP, SME, NSE or BSE (main board)	Equity, debt, development impact bonds, SVPs	Social impact reporting
<b>NOT-FOR-PROFIT</b>	Separate segment under the existing stock exchanges	Equity, ZCZP, MFs, SVPs, development impact bonds	Social impact reporting and other disclosure requirements of exchanges

- These include eradicating hunger, poverty malnutrition and inequality; promoting gender equality by empowerment of women and LGBTQIA+ communities; training to promote rural sports; and slum area development, affordable housing.

#### **What is social stock exchange (SSE)?**

- It is a novel concept in India and such a bourse is meant to serve private and non-profit sector providers by channelling greater capital to them. As per the proposal, SSE can be housed within the existing stock exchange such as the BSE and/or National Stock Exchange (NSE).
- With this, Social welfare enterprises and non-profits could soon get to raise so-called social capital on a transparent electronic platform, aiding the process of rebuilding livelihoods ravaged by the coronavirus pandemic. These recommendations, if implemented as a package, can result in a vibrant and supportive ecosystem, enabling the non-profit sector to realise its full potential for creating social impact.
- India will need a significant amount of patient capital to repair and rebuild those livelihoods, which are the bedrock of her economy. Conventional capital that prioritises financial returns will not be able to carry such a burden all by itself. Social capital, on the other hand, is more suited for this role. It is not only patient but its goal is precisely to support and fortify social structures that are in danger of collapsing because of COVID-19.
- A social enterprise is a revenue-generating business. Its primary objective is to achieve a social objective, for example, providing healthcare or clean energy.
- This in no way means that a social enterprise can't be highly profitable. In fact, most social enterprises look and operate like traditional businesses. The only catch is that the profit these entities generate is not necessarily used for payouts to stakeholders, but reinvested into their social programmes.

## **Revamped Distribution Sector Scheme**

**News:** REC and PFC, the state-run lenders that are the nodal lending agencies for the Rs 3.03 lakh crore revamped distribution sector scheme (RDSS) launched by the Union ministry of power in August last year, will release the first tranche of funds to a host of states including Uttar Pradesh, Assam and Meghalaya by March 31. The funds will be disbursed in the form of ad hoc 10% of grant from the central government, while the rest of the disbursement will depend on the discoms concerned fulfilling various conditions under the scheme.

#### **Details:**

- It is worth Rs. 3.03 trillion scheme wherein the Centre's share will be Rs. 97,631 crore. It aims to improve the operational efficiencies and financial sustainability of discoms (excluding Private Sector DISCOMs).
- It is a reforms-based and results-linked scheme. It seeks to improve the operational efficiencies and financial sustainability of all DISCOMs/Power Departments excluding Private Sector DISCOMs.
- The scheme envisages the provision of conditional financial assistance to DISCOMs for strengthening supply infrastructure. The assistance will be based on meeting pre-qualifying criteria as well as upon the achievement of basic minimum benchmarks by the DISCOM.
- The scheme involves a compulsory smart metering ecosystem across the distribution sector—starting from electricity feeders to the consumer level, including in about 250 million households.
- Scheme also focuses on funding for feeder segregation for unsegregated feeders.
- The Scheme has a major focus on improving electricity supply for the farmers and for providing daytime electricity to them through solarization of agricultural feeders.

#### **Implementation:**

- Existing power sector reforms schemes such as Integrated Power Development Scheme, Deen Dayal Upadhyaya Gram Jyoti Yojana, and Pradhan Mantri Sahaj Bijli Har Ghar Yojana will be merged into this umbrella program. Each state would have its own action plan for implementation of the scheme rather than a 'one-size-fits-all' approach.
- Nodal agencies for the scheme's implementation are Rural Electrification Corporation (REC) Limited and Power Finance Corporation (PFC). The scheme's cost is borne by the Centre and state governments in a 3:2 ratio. The state governments will be free to borrow from either REC-PFC or from other financial institutions to mobilise the funds.

### Objectives of the scheme:

- Reduction of average aggregate technical and commercial loss to pan-India levels of 12-15% by 2024-25.
- Narrow the deficit between the cost of electricity and the price at which it is supplied to zero by 2024-25.
- Developing institutional capabilities for modern DISCOMs.
- Improvement in the quality, reliability, and affordability of power supply to consumers through a financially sustainable and operationally efficient distribution sector.

### Existing issues:

- Due to inadequate metering and data collection system in place, utilities have not been able to conduct energy audit, which is crucial for any energy business.
- The Schemes could not reduce the high Aggregate Technical & Commercial (AT&C) losses due to high Transmission and Distribution (T&D) losses coupled with low collection efficiency. Low level of collection is attributable to lack of employees' accountability, inadequate collection facilities, limited usage of advanced technology, billing errors etc.
- Schemes have not put in mechanism for maintaining consumer database and asset database, which can be addressed through IT and communication solutions. Most utilities maintain manual records of consumers. This leads to mismanagement and losses.
- The gap between discoms' costs (average cost of supply) and revenues (average revenue realised), which was supposed to have been eliminated by now, stands at Rs 0.49 per unit in the absence of regular and commensurate tariff hikes.
- The schemes have not been able to address the gap between increasing electrification and related supporting structural mechanism.

## Sovereign Green Bonds

**News:** India will issue at least Rs 24,000 crore (\$3.3 billion) in sovereign green bonds as the country marks a shift towards a low-carbon economy.

### Background:

- India's maiden foray into the green bond space comes as it plans to fund renewable energy projects that will help meet its goal of net-zero emissions by 2070. The planned issuance comes amid a global boom in sustainable investments. India is the world's third-biggest emitter of greenhouse gases and plans to more than quadruple its renewable power generation capacity by 2030.

### Details:

- A green bond is a type of fixed-income instrument that is specifically earmarked to raise money for climate and environmental projects. These bonds are typically asset-linked and backed by the issuing entity's balance sheet, so they usually carry the same credit rating as their issuers' other debt obligations.
- Green bonds may come with tax incentives to enhance their attractiveness to investors.
- The World Bank is a major issuer of green bonds. It has issued 164 such bonds since 2008, worth a combined \$14.4 billion. In 2020, the total issuance of green bonds was worth almost \$270 billion, according to the Climate Bond Initiative.
- Green bonds work just like any other corporate or government bond. Borrowers issue these securities in order to secure financing for projects that will have a positive environmental impact, such as ecosystem restoration or reducing pollution. Investors who purchase these bonds can expect to make as the bond matures. In addition, there are often tax benefits for investing in green bonds.
- Sovereign green issuance sends a powerful signal of intent around climate action and sustainable development to governments and regulators. It will catalyze domestic market development and provides impetus to institutional investors. It will provide benchmark pricing, liquidity and a demonstration effect for local issuers, helping to support the growth of a local market.

### Green Bonds Vs Blue Bonds:

- Blue bonds are sustainability bonds to finance projects that protect the ocean and related ecosystems.
- This can include projects to support sustainable fisheries, protection of coral reefs and other fragile ecosystems, or reducing pollution and acidification.

- All blue bonds are green bonds, but not all green bonds are blue bonds.

### **Green Bonds Vs Climate Bonds:**

- “Green bonds” and “climate bonds” are sometimes used interchangeably, but some authorities use the latter term specifically for projects focusing on reducing carbon emissions or alleviating the effects of climate change.

## **India’s Solar Capacity**

**News:** India added a record 10 Gigawatt (GW) of solar energy to its cumulative installed capacity in 2021. This has been the highest 12-month capacity addition, recording nearly a 200% year-on-year growth. India has now surpassed 50 GW of cumulative installed solar capacity, as on 28<sup>th</sup> February 2022. Of the 50 GW installed solar capacity, an overwhelming 42 GW comes from ground-mounted Solar Photovoltaic (PV) systems, and only 6.48 GW comes from Roof Top Solar (RTS); and 1.48 GW from off-grid solar PV.

### **Details:**

- This is a milestone in India’s journey towards generating 500 GW from renewable energy by 2030, of which 300 GW is expected to come from solar power. India’s capacity additions rank the country fifth in solar power deployment, contributing nearly 6.5% to the global cumulative capacity of 709.68 GW.
- The large-scale solar PV focus fails to exploit the many benefits of Decentralised Renewable Energy (DRE) options, including reduction in Transmission and Distribution (T&D) losses.
- One of the primary benefits of solar PV technology is that it can be installed at the point of consumption, significantly reducing the need for large capital-intensive transmission infrastructure.
- This is not an either/or situation; India needs to deploy both large and smaller-scale solar PV, and particularly needs to expand RTS efforts. However, there is limited financing for residential consumers and Small and Medium Enterprises (SMEs) who want to install RTS.
- Lukewarm responses from electricity Distribution Companies (DISCOMS) to supporting net metering, RTS continues to see low uptake across the country.

### **Challenges:**

- Despite significant growth in the installed solar capacity, the contribution of solar energy to the country’s power generation has not grown at the same pace. In 2019-20, for instance, solar power contributed only 3.6% (50 billion units) of India’s total power generation of 1390 BU.
- The utility-scale solar PV sector continues to face challenges like land costs, high T&D losses and other inefficiencies, and grid integration challenges. There have also been conflicts with local communities and biodiversity protection norms. Also, while India has achieved record low tariffs for solar power generation in the utility-scale segment, this has not translated into cheaper power for end-consumers.
- The International Renewable Energy Agency (IRENA) estimates that the global value of recoverable materials from solar PV waste could exceed USD15 billion.
- Currently, only the European Union has taken decisive steps in managing solar PV waste.
- India could look at developing appropriate guidelines around Extended Producer Responsibility (EPR), which means holding manufacturers accountable for the entire life cycle of solar PV products and creating standards for waste recycling. This could give domestic manufacturers a competitive edge and go a long way in addressing waste management and supply side constraints.

### **Indian scenario:**

- Domestic manufacturing capacities in the solar sector do not match up to the present potential demand for solar power in the country. India had 3 GW capacity for solar cell production and 8 GW for solar panel production capacity. Moreover, backward integration in the solar value chain is absent as India has no capacity for manufacturing solar wafers and polysilicon.
- In 2021-22, India imported nearly USD 76.62 billion worth of solar cells and modules from China alone, accounting for 78.6% of India’s total imports that year. Low manufacturing capacities, coupled with cheaper imports from China have rendered Indian products uncompetitive in the domestic market.
- This situation can, however, be corrected if India embraces a circular economy model for solar systems.
- This would allow solar PV waste to be recycled and reused in the solar PV supply chain. By the end of 2030, India will likely produce nearly 34,600 metric tonnes of solar PV waste.



## Export Preparedness Index

**News:** NITI Aayog, in collaboration with the Institute of Competitiveness, has released the second edition of the Export Preparedness Index.

### On what basis are states ranked?

- The index entails four pillars, eleven sub pillars and sixty indicators and covers across 28 states and 8 UTs.
- The 4 Pillars include Policy, Business Ecosystem, Export Ecosystem and Export Performance.
- The 11 sub-pillars include export promotion policy, institutional framework, business environment, infrastructure, transport connectivity, access to finance, export infrastructure, trade support, R&D infrastructure, export diversification, and growth orientation.

### Performance of States:

- Gujarat has topped NITI Aayog's Export Preparedness Index (EPI) 2021 for the second consecutive time.
- Maharashtra has been ranked second and Karnataka has been ranked third.

### Significance of the Index:

- It examines the export performance of states/UTs and provides a benchmark based upon which states can be assessed
- It helps policy makers to analyse the obstacles that prevent states from realising their true potential to generate exports
- It imbibes a competitive spirit across states (coastal, Himalayan, UT's, landlocked) to bring favourable export promotion policies

### Challenges to Indian exports:

- Intra and inter-regional differences in export infrastructure,
- Weak trade support and growth orientation across States,
- Lack of R&D infrastructure to promote complex and unique exports.

### Way Forward

- It is necessary to invest in reliable and efficient export infrastructure that will help in cost reduction and improve efficiency in supply of exports. Private sector participation and export diversification is crucial to maximise our export potential.

# Science & Technology

## International Intellectual Property Index

**News:** Recently, India has improved its overall International Intellectual Property (IIP) score from 38.4% to 38.6%, and the country is ranked 43<sup>rd</sup> out of 55 countries on the International Intellectual Property Index. International Intellectual Property Index is an annual report compiled by the US Chambers of Commerce. This year (2022) the index is topped by the US with 95.4%.

### What is the International Intellectual Property Index?

- The 2020 U.S. Chamber International IP Index titled 'Art of the Possible' creates a template for economies that aspire to become the 21<sup>st</sup> century, knowledge-based economies through more effective IP protection.
- In its eighth edition, the Index maps the IP ecosystem in 53 global economies, representing over 90% of global Gross Domestic Product.
- The Index evaluates the IP framework in each economy across 50 unique indicators which industry believes represent economies with the most effective IP systems.
- The indicators create a snapshot of an economy overall IP ecosystem and span nine categories of protection:
  - Patents,
  - Copyrights,
  - Trademarks,
  - Design Rights,
  - Trade Secrets,
  - Commercialization of IP Assets,
  - Enforcement,
  - Systemic Efficiency,
  - Membership And Ratification of International Treaties.

## Global Chip Shortage due to War between Russia-Ukraine

**News:** The ongoing conflict between Russia and Ukraine is worsening the global chip shortage crisis.

### What is a Semiconductor Chip?

- It is an electric circuit with many components such as transistors and wiring formed on a semiconductor wafer. An electronic device comprising numerous of these components is called Integrated Circuit (IC), and can be found in electronic devices such as computers, smartphones, appliances, gaming hardware and medical equipment.
- These devices find widespread use in almost all industries, especially in the automobile industry.
- Semiconductors are materials which have a conductivity between conductors and insulators. They can be pure elements, silicon or germanium or compounds, gallium, arsenide or cadmium selenide.

### Indian scenario:

- India currently imports all chips and the market is estimated to touch USD100 billion by 2025 from USD24 billion now.
- The Union Cabinet has recently allocated an amount of Rs.76,000 crore for supporting the development of a 'semiconductors and display manufacturing ecosystem'.
- It is a belated but welcome acknowledgment of the strategic significance of integrated circuits, or chips, to a modern economy.
- India has also launched the Scheme for Promotion of Manufacturing of Electronic Components and Semiconductors (SPECS) under which a budget outlay of Rs 3,285 crore is spread over a period of eight years for manufacturing of electronics components and semiconductors.

### Shortage situation:

- Earlier, it was predicted that the chip shortage would extend until at least 2023. The prediction was based on the pandemic's effect on a component that has become a life-line for most gadgets we use every day.
- The global semiconductor market is projected to grow by 8.8% to USD 601 billion, driven by a double-digit growth of the sensors and logic category and with the recent trends in electric mobility, automotive safety, and Internet of Things (IoT), the demand for semiconductors is only going to grow.

- Lockdowns increased the growth in sales of laptops to the highest in a decade.
- Home networking gear, webcams and monitors were snapped up as office work moved out of the office, and laptops were in demand for a while as schools shut.
- The stay-at-home rules also made several people pick up console-based gaming.
- These devices in high demand run on thumbnail-sized semiconductor piece (or pieces some time), performing various functions on a single device and manufacturers produce them as 200mm or 300mm wafers. These are further split into tiny chips.
- While the larger wafers are expensive and mostly used for advanced equipment, the devices that were in high demand needed smaller diameter wafers.
- But the manufacturing equipment required to make them were in short supply even before the pandemic began. That's because the industry was moving in the direction of 5G, which required the expensive wafers.
- High consumer demand for low-end products, coupled with large orders from tech firms choked chip makers whose factories were also closed during lockdowns.
- As the industry gradually tried to pull itself out of the supply crunch, logistical complexities exacerbated the problem. And then the cost of moving containers across the world drove up the price of the core component used in most electronic devices and automobiles.

#### **Impact of present war:**

- Ukraine supplies rare gases used to produce semiconductor fab lasers, and Russia exports rare metals like palladium to make semiconductors. This combination is required to build chipsets that power a range of devices, from automobiles to smartphones.
- Russia and South Africa are the two largest producers of palladium. In 2021, Russia supplied 2.35 million ounces (66 million grams) of palladium. The silvery-white market would move into a severe deficit without those supplies, pushing the price up. While platinum and rhodium could be substituted for palladium, Russia is also a leading producer of the other platinum group metals. As Russia's invasion into Ukraine escalates, the country is getting hit by Western sanctions, which could disrupt the country's exports, leaving the semiconductor firms fewer options to source raw materials to make chip sets.

#### **What is Palladium and what are its Uses?**

- Palladium is often used as an alternative to gold in making various devices as the metal is highly malleable and resistant to corrosion. The rare metal is considered to be softer than gold, but is still much harder and durable than the yellow metal.
- This quality of palladium gives it more protection against an impact and a greater resistance to denting. So, automobile makers, electronics manufacturers and biomedical device producers prefer the silvery-white metal. Palladium is used in nearly all electronic devices, and the metal is a key to make chipsets and circuit boards. It is used to make Multi-Layer Ceramic Capacitors (MLCCs), which are important to make smartphone screens, stereo systems, and power circuit breakers.

## **Thermobaric Bombs**

**News:** Russia has resorted to the use of dangerous thermobaric bombs — or vacuum bombs — in Ukraine. Cluster weaponry has been banned by the 2008 Convention on Cluster Munitions; however, neither Ukraine nor Russia were signatories at the convention.

#### **Details:**

- These are called vacuum bombs as they suck in oxygen from surrounding areas to generate high-voltage explosions. The blast wave is of a greater intensity and duration than conventional bombs and can vapourise humans. While they cannot be used in taking down tanks and other such military vehicles, they can dismantle civilian spaces, like residential or commercial complexes.
- Cluster munitions are non-precision weapons that are designed to injure or kill human beings indiscriminately over a large area, and to destroy vehicles and infrastructure such as runways, railway or power transmission lines. They can be dropped from an aircraft or launched in a projectile that spins in flight, scattering many bomblets as it travels. Many of these bomblets end up not exploding, but continue to

lie on the ground, often partially or fully hidden and difficult to locate and remove, posing a threat to the civilian population for long after the fighting has ceased.

### Convention on Cluster Munitions:

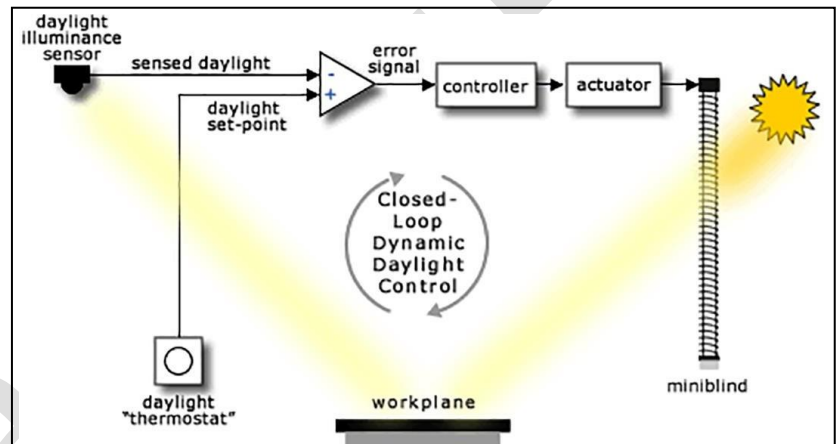
- It is an international treaty that prohibits all use, transfer, production, and stockpiling of cluster bombs, a type of explosive weapon which scatters submunitions (“bomblets”) over an area.
- Additionally, the Convention establishes a framework to support victim assistance, clearance of contaminated sites, risk reduction education, and stockpile destruction.
- The convention was adopted on 30 May 2008 in Dublin. As of date, there are 110 state parties to the convention, and 13 other countries have signed up but are yet to ratify it.

## Daylight Harvesting Technology

**News:** Recently, the Ministry of Science & Technology has decided to promote a unique Start-up in the latest Daylight Harvesting Technology in order to reduce carbon footprint and improve the building's energy efficiency. The Ministry will give Rs 5 Crore of the 10 Crore project to Skyshade company for developing new technologies for basement illumination on a 24x7 basis. The company aims to create Green & Net zero buildings and to participate and contribute in national missions under the National Action Plan on Climate Change (NAPCC).

### What is Daylight Harvesting?

- Daylight Harvesting is a method of saving the energy costs associated with lighting. It makes use of the available sunlight. The solar energy spectrum has 45% energy as visible light and this can be used to harvest building illumination for about 9-11 hours a day.
- It is one of the most advanced techniques used in sustainable lighting designs for contemporary buildings.
- It automatically dims or adjusts the brightness of light in response to the amount of natural light available in a space. Utilising natural daylight coming through the windows or skylights minimises the amount of energy used in artificial lighting. The daylight harvesting system employs light sensors, also known as photocell sensors, to detect the prevailing light level in the environment.
- It then sends the intensity of light received to a controller, which is connected to the lighting control system. The control system in turn adjusts the electric lights automatically according to the measured light level.



### Significance:

- It increases energy savings by dimming or turning Off lights based on the natural daylight entering the space.
- It helps to maintain proper light intensity in a space by continuously and automatically adjusting lights.
- Providing right amounts of light to people helps in maintaining proper circadian rhythms that are crucial to good health and adequate sleep besides preventing seasonal affective disorders.
- Circadian rhythm is the 24-hour cycle that tells our bodies when to sleep, rise, and eat—regulating many physiological processes. Letting in natural light to workplaces provides better concentration, creates a positive mood, and drives healthier employee life.
- Daylight is available universally and it is a very clean and cost-efficient source of energy.
- Meeting our energy requirement during the day by using daylight harvesting technology will contribute immensely to meet one of the commitments of the five nectars of “PANCHAMRIT” i.e., to make India a Net Zero emission country by 2070.

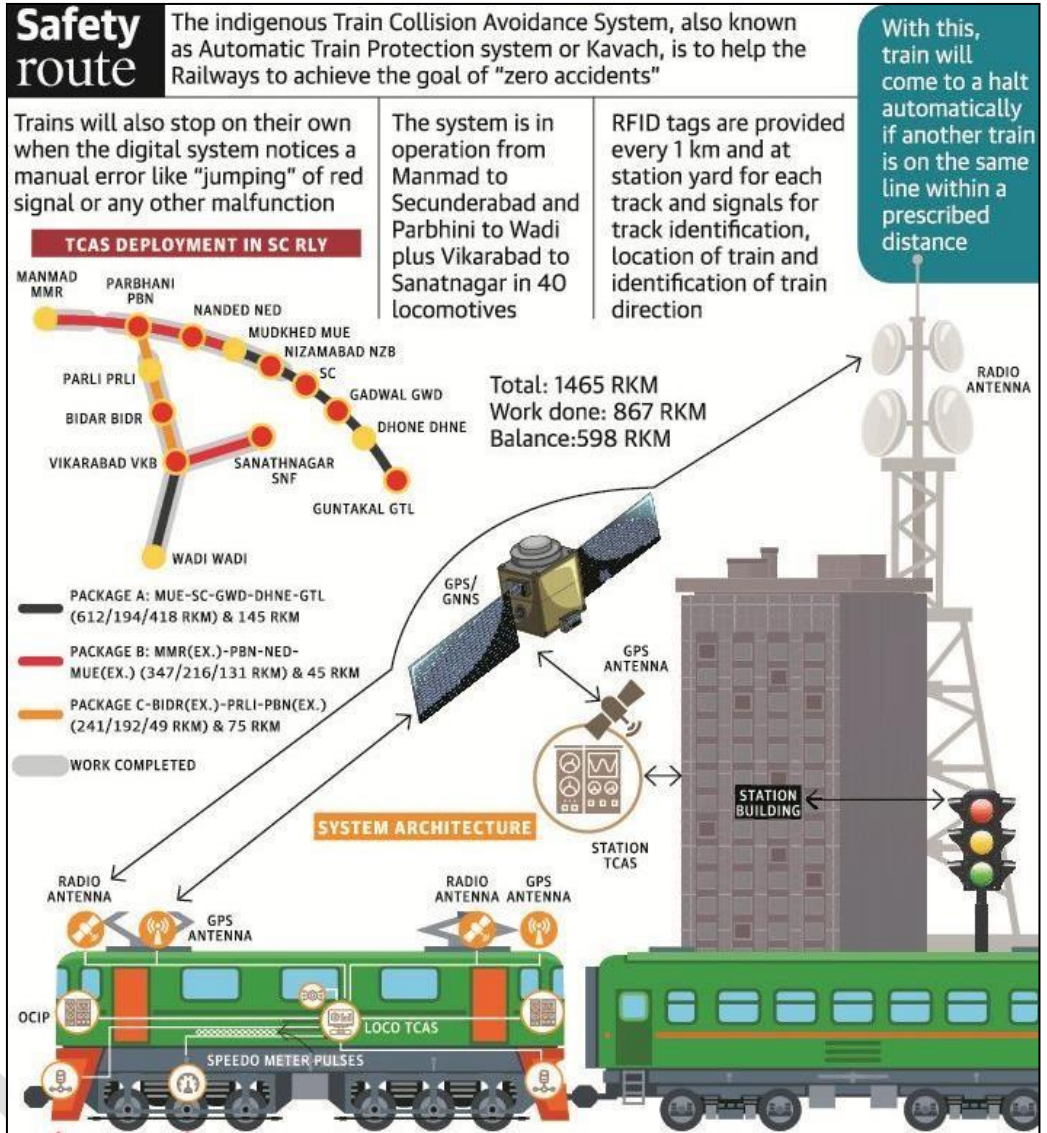


# Kavach

**News:** Kavach, this indigenously developed Automatic Train Protection System is earmarked for aggressive rollout on 2,000 km in 2022-23, according to the Budget proposals.

## What is Kavach?

- It is India's very own automatic protection system in development since 2012, under the name Train Collision Avoidance System (TCAS), which got rechristened to Kavach or "armour".
- Simply put, it is a set of electronic devices and Radio Frequency Identification devices installed in locomotives, in the signalling system as well the tracks.
- They connect to each other using ultra high radio frequencies to control the brakes of trains and also alert drivers, all based on the logic programmed into them. One of its features is that by continuously refreshing the movement information of a train, it is able to send out triggers when a loco pilot jumps signal, called Signal Passed at Danger (SPAD).
- The devices also continuously relay the signals ahead to the locomotive, making it useful for loco pilots in low visibility, especially during dense fog.
- It includes the key elements from already existing, and tried and tested systems like the European Train Protection and Warning System, and the indigenous Anti Collision Device.
- It will also carry features of the high-tech European Train Control System Level-2 in future.
- The current form of Kavach adheres to the highest level of safety and reliability standard called Safety Integrity Level 4. In the new avatar, India wants to position Kavach as an exportable system, a cheaper alternative to the European systems in vogue across the world.
- While now Kavach uses Ultra High Frequency, work is on to make it compatible with 4G Long Term Evolution (LTE) technology and make the product for global markets.
- Work is on to make the system such that it can be compatible with other already installed systems globally.
- So far, Kavach has been deployed on over 1,098 km and 65 locomotives in ongoing projects of the South Central Railway. In future it will be implemented on 3000 km of the Delhi-Mumbai and Delhi-Howrah corridors where the tracks and systems are being upgraded to host a top speed of 160 kmph.
- Further, over 34,000 km on the High Density Network (HDN) and Highly Utilized Network (HUN) of on the Golden Quadrilateral have been included in its sanctioned plans.



## Jets of Plasma

**News:** Scientists have unravelled the science behind the jets of plasma – the fourth state of matter consisting of electrically charged particles that occur just about everywhere in the sun’s chromosphere, which is the atmospheric layer just above the Sun’s visible surface.

### What are the jets of plasma?

- The jets, or spicules, appear as thin grass-like plasma structures that constantly shoot up from the surface and are then brought down by gravity. The amount of energy and momentum that these spicules can carry is of fundamental interest in solar and plasma astrophysics.
- Astronomers at the Indian Institute of Astrophysics conducted an experiment to understand the science behind this. They found that the physics underlying paint jets when excited on a speaker is analogous to the solar plasma jets. When a liquid is placed above a speaker and the music is turned on, the free surface of the liquid becomes unstable beyond a particular frequency and starts vibrating. The researchers realized that the physics underlying these paint jets must be analogous to the solar plasma jets.
- The scientists elaborated that the plasma right below the visible solar surface (photosphere) is perpetually in a state of convection, much like boiling water in a vessel heated at the bottom.
- This is ultimately powered by the nuclear energy released in the hot-dense core. The convection serves almost periodic but there are strong kicks to the plasma in the solar chromosphere.
- The chromosphere is 500 times lighter than the plasma in the photosphere. Therefore, these strong kicks from the bottom shoot the chromospheric plasma outward at ultrasonic speeds in the form of thin columns or spicules.

## Kudankulam Nuclear Power Project

**News:** Recently, the Kudankulam Village Panchayat has passed a resolution against the construction of the ‘Away From Reactor (AFR) facility at the Kudankulam Nuclear Power Project (KKNPP) site for storing nuclear waste. Earlier, the state government (Tamil Nadu) had also opposed such construction. The village panchayat is of the view that the AFR site would lead to radioactive pollution (spread of radioactivity) and spoil the groundwater, which is used for drinking water and irrigation.

### What is an AFR site?

- The scheme for the storage of spent fuel in a nuclear power plant is two-fold:
  - One facility is located within the reactor building/service building, generally known as the spent fuel storage pool/bay.
  - Another is located away from the reactor, called the Away From Reactor (AFR) Spent Fuel Storage Facility, but within the plant’s premises.
- The spent fuel storage pool inside the reactor building has a limited capacity and is used for immediate storage of the spent fuel removed from the reactor during refueling. The fuel remains in the pool initially for a few years for it to be cooled sufficiently before it is shifted to the facility. The AFR Spent Fuel Storage Facility is functionally similar to the ‘Spent Fuel Pool’ inside the reactor building, except in terms of capacity.

### Arguments of the Government:

- The proposed AFR facility at KKNPP reactors 1 and 2 is for storage of spent fuel only and not for storage of nuclear waste, as perceived by a few. The design ensures that there would not be any adverse impact of the facility on the personnel, the public and the environment.
- The radiation dose on account of AFR to the public would be negligible, even [when] compared to the exposure from natural radiation background sources like soil, sun etc. This has been established at the Tarapur and Rawatbhata sites, where AFRs have been in operation for many years.

### Radioactivity:

- Radioactivity is the phenomenon of spontaneous emission of particles or waves from the unstable nuclei of some elements. There are three types of radioactive emissions: Alpha, Beta and Gamma.

- Alpha particles are positively charged He (Helium) atoms, beta particles are negatively charged electrons and gamma rays are neutral electromagnetic radiations.
- Radioactive elements are naturally found in the earth's crust.
- Uranium, thorium and actinium are three NORM (Naturally Occurring Radioactive Materials) series that contaminate water resources.
- A small amount of radiation is found in nature but the extended amount of radiation is harmful to human health. Radioactivity is measured in Becquerel (SI unit) or in Curie. The unit Sievert measures the quantity of radiation absorbed by human tissues.

## White Phosphorus Bombs

**News:** Allegations of white phosphorus munitions being used by Russia and Ukraine are emerging.

### Details:

- It is a colourless, white or yellow, waxy solid. It does not occur naturally. It is manufactured using phosphate rocks. It is a highly combustible substance that reacts with oxygen in the air.
- It can catch fire at temperatures as low as 10 to 15 degrees above room temperature.
- Due to its combustible nature, every country has strict regulations regarding its manufacturing and handling.
- It is used mainly in the military, and other applications may include as a component in fertilisers, food additives and cleaning compounds. Initially, it was also used in pesticides and fireworks, but many countries have banned its use in several sectors.
- WP has not been categorised as an incendiary or chemical weapon by international agencies.
- The Organisation for the Prohibition of Chemical Weapons, which is an intergovernmental organisation and the implementing body for the Chemical Weapons Convention, has not listed WP in any of the three Schedules of Chemical Weapons.
- However, the United Nations considers it as an incendiary chemical. The general regulations of Protocol III on Prohibitions or Restrictions on the Use of Incendiary Weapons may apply when it is used in military actions.
- Protocol III specifically mentions it is not applicable on munitions that are illuminants, tracers, smoke or signalling systems thus making it confusing for many if the use of WP can be considered a war crime or not. Protocol III specifically does not ban the use of White Phosphorous in military action. It only restricts its use near the civilian population.
- The main reason behind WP being considered incendiary is its effect on humans. When WP comes in contact with the human skin, it can cause both thermal and chemical burns. It can produce several chemicals when it comes in contact with the skin, such as phosphorus pentoxide that reacts with water in the skin and produces phosphoric acid that is highly corrosive.

### Organization for Chemical Weapons Convention, 1997:

- It is an international organization established by the Chemical Weapons Convention, 1997 to implement and enforce the terms of the non-proliferation treaty, which prohibits the use, stockpiling, or transfer of chemical weapons by signatory states. By the 2001 Relationship Agreement between the OPCW and the United Nations, the OPCW reports on its inspections and other activities to the UN through the office of the Secretary General. The organisation was awarded the 2013 Nobel Peace Prize "for its extensive efforts to eliminate chemical weapons".
- The OPCW is authorized to perform inspections to verify that signatory states are complying with the convention. The Chemical Weapons Convention prohibits:
  - Developing, producing, acquiring, stockpiling, or retaining chemical weapons.
  - The direct or indirect transfer of chemical weapons.
  - Chemical weapons use or military preparation for use.
  - Assisting, encouraging, or inducing other states to engage in CWC-prohibited activity.
  - The use of riot control agents "as a method of warfare."



## Small Satellite Launch Vehicle

**News:** The Indian Space Research Organisation (ISRO) is all geared up for the maiden flight of its mini rocket launcher – Small Satellite Launch Vehicle (SSLV) – in May.

### Small Satellite Launch Vehicle (SSLV):

- The indigenously developed mini-rocket-launcher is specially designed to carry smaller commercial satellites into the low-earth orbit (LEO) from 200-2,000 km above the Earth's surface. It has a payload capacity of upto 500 kg. Designed to bolster the agency's partnership with the private sector for the launch of commercial satellites. The SSLV is the smallest vehicle at 110-ton mass at ISRO.
- It will take only 72 hours to integrate. Only six people will be required to do the job.
- The cost will be only around Rs 30 crore. It is best suited for launching multiple microsattellites at a time and supports multiple orbital drop-offs.
- Launch of small satellites into low earth orbits has become significant in recent years on account of the need for developing countries, private corporations, and universities for small satellites.
- About 15 to 20 SSLVs would be required every year to meet the national demand alone.

### What is PSLV?

- The launch of small satellites has until now been dependent on 'piggy-back' rides with big satellite launches on ISRO's work-horse – the Polar Satellite Launch Vehicle which has had over 50 successful launches so far.
- PSLV can launch satellites weighing in the range of 1000 kg. But, it takes 70 days to integrate this launch vehicle. It is the third generation launch vehicle of India. It is the first Indian launch vehicle to be equipped with liquid stages.
- India has two operational launchers- Polar Satellite Launch Vehicle (PSLV) and Geosynchronous Satellite Launch Vehicle (GSLV).
- PSLV was developed to launch low-Earth Orbit satellites into polar and sun synchronous orbits. It has since proved its versatility by launching geosynchronous, lunar and interplanetary spacecraft successfully.
- On the other hand, GSLV was developed to launch the heavier INSAT class of geosynchronous satellites into orbit. In its third and final stage, GSLV uses the indigenously developed cryogenic upper stage.

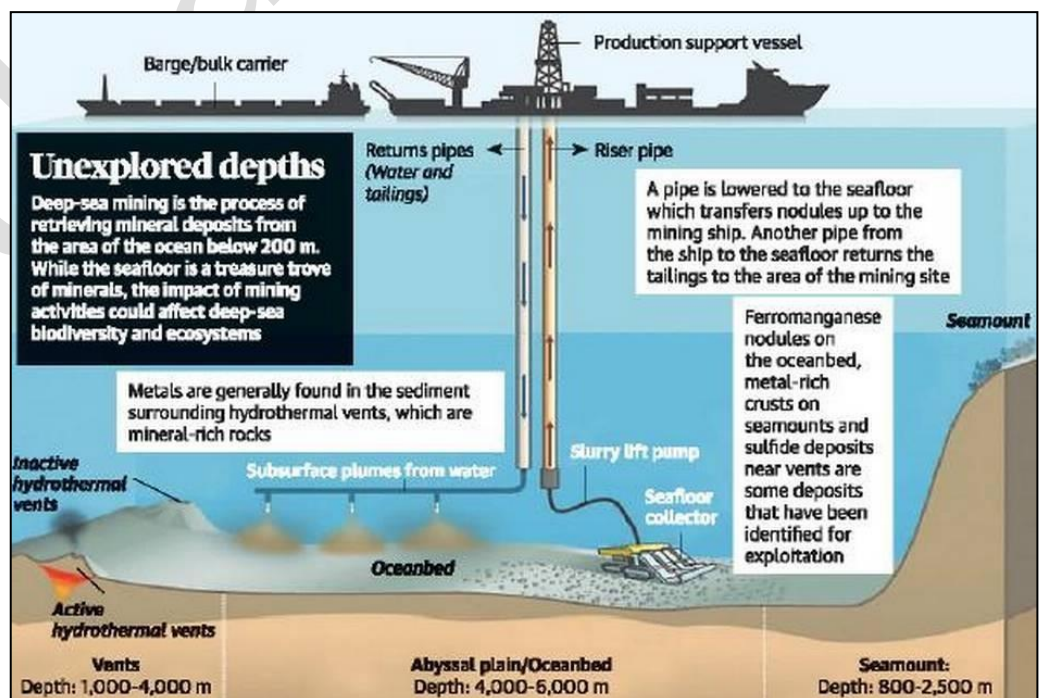
## Deep Ocean Mission

**News:** Recently, the Ministry of Earth Sciences has launched the Deep Ocean Mission (DOM). DOM is a mission mode project to support the Blue

Economy Initiatives of the Government of India. Earlier, the Ministry of Earth Sciences had also rolled out the draft Blue Economy Policy. Blue Economy is the sustainable use of ocean resources for economic growth, improved livelihoods and jobs, and ocean ecosystem health.

### Details:

- A manned submersible will be developed to carry three people to a depth of 6,000 metres in the ocean with a suite of scientific sensors and tools.





- NIOT & ISRO is jointly developing a Manned Submersible Vehicle. National Institute of Ocean Technology (NIOT), an autonomous institute under the Ministry of Earth Sciences.
- An Integrated Mining System will be also developed for mining polymetallic nodules at those depths in the central Indian Ocean. Polymetallic nodules are rocks scattered on the seabed containing iron, manganese, nickel and cobalt. The exploration studies of minerals will pave the way for commercial exploitation in the near future, as and when commercial exploitation code is evolved by the International Seabed Authority, a United Nations (UN) organisation.
- It entails developing a suite of observations and models to understand and provide future projections of important climate variables on seasonal to decadal time scales.
- Bio-prospecting of deep-sea flora and fauna including microbes and studies on sustainable utilisation of deep-sea bio-resources will be the main focus.
- It will explore and identify potential sites of multi-metal Hydrothermal Sulphides mineralization along the Indian Ocean mid-oceanic ridges.
- Studies and detailed engineering design for offshore Ocean Thermal Energy Conversion (OTEC) powered desalination plants are envisaged in this proof of concept proposal. OTEC is a technology that uses ocean temperature differences from the surface to depths lower than 1,000 metres, to extract energy. It is aimed at the development of human capacity and enterprise in ocean biology and engineering.
- It will translate research into industrial application and product development through on-site business incubator facilities.

#### **Significance:**

- Oceans, which cover 70% of the globe, remain a key part of our life. About 95% of the Deep Ocean remains unexplored. Three sides of India are surrounded by the oceans and around 30% of the country's population lives in coastal areas, the ocean is a major economic factor supporting fisheries and aquaculture, tourism, livelihoods and blue trade.
- Considering the importance of the oceans on sustainability, the UN has declared the decade, 2021-2030 as the Decade of Ocean Science for Sustainable Development. India has a unique maritime position. Its 7517 km long coastline is home to nine coastal states and 1382 islands.
- The Government of India's Vision of New India by 2030 announced in February 2019 highlighted the Blue Economy as one of the ten core dimensions of growth.
- The technology and expertise needed in such missions are now available in only five countries - the US, Russia, France, Japan and China. India will now be the sixth country to have it.

## **Draft National Policy for Medical Devices 2022**

**News:** The government is proposing a new Draft National Policy for Medical Devices, 2022 to reduce India's dependence on import of high-end medical devices.

#### **Background:**

- In February 2020, the government notified changes in the Medical Devices Rules, 2017 to regulate medical devices on the same lines as drugs under the Drugs and Cosmetics Act, 1940.
- This was necessitated after revelations about faulty hip implants marketed by Johnson & Johnson, exposing the lack of regulatory teeth when it came to medical devices.
- The government said the transition from partial regulation of selected medical services to the complete regulation and licensing of all medical devices is underway.

#### **Details:**

- Adopting public-private partnerships to reduce the cost of healthcare, drive efficiency, and aid quality improvements in medical devices manufactured in the country. The key proposals include the following.
- Incentivising the export of medical devices and related technology projects through tax rebates and refunds
- Increasing government spending in "high-risk" projects in the medical devices sector
- Single-window clearance system for licencing medical devices
- Pricing environment with no price control on newly developed innovation in the sector

- Allot a dedicated fund for encouraging joint research involving existing industry players, reputed academic institutions and start-ups
- Incorporate a framework for a coherent pricing regulation, to make available quality and effective medical devices to all citizens at affordable prices
- NPPA (National Pharmaceutical Pricing Authority) shall be strengthened with adequate manpower of suitable expertise to provide effective price regulation balancing patient and industry needs.
- Pharmaceuticals Department will also work with industry to implement a Uniform Code for Medical Device Marketing Practices (UCMDMP)

#### Significance:

- India's medical devices sector has so far been regulated as per provisions under the Drugs and Cosmetics Act of 1940, and a specific policy on medical devices has been a long standing demand from the industry.
- The policy also aims to increase India's per capita spend on medical devices. India has one of the lowest per capita spend on medical devices at \$3, compared to the global average of per capita consumption of \$47.
- With the new policy, the government aims to reduce India's import dependence from 80 per cent to nearly 30 per cent in the next 10 years.
- It aims to become one of the top five global manufacturing hubs for medical devices by 2047.
- Indian players in the space have so far typically focussed on low-cost and low-tech products, like consumables and disposables, leading to a higher value share going to foreign companies.

## Nasa's Artemis Mission

**News:** Recently, the National Aeronautics and Space Administration (NASA) rolled out its Artemis 1 moon mission to the launchpad for testing at the Kennedy Space centre in Florida, United States.

#### About the Mission:

- It is touted as next generation of lunar exploration, and is named after twin sister of Apollo from Greek mythology. Artemis is also the Goddess of the moon.
- With the mission, NASA aims to land humans on the moon by 2024. The flight paves the way toward landing the first woman and the first person of color on the Moon.
- Artemis I will be the first uncrewed flight test of the Space Launch System rocket and the Orion spacecraft.
- It will be the first in the series of increasingly complex missions to build a long-term human presence at the moon for decades to come.
- Other space agencies involved in the Artemis mission include Canadian Space agency, European Space agency and Japanese Aerospace exploration agency.
- The primary goal of the mission is to assure safe crew module entry, descent, splashdown, and recovery.

#### ISRO'S moon exploration efforts

- **Chandrayaan 1** - Joint effort between ISRO and Russia's ROSCOSMOS
- Confirmed presence of lunar water
- Past tectonic activities were found on lunar surface
- Evidence of lunar caves
- **Chandrayaan 2** - It comprises a fully indigenous orbiter, lander (Vikram) and rover (Pragyan)
- **Chandrayaan 3** - The ISRO recently confirmed India's 3rd lunar mission which will comprise a rover and a lander.

## Hypersonic Missiles

**News:** Russia used a hypersonic missile for the first time in the recent war against Ukraine.

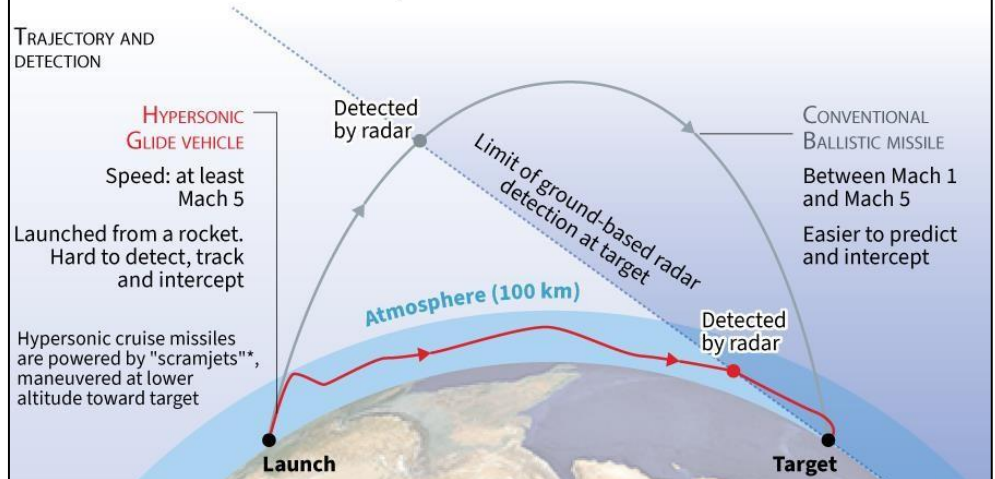
#### About Hypersonic Missiles:

- It is a weapon system which flies at least at the speed of Mach 5 which means five times the speed of sound.
- It is maneuverable and this is what makes it different from a ballistic missile. A ballistic missile follows a set course or a trajectory.

- Thus, a hypersonic missile can be used to target with precision.
- They can enable responsive, long range strike options against distant, defended or time critical threats (such as road mobile missiles) when other forces are unavailable, denied access or not preferred.
- Conventional hypersonic weapons use only kinetic energy which means energy derived from motion, to destroy unhardened targets or even underground facilities.

## Hypersonic weapons

Considered the next generation of arms with conventional or nuclear warheads that are hard to detect and can travel more than five times the speed of sound



### Can they be detectable?

- They can challenge the detectability aspect owing to their speed, maneuverability and low altitude of flight.
- The ground-based radars cannot detect hypersonic missiles until late in the flight of the weapon.
- Thus, it makes it difficult for the responders to the missile attack and attempt to intercept the missile.

### Which countries possess such weapons?

- The USA, Russia and China are in advanced stages of hypersonic missiles programmes, India, France, Germany, Japan and Australia too are developing hypersonic weapons.

## Lead Poisoning

**News:** Recently, high levels of lead were found in the blood of thousands of children living around the Kabwe mine in Zambia.

### About Lead:

- Lead is a naturally occurring toxic metal found in the Earth's crust.
  - Lead in the body is distributed to the brain, liver, kidney and bones. It is stored in the teeth and bones, where it accumulates over time.
  - Lead in bone is released into blood during pregnancy and becomes a source of exposure to the developing foetus.

### What is Lead Poisoning?

- Lead poisoning is caused by the absorption of Lead in the system and is characterised especially by fatigue, abdominal pain, nausea, diarrhoea, loss of appetite, anaemia, a dark line





along the gums, and muscle paralysis or weakness of limbs.

- Children younger than 6 years are especially vulnerable to lead poisoning, which can severely affect mental and physical development.
- It can also cause anaemia, hypertension, renal impairment, toxicity to the reproductive organs.

#### Factors contributing to Lead Poisoning:

- Substandard recycling of lead-acid batteries.
- Ingestion of lead-contaminated dust, water (from leaded pipes) and food (from lead-glazed or lead-soldered containers).
- Increase in vehicle ownership in addition to lack of vehicle battery recycling regulation and infrastructure
- Workers in dangerous and often illegal recycling operations break open battery cases, spill acid and lead dust in the soil.

#### Way Forward:

- Childhood lead exposure is estimated to cost lower- and middle-income countries almost USD \$1 trillion due to lost economic potential of these children over their lifetime. Thus, it is clear that lead poisoning is likely to impact the kids the most and decisive efforts are needed right now to be acted upon.

## GSAT 7B and Indian military satellites

**News:** Recently, the Ministry of Defense has given the Acceptance of Necessity for the GSAT-7B satellite. This satellite will be a dedicated satellite for the Indian Army. Currently, India has only two dedicated military satellites — the GSAT-7 (Rukmini) and GSAT-7A (Angry Bird) — used by the Indian Navy and Air Force respectively.

#### Role of GSAT 7B satellite

- It will help Indian army enhance its surveillance in border areas.
- It will primarily ensure the communication needs of the army.
- While many features of the satellite are outside the purview of public domain, it is expected that state of the art, multi-band, military-grade satellite shall help Indian army to a great extent
- As India faces double front war against China and Pakistan this satellite shall provide added impetus to our military capability.

#### India's other military satellites

- An Electromagnetic Intelligence Gathering Satellite (EMISAT), developed by ISRO, was launched in April 2020 through a Polar Satellite Launch Vehicle (PSLV-C45).
- EMISAT has an electronic intelligence (ELINT) package called Kautilya, which allows interception of ground-based radar and carries out electronic surveillance across India.
- India also has a RISAT 2BR1 synthetic aperture radar imaging satellite, which was launched in December 2019 from Sriharikota.

## National Pharmaceutical Pricing Authority

**News:** The NPPA has announced a hike in prices of around 800 essential drugs from April 1. These drugs are included in the National list of essential Medicine (NLEM)

#### About NPPA:

- NPPA was constituted by the Government of India in 1997 as an attached office of the Department of Pharmaceuticals (DoP), Ministry of Chemicals & Fertilizers as an independent Regulator for pricing of drugs and to ensure availability and accessibility of medicines at affordable prices.
- It was made to fix/revise prices of controlled bulk drugs and formulations and to enforce price

**RELIEF FOR INDUSTRY HIT BY HIGH COSTS**

- > Govt is expected to let drug cos hike prices **in line with rise in wholesale price index**, which was 10.8% for 2021
- > Drug prices regulator NPPA is likely to announce the **higher price caps within days**
- > Over **850 formulations** across key therapies may be impacted
- > This would be the first time essentials — like **painkillers, anti-infectives, cardiac & antibiotics** — are allowed a price-hike of more than that for non-scheduled drugs
- > The move will provide major relief to the industry as it has been **incurring cost-escalations of 60-70%**



and availability of the medicines in the country, under the Drugs (Prices Control) Order, 1995-2013 (DPCO). The clause 16 of Drugs Price Control Order 2013, allows NPPA to revise the ceiling price of scheduled formulations as per the annual wholesale price index (WPI) for the preceding calendar year on or before 1 April of every year and notify the same on the first day of April every year.

#### **NELM:**

- Under the provisions of Drug Prices Control Order, 2013, only the prices of drugs that figure in the National List of Essential Medicines (NLEM) are monitored and controlled by the regulator, the National Pharmaceutical Pricing Authority.
- Essential medicines are those that satisfy the priority healthcare needs of the majority of the population.
- The primary purpose of NLEM is to promote rational use of medicines.

## **Microplastics in Human Blood**

**News:** Tiny particles of plastics, called Microplastics, were detected in human blood for the first time, according to researchers in Netherlands. The researchers adapted existing techniques to detect and analyze particles that were as small as 700 nanometers in size. They targeted five common plastics, including Polyethylene Terephthalate (PET), and polyethylene

#### **What are Microplastics?**

- They are defined as plastics less than five millimetres in diameter. They are classified into Primary microplastics and Secondary microplastics.
- Primary microplastics are tiny particles designed for commercial use. Example, microbeads found in personal care products, plastic fibres.
- Secondary microplastics are formed from breakdown of larger plastics such as water bottles.

#### **What did the study find?**

- The scientists analysed blood samples from 22 anonymous donors, all healthy adults and found plastic particles in 17.
- Half the samples contained PET plastic, which is commonly used in drinks bottles.
- A third contained polystyrene, used for packaging food and other products.
- Previous work had shown that microplastics were 10 times higher in the faeces of babies compared with adults and that babies fed with plastic bottles are swallowing millions of microplastic particles a day.
- The particles can travel around the body and may settle in organs. The impact on health is yet to be known.

#### **Concerns surrounding Microplastics**

- Microplastics may stick around Red Blood Cells and may limit their ability to transport oxygen.
- The particles have also been found in placentas of pregnant women.
- Babies and young children are more susceptible to chemical and particle exposure.

#### **Initiatives taken to tackle Microplastics**

- Elimination of Single Use Plastic by 2022 (call given by the PM himself in 2019)
- Plastic Waste management rules, 2016 state that every local body has to be responsible for setting up infrastructure for segregation, collection, processing, and disposal of plastic waste.
- Plastic waste management (amended) rules 2018 introduced the concept of Extended Producer Responsibility (EPR)
- Un-Plastic Collective (UPC), a voluntary initiative seeks to minimise externalities of plastics on the ecological and social health of our planet.

## **What is NETRA Project?**

**News:** In pursue of addressing the space junk crisis, a space debris tracking radar with a range of 1500 km and an optical telescope will be inducted as a part of establishing an effective surveillance and tracking network under the Network for Space Objects Tracking and Analysis (NETRA) project.

### **About Space Junk:**

- Space junk or debris consist of spent rocket stages, dead satellites, fragments of space objects resulting from Anti-Satellite systems (ASAT).
- Most of these debris are found in Low-earth Orbit (LEO) and even centimeter sized fragments can be catastrophic to satellites.
- The Kessler Syndrome states that if there is too much space junk in orbit, it could result in a chain reaction where further more objects will collide and create new junk in the space.

### **About NETRA Project:**

- It is an early warning space system in space to detect debris and other hazards to our satellites. Once functional, it will help our country gain Space situational awareness (SSA).
- Under NETRA, the ISRO plans to put up many observational facilities: connected radars, telescopes, data processing units and a control centre.
- NETRA can spot, track and catalogue objects as small as 10 cm, up to a range of 3,400 km and equal to a space orbit of around 2,000 km.
- The SSA also has a military quotient to it and adds a new ring to the country's overall security, against attacks from air, space or sea.
- At present, India depends on data from North American Aerospace Defend Command (NORAD), which shares selective debris data with many countries.
- As more countries launch space satellites, each of them has a commercial or strategic component, thus avoiding collisions becomes vital and being self-reliant in this area will help India safeguard its space assets.

## **MATLAB Software and I-STEM Portal**

**News:** For the first time in the country, academic users in India will be able to access the MATLAB software suite at no cost through the Indian Science Technology and Engineering facilities Map (I-STEM) portal.

### **About MATLAB:**

- It is a proprietary multi-paradigm programming language and numeric computing environment developed by MathWorks.
- MATLAB, allows matrix manipulations, plotting of functions and data, implementation of algorithms, creation of user interfaces, and interfacing with programs written in other languages.

### **About I-STEM Portal:**

- I-STEM is a National Web portal for sharing R&D (Research and Development) facilities.
- The portal facilitates researchers to access slots for the use of equipment, as well as to share the details of the outcomes, such as, patents, publications and technologies.
- In July, 2021, I-STEM project was accorded an extension for five years, until 2026 and entered its second phase with added features.
- Launched in January 2020, it is an initiative of Office of the Principal Scientific Adviser to the Government of India under the aegis of Prime Minister Science, Technology and Innovation Advisory Council (PM-STIAC) mission.

### **Objectives under Phase II of the Scheme:**

- The portal will host indigenous technology products listed through a digital catalogue.
- Access to selected R&D software required to undertake research projects by students and scientists.
- The portal will also provide a platform for the various City Knowledge and Innovation Clusters to enhance effective use of R&D infrastructure.
- Focus on Tier 2 and Tier 3 cities to boost research and innovation for emerging start-up ecosystem.

# Environment & Bio-diversity

## UNEP Resolution on SDG

**News:** Recently, the Fifth UN Environment Assembly concluded with 14 resolutions to strengthen actions for nature to achieve the Sustainable Development Goals.

### Details:

- The overall theme for UNEA-5 was “Strengthening Actions for Nature to Achieve the Sustainable Development Goals”, which was hosted by the UN Environment Programme.
- The Assembly will be followed by "UNEP@50", a two-day Special Session of the Assembly marking UNEP's 50 anniversary where member states are expected to address how to build a resilient and inclusive post-pandemic world, as well as to endorse a draft Political Declaration.
- The world's ministers for the environment agreed to establish an Intergovernmental Negotiating Committee (INC) with the mandate to forge an international legally binding agreement to end plastic pollution.
- INC will begin its work in 2022, with the ambition of completing a draft global legally binding agreement by the end of 2024.
- This development is considered the most important environmental deal since the 2015 Paris Agreement.
- Under the legally binding agreement, countries will be expected to develop, implement and update national action plans reflecting country-driven approaches to contribute to the objectives of the instrument.
- They will be expected to promote national action plans to work towards the prevention, reduction and elimination of plastic pollution and to support regional and international cooperation.

### Resolution on Management of Chemicals and Waste:

- It supports the establishment of a comprehensive and ambitious science policy panel on the sound management of chemicals and waste and preventing pollution. The Ministerial Declaration recognises humanity's failure to date to manage chemicals and waste, a threat that is further aggravated by the Covid-19 pandemic through widespread use of single-use plastics and disinfectant chemicals.

### Resolution focused on Nature-based Solutions:

- In the spirit of the UN Decade for Ecosystem Restoration (2021-2030), it focuses on nature-based solutions: actions to protect, conserve, restore, sustainably use and manage ecosystems. The resolution calls on UNEP to support the implementation of such solutions, which safeguard the rights of communities and indigenous peoples.

### Resolution Prioritising Ecosystem Restoration:

- Three resolutions prioritize ecosystem restoration, biodiversity protection, resource efficiency, consumption and production patterns, climate mitigation and adaptation, job creation and poverty reduction.

### Resolution on Minerals and Metals:

- It calls for the development of proposals to enhance their environmental sustainability along their full lifecycle.

### Resolution on Sustainable Lake Management:

- It calls on member states to protect, conserve, and restore, as well as sustainably use lakes, while integrating lakes into national and regional development plans.

### Resolution on Sustainable and Resilient Infrastructure:

- It encourages member states to integrate environmental considerations in all their infrastructure plans.

### Resolution on Animal Welfare:

- It calls on member states to protect animals, protecting their habitats and meeting their welfare requirements.

- It recognised the risk for future pandemics and other health risks if humanity doesn't overhaul its patterns of interaction with nature by adopting a holistic approach such as 'One Health'.

#### **Resolution on Biodiversity and Health:**

- It calls on member states to reduce health risks associated with trade in live wildlife captured for the purposes of food, captive breeding, medicines and the pet trade, through regulation and sanitary controls.

#### **Resolution to Reduce Nitrogen Waste:**

- It calls for accelerated actions to significantly reduce nitrogen waste from all sources, especially through agricultural practices, and saving USD100 billion annually.

#### **Resolution to strengthen measures Post Covid:**

- The Assembly adopted a "resolution on the environmental dimension of a sustainable, resilient and inclusive post-Covid-19 recovery" to strengthen measures to achieve a sustainable, resilient and inclusive global recovery.

#### **Other Resolutions:**

- Additional resolutions and decisions from the Assembly address the date and venue for UNEA-6, the future of the Global Environment Outlook (GEO) and the equitable geographical representation and balance in the secretariat of UNEP.

## **Conservation Reserve for Dugong**

**News:** Recently, the Tamil Nadu government has decided to go ahead with the establishment of India's first conservation reserve for the Dugong in Gulf of Mannar, Palk Bay. It facilitates India to act as the leading nation in the South Asia Sub-region with respect to dugong conservation.

#### **Dugongs?**

- Dugong (Dugong dugon) also called 'Sea Cow' is one of the four surviving species in the Order Sirenia and it is the only existing species of herbivorous mammal that lives exclusively in the sea including in India.
- Dugongs are an important part of the marine ecosystem and their depletion will have effects all the way up the food chain. They are found in over 30 countries and in India are seen in the Gulf of Mannar, Gulf of Kutch, Palk Bay, and the Andaman and Nicobar Islands.
- IUCN Red List status: Vulnerable
- Wild (Life) Protection Act, 1972: Schedule I
- CITES: Appendix I
- Dugongs graze on seagrass and the loss of seagrass beds due to ocean floor trawling is one of the most important factors behind decreasing dugong populations in many parts of the world.
- Trawling is a method of fishing that involves pulling a fishing net through the water behind one or more boats. It is harmful to the environment because it damages the seafloor, coral reefs and other marine animals.
- Human activities such as the destruction and modification of habitat, pollution, rampant illegal fishing activities, vessel strikes, unsustainable hunting or poaching and unplanned tourism are the main threats to dugongs. Dugong meat is consumed under the wrong impression that it cools down human body temperature.
- In February 2020, India hosted the 13<sup>th</sup> Conference of Parties (CoP) of the Convention on the Conservation of Migratory Species of Wild Animals (CMS), an environmental treaty under the aegis of the United Nations Environment Programme (UNEP). The Government of India has been a signatory to the CMS since 1983.
- India has signed non-legally binding Memorandums of Understanding (MoU) with CMS on the conservation and management of Siberian Cranes (1998), Marine Turtles (2007), Dugongs (2008) and Raptors (2016).
- The Ministry of Environment, Forests and Climate Change constituted a 'Task Force for Conservation of Dugongs' to look into issues related to conservation of dugongs and implementation of the 'UNEP/CMS Dugong MoU' in India. It also facilitates India to act as the leading nation in the South Asia Sub-region with respect to dugong conservation.



### What are Conservation Reserves?

- Conservation reserves and community reserves are terms denoting protected areas of the country which typically act as buffer zones to or connectors and migration corridors between established national parks, wildlife sanctuaries and reserved and protected forests.
- Such areas are designated as conservation areas if they are uninhabited and completely owned by the Government of India but used for subsistence by communities and community areas if part of the lands are privately owned. These protected area categories were first introduced in the Wildlife (Protection) Amendment Act of 2002 – the amendment to the Wildlife Protection Act of 1972.
- These categories were added because of reduced protection in and around existing or proposed protected areas due to private ownership of land and land use.

## State of India's Environment Report

**News:** Recently, the Centre for Science and Environment (CSE), released the State of India's Environment Report 2022. The report is the annual publication of the Centre for Science and Environment, and Down To Earth (magazine). The report focuses on climate change, migration, health and food systems. It also covers biodiversity, forest and wildlife, energy, industry, habitat, pollution, waste, agriculture and rural development. CSE is a public interest research and advocacy organisation based in New Delhi.

### India's position on various targets:

- The target for the economy is to raise the Gross Domestic Product (GDP) to nearly USD 4 trillion by 2022-23. But by 2020, the economy has grown only to USD 2.48 trillion. The economy has largely shrunk during the Covid-19 pandemic, making it even more difficult to meet the deadline.
- The target is to increase the female labour force participation rate to at least 30% by 2022-23. It stood at 17.3% in January-March 2020.
- The targets are to construct 29.5 million housing units under Pradhan Mantri Awas Yojana (PMAY)-Rural and 12 million units under PMAY-Urban. Only about 46.8% and 38% respectively of the targets under 'Housing for All' have been achieved.
- The target is to provide safe piped drinking water to all by 2022-23. Only 45% of the target has been achieved.
- The target is to double farmers' income by 2022. While the average monthly income of an agricultural household has increased to Rs 10,218 from Rs 6,426, this increase is largely due to increase in wages and income from farming animals. The share of income from crop production in the average monthly income of an agricultural household has, in fact, dropped — to 37.2% in 2018-19, from 48% in 2012-13.
- Another target is to digitise all land records by 2022. While states like Madhya Pradesh, West Bengal and Odisha have made good progress, states like Jammu and Kashmir, Ladakh and Sikkim languish at 5%, 2% and 8.8% digitisation of land records, respectively. Overall, the target is unlikely to be met, particularly because 14 states have witnessed deterioration in the quality of land records since 2019-20.
- The target is to bring down Particulate Matter (PM) 2.5 levels in Indian cities to less than 50 micrograms per cubic metre ( $\mu\text{g}/\text{m}^3$ ). In 2020, when vehicular movement was restricted due to the pandemic, 23 of the 121 cities monitored for PM2.5 exceeded  $50 \mu\text{g}/\text{m}^3$ .
- The target is to achieve 100% source segregation in all households. The overall progress is 78%, and while states like Kerala and Union territories like Puducherry have achieved the target, others like West Bengal and Delhi are woefully behind. Manual scavenging is targeted for eradication, but India still has 66,692 manual scavengers.
- The target is to increase it to 33.3% of the geographical area, as envisaged in the National Forest Policy, 1988.
- By 2019, 21.6% of India was under forest cover.
- The target is to achieve 175 GW of renewable energy generation capacity by 2022. Only 56% of this target has been achieved thus far.

### India's Performance on Sustainable Development Goals:

- India has slipped three spots to rank 120 on the 17 Sustainable Development Goals (SDG) adopted as a part of the 2030 agenda by 192 United Nations member states in 2015.

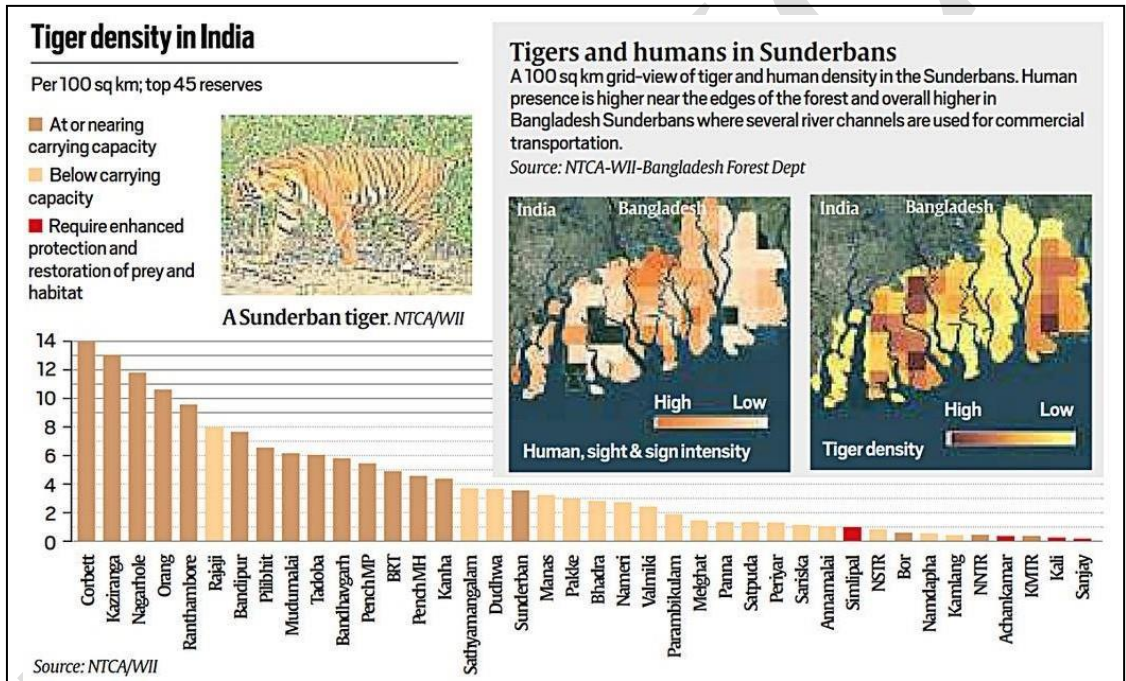
- In 2021 India ranked 117 among 192 nations. India’s overall SDG score was 66 out of 100.
- India’s rank dropped primarily because of major challenges in 11 SDGs including zero hunger, good health and wellbeing, gender equality and sustainable cities and communities.
- India also performed poorly in dealing with quality education and life on land aspects.
- In 2021, India had suffered on the fronts of ending hunger and achieving food security, achieving gender equality and building resilient infrastructure, promoting inclusive and sustainable industrialisation and fostering innovation.

## Tiger Density in India

**News:** Preliminary findings of a study by the Wildlife Institute of India (WII) suggest that the density of tigers in the Sunderbans may have reached the carrying capacity of the mangrove forests, leading to frequent dispersals and a surge in human-wildlife conflict.

### Tiger Density of India

- In the Terai and Shivalik hills habitat — think Corbett tiger reserve, for example — 10-16 tigers can survive in 100 sq km.
- This slides to 7-11 tigers per 100 sq km in the reserves of north-central Western Ghats such as Bandipur, and to 6-10 tigers per 100 sq km in the dry deciduous forests, such as Kanha, of central India.



- The correlation between prey availability and tiger density is fairly established.
- There is even a simple linear regression explaining the relationship in the 2018 All-India Tiger report that put the carrying capacity in the Sunderbans “at around 4 tigers” per 100 sq km.
- A joint Indo-Bangla study in 2015 pegged the tiger density at 2.85 per 100 sq km after surveying eight blocks spanning 2,913 sq km across the international borders in the Sunderbans.
- The consequence, as classical theories go, is frequent dispersal of tigers leading to higher levels of human-wildlife conflict in the reserve peripheries.
- Physical (space) and biological (forest productivity) factors have an obvious influence on a reserve’s carrying capacity of tigers.
- What also plays a crucial role is how the dispersal of wildlife is tolerated by people — from the locals who live around them to policymakers who decide management strategies.
- More so when different land uses overlap and a good number of people depend on forest resources for livelihood.

### Way forward:

- But though vital for genes to travel and avoid a population bottleneck, wildlife corridors may not be the one-stop solution for conflict. First, not all dispersing tigers will chance upon corridors simply because many will find territories of other tigers between them and such openings.



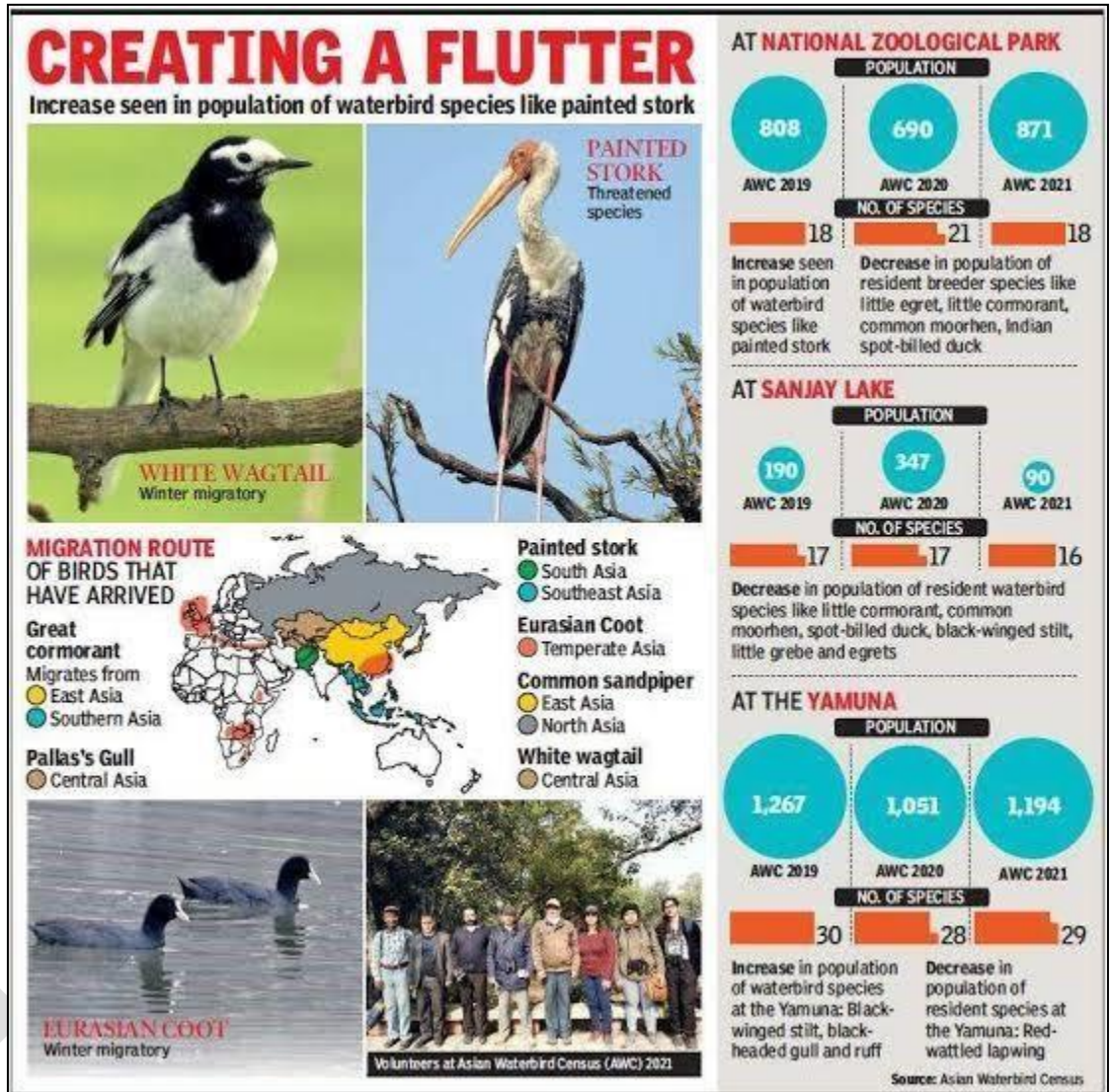
- Even the lucky few that may take those routes are likely to wander to the forest edges along the way. Worse, the corridors may not lead to viable forests in reserves such as Sunderbans, bounded by the sea and villages.

## Species Richness Survey

**News:** Every year, the Wildlife Department of Forests and Wildlife Preservation, Punjab, conducts waterbirds census exercise in six major and most biodiverse wetlands, which include the Nangal Wildlife Sanctuary, the Ropar Conservation Reserve, the Harike Wildlife Sanctuary, the Kanjli Wetland, the Keshopur-Miani Community Reserve and the Ranjit Sagar Conservation Reserve. However, the census could not be done this year on account of dense fog conditions. Instead, a “species richness” survey was conducted by the Department of Forests and Wildlife Preservation with the support from the WWF-India.

### Details:

- According to Wetlands International (WI), waterbirds are defined as species of birds that are ecologically dependent on wetlands. These birds are considered to be an important health indicator of wetlands of a region.
- 91 species of waterbirds were recorded from the six protected wetlands.
- The waterbird count was highest in the Harike Wildlife Sanctuary followed by the Keshopur–Miani Community Reserve, Ropar Conservation Reserve and Nangal Wildlife Sanctuary.
- Wetlands like Keshopur–Miani and Shallpattan are the only wetlands in Punjab to host the migratory population of common crane and resident population of the Sarus crane.
- The Ropar and Nangal wetlands host the three migratory water species of the family Podicipedidae i.e., black-necked Grebe, Horned Grebe and Greater Crested Grebe along with the resident Little Grebe.
- Eurasian Coot was one of the most common waterbirds spotted in almost all protected wetlands of Punjab during the survey.
- The species of high conservation significance recorded during the survey include Bonelli’s Eagle, Greater Spotted Eagle, Northern Lapwing, Peregrine Falcon, Steppe Eagle, Western Black-tailed Godwit, Black-headed Ibis, Sarus Crane, Painted Stork, Woolly-necked Stork, Common Pochard, Common Crane,



Ferruginous Pochard, Pallid Harrier, River Tern, Indian Spotted Eagle, River Lapwing, Oriental Darter, and Eurasian Curlew.

- Every winter, the birds make their way to India through the central Asian flyway, which covers a large continental area of Europe–Asia between the Arctic and the Indian Oceans.

#### **What is migration? Why is it significant?**

- Migration is an adaptation mechanism to help birds overcome weather adversities and unavailability of food in colder regions. The importance of bird migrations on the health of the ecosystems is well-established.
- Saving migratory birds means saving the wetlands, terrestrial habitats and saving of an ecosystem, benefiting communities dependent on wetlands.

#### **Challenges faced by migratory birds:**

- Accelerated habitat loss globally during the last decade.
- Decreased area under water bodies, wetlands, natural grasslands and forests.
- Increased weather variability, and climate change have resulted in loss of biodiversity for the migratory birds.

## **Amazon Rainforests**

**News:** A study published recently says that a significant part of the Amazon rainforest has been heading towards a tipping point since the early 2000s. It may be losing its ability to bounce back from extreme events such as drought or fire, threatening to become a dry savanna-like ecosystem. In this study, researchers analyzed 30 years of satellite data to understand the resilience of the rainforest and how it has changed over the years. The latest findings are consistent with the accumulating evidence that the twin pressures of climate change and human exploitation of tropical forests are endangering the world's largest rainforest, which is home to one out of every 10 species known to science.

#### **Savannah-Like Ecosystem:**

- The Savannah ecosystem is a tropical grassland with warm temperatures year-round and with its highest seasonal rainfall in the summer. The savanna is characterized by grasses and small or dispersed trees that do not form a closed canopy, allowing sunlight to reach the ground.
- The largest areas of savanna are found in Africa, South America, Australia, India, the Myanmar (Burma)–Thailand region in Asia, and Madagascar.

#### **Latest findings:**

- There are signs of a loss of resilience in more than 75% of the forest, with trees taking longer to recover from the effects of droughts largely driven by climate change as well as human impacts such as deforestation and fires. A vicious cycle of damage could trigger "dieback". Dieback is a condition in which a tree or shrub begins to die from the tip of its leaves or roots backwards, owing to disease or an unfavourable environment.
- While it's not clear when that critical point might be reached, the implications for climate change, biodiversity and the local community would be "devastating". A previous study predicted that a tipping point would occur when the rainforest witnesses roughly 20-25% of deforestation.

#### **Causes:**

- It totalled 430 square kilometers in January 2022, five times higher than the same month last year. Around a fifth of the rainforest has already been lost, compared to pre-industrial levels. This loss will affect the amount of rainfall. Trees take up water through the roots, releasing it into the atmosphere, influencing precipitation over South America.
- Increasing temperatures due to human-induced climate change and deforestation are pushing the rainforest to transform into a carbon source: Places that release more CO<sub>2</sub> than they absorb. The researchers warn that the forests could release vast amounts of CO<sub>2</sub> if they partially transform into dry habitats.
- Human land-use activities — direct removal of trees, construction of roads, and fires — could be another contributor. It has been on the rise since 2010.



# Project Report on Rivers Rejuvenation

**News:** Recently, the Ministry of Environment, Forest and Climate Change released Rs. 19,000-crore Detailed Project Reports (DPRs) on rejuvenation of 13 major rivers through forestry interventions. These 13 rivers are Jhelum, Chenab, Ravi, Beas, Sutlej, Yamuna, Brahmaputra, Narmada, Godavari, Mahanadi, Krishna, Cauvery, and Luni.

## Background:

- It is modelled on the lines of the work done as part of the National Mission for Clean Ganga (NMCG) in 2015-16 for the river and acknowledging that the growing water crisis is on account of degradation of river ecosystems, The project adopted a multi-scale, multi-stakeholder, multidisciplinary and holistic approach so as to accomplish broad objectives of 'Aviral Dhara' (uninterrupted flow), 'Nirmal Dhara' (clean water), and ecological rejuvenation.

## Details:

- The 13 rivers collectively cover a total basin area of 18,90,110 square kilometres that represents 57.45% of the geographical area of the country. The length of 13 rivers, including 202 tributaries within the delineated riverscapes, is 42,830 km. The Brahmaputra Riverscape incorporated the highest number of tributaries (30) and 1,54,456 sq km area, respectively. The documents propose many kinds of afforestation for the rivers. They include timber species, medicinal plants, grasses, shrubs and fuel fodder and fruit trees.
- The DPRs recognise the merit of adopting a holistic riverscape approach for forestry interventions in three types of landscapes viz., natural, agriculture, and urban within the vast expanse of a riverscape besides conservation interventions including soil and moisture conservation measures, riverine and riparian wildlife management, and wetland management.
- These are done with supporting activities such as policy level interventions, strategic and adaptive research, capacity development, awareness creation, project management and participatory monitoring & evaluation).

## Benefits:

- It is expected to increase the cumulative forest cover of 7,417.36 sq km across 13 riverscapes.
- Proposed interventions would help in sequestration of CO<sub>2</sub> to the extent of 50.21 million tonnes of CO<sub>2</sub> equivalent in 10-year-old plantations while the value of estimated CO<sub>2</sub> sequestered in 20-year-old plantations would be 74.76 million tonnes of CO<sub>2</sub>.
- They would help recharge groundwater, reduce sedimentation, generate Rs. 449.01 crore from non-timber and other forest produce.
- They are also expected to make a significant contribution towards employment generation by way of nearly 344 million man-days of work.
- These efforts would help India meet its international climate commitments of:
  - Creating an additional carbon sink of 2.5 -3 billion tonnes of CO<sub>2</sub> equivalent through additional forest and tree cover by 2030 under the Paris Agreement of the United Nations Framework Convention on Climate Change (UNFCCC),
  - Restore 26 million hectares of degraded lands by 2030 and
  - Halt biodiversity loss by 2030 under Convention on Biological Diversity (CBD) and Sustainable Development Goals.
- At the COP26 meeting, India promised to reduce its projected carbon emission by one billion tonnes by 2030, meet 50% of energy requirements with renewable energy by 2030, enhance non-fossil energy capacity to 500 gigawatt by 2030, reduce the carbon intensity of its economy by 45% by 2030 and achieve net zero emission by 2070. Under the Bonn Challenge, India had also pledged in 2015 to restore five million hectares of degraded land by 2030.

## Challenges:

- Growing water crisis on account of depleting fresh water resources especially due to shrinking and degradation of river ecosystems is a major impediment to achieving national goals pertaining to environment, conservation, climate change and sustainable development.

- The success of the project hinges on several factors, including the correct method of plantation and changes in climate.

## World Water Day

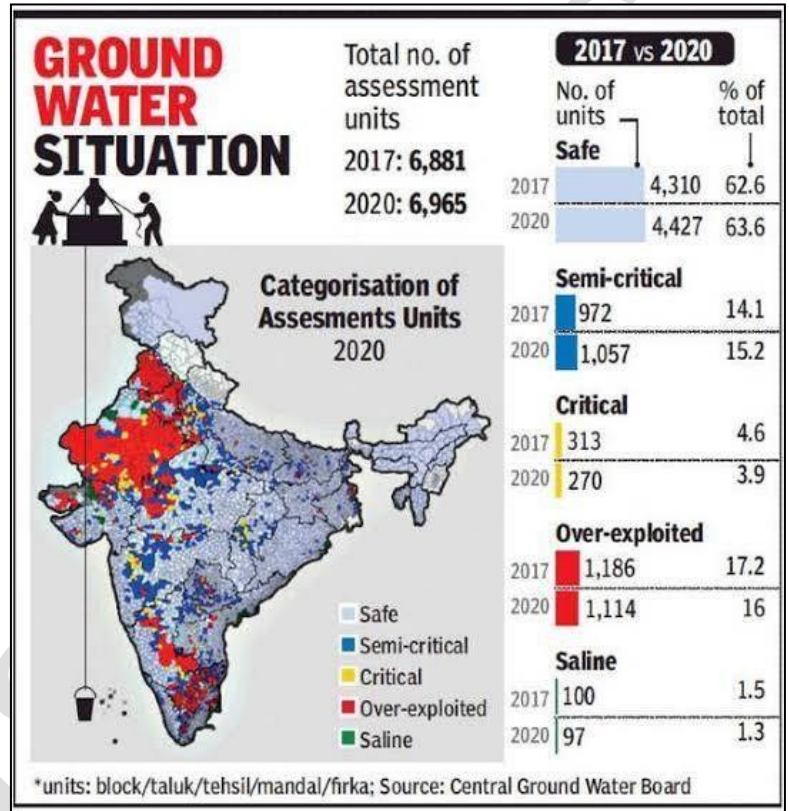
**News:** World Water Day is celebrated on 22<sup>nd</sup> March every year to highlight the importance of water. The theme of World Water Day is, 'Groundwater, making the invisible visible'

### Water as a Human Right

- The United Nations in 2010, recognized 'the right to safe and clean drinking water and sanitation as a human right that is essential for the full enjoyment of life and all human rights.'
- The Sustainable Development Goal 6 (SDG 6) aims to ensure availability and sustainable management of water for all by 2030.

### Why should we conserve Groundwater?

- Groundwater is a vital resource that provides almost half of all drinking water worldwide, about 40% of water for irrigated agriculture and about 1/3<sup>rd</sup> of water required for industry.
- It sustains ecosystems, maintains the baseflow of rivers and prevents land subsidence and seawater intrusion.
- However, groundwater reserves are already under pressure as the global population explodes and crop production rises. Climate variability also increases pressure on groundwater level.
- Countries in the Asia-Pacific (Bangladesh, China, India, Indonesia, Pakistan, Turkey, Iran) are largest groundwater abstractor in the world comprising roughly 60% of the world's total groundwater withdrawal.



## Mercury Pollution

**News:** Indonesia has introduced a global declaration that calls on parties to the Minamata Convention on Mercury to tackle illegal trade of mercury.

### Minamata Convention on Mercury

- The Minamata Convention on Mercury is a global treaty to protect human health and the environment from the adverse effects of mercury and its compounds.
- Controlling the anthropogenic release of mercury throughout the lifecycle is one of important obligation under the convention.
- It covers all aspect of life cycle of mercury, controlling and reducing mercury across range of products, industries and processes.
- India has ratified the convention and is therefore bound by international law to put certain controls in place.

### About Mercury

- It is a naturally occurring element in air, water and soil. Mercury may have toxic effects on the nervous, digestive and immune systems, and on lungs, kidneys, skin and eyes.

- Exposure to mercury – even small amounts – may cause serious health problems, and is a threat to the development of the child in utero and early in life. It is considered by WHO as one of the top ten chemicals or groups of chemicals of major public health concern.
- People are mainly exposed to methylmercury, when they eat fish and shellfish

#### **How to reduce human exposure from mercury sources?**

- Promote the use of clean energy that do not burn coal
- Eliminate mercury mining, and the use of mercury in gold extraction and several industrial processes
- Phase out use of non-essential mercury containing products. For example, mercury is found in products such as batteries, electric switches, pharmaceuticals, skin-lightening products and other cosmetics.

## **World Air Quality Report 2021**

**News:** The 2021 World Air Quality Report was released; the report presented an overview of the state of global air quality in 2021. IQAir, a Swiss group that measures air quality levels based on the concentration of Particulate Matter (PM) 2.5.

#### **Worrying trends associated with Air pollution:**

- Air pollution is now considered to be the world's largest environmental health threat, accounting for seven million deaths around the world every year. Air pollution causes and aggravates many diseases, ranging from asthma to cancer, lung illnesses and heart disease.
- The estimated daily economic cost of air pollution has been figured at \$8 billion (USD), or 3 to 4 per cent of the gross world product. Air pollution affects those that are most vulnerable the most. It is estimated that in 2021, the deaths of 40,000 children under the age of five were directly linked to PM2.5 air pollution.

#### **Key Findings:**

- Bangladesh was the most polluted country in the world in 2021. The data reveals that not a single country in the world managed to meet the WHO's air quality standard in 2021.
- All over the world, 93 cities reported PM 2.5 levels at 10 times the recommended level.

#### **Performance of India**

- New Delhi continues to be the world's most polluted capital city for the fourth consecutive year.
- As per the report, in 2021, India was home to 11 of the 15 most polluted cities in Central and also in South Asia. Bhiwandi topped the list under the worst air quality tag for 2021.

#### **Steps taken by India to address Air pollution:**

- System of Air Quality and Weather Forecasting and Research (SAFAR) Portal
- Air Quality Index: AQI has been developed for eight pollutants viz. PM2.5, PM10, Ammonia, Lead, nitrogen oxides, sulphur dioxide, ozone, and carbon monoxide.
- For reducing vehicular pollution, we have introduced BS-VI vehicle norms, push towards Electric Vehicles (EVs)
- Graded Response Action Plan

## **Grey Water Recycling Project**

**News:** The Ministry of Jal Shakti launched a countrywide project to reuse grey water, or run-offs from kitchens, bathing and laundry.

#### **What is Grey Water?**

- Grey water is defined as wastewater that is produced from household processes (e.g. washing dishes, laundry and bathing).
- It can contain harmful bacteria and even faecal matter that contaminates soil and groundwater.

## 'Sujalam 2.0' Grey Water Recycling Project

- The campaign would focus on the creation of institutional level greywater management assets in Panchayat Ghar, healthcare facilities, schools, Anganwadi Centres (AWCs), community centres and other government institutions.
- Creation of individual and community greywater management assets will be encouraged.

### Need to address Grey water crisis:

- Saving freshwater can not only significantly reduce household water bills, but also has larger community benefit in reducing demands on public water supply.
- It will help reduce amount of wastewater entering sewers or on-site treatment systems.
- It is estimated that 31 billion litres of greywater is generated every day in India.
- Over 6 crores tap water connections have been provided under Jal Jeevan Mission therefore giving added impetus to address grey water crisis.

### Related initiatives taken by Indian Government:

- Jal Shakti Abhiyan
- Atal Bhujal Yojana

**Way Forward:** Sustainable Development Goal 6 aims to provide universal access to safe and clean drinking water and sanitation thus there is need to develop sustainable behaviour practices to conserve water.

## Desert Fox and Mange Disease

**News:** Recently a few Desert Foxes were spotted in the scrub forests of Rajasthan's Jaisalmer district, suffering from a loss of fur due to the Mange Skin Disease.

### About:

- Desert fox is the third sub-species of red fox in India. Desert fox inhabits the dry and semi-arid regions of western and north-western India.
- Desert foxes can be found wandering around sand dunes and semi-dried river beds, where they build their dens.
- IUCN Red List: Least Concern
- CITES Listing: Appendix II
- India's Wildlife Protection Act: Schedule II



### What is Mange Disease?

- Mange is a skin disease of animals caused by mite infestations, characterized by inflammation, itching, thickening of the skin, and hair loss. They are transmitted between animals by direct contact and by objects that have been in contact with infested animals. Most forms of mange are treatable.

## One-Horned Rhinos

**News:** The population of one-horned rhinoceros increased by 200 over the last four years in Assam's Kaziranga National Park and Tiger Reserve.

### About Rhinoceros:

- Only the Great One-Horned Rhino is found in India.
- Also known as Indian rhino, it is the largest of the rhino species.
- It is identified by a single black horn and a grey-brown hide with skin folds.
- IUCN Red List – Vulnerable
- CITES – Appendix I
- Wildlife Protection Act, 1972 – Schedule I

### Conservation efforts by India:

- National Rhino Conservation Strategy: It was launched in 2019 to conserve the greater one-horned rhinoceros. A project to create DNA profiles of all Rhinos in the country by MoEFCC.
- 'The New Delhi Declaration on Asian Rhinos 2019' for the conservation and protection of the species started by India, Bhutan, Nepal, Indonesia and Malaysia.



# Security & Disaster Management

## Defence Acquisition Procedure

**News:** The Ministry of Defence approved projects that will involve design and development of the military hardware covering light tanks, airborne stand-off jammers, communication equipment and simulators under Defence Acquisition Procedure (DAP).

### Background:

- The defense ministry has cleared nine such projects: four under the 'Make-I' and five under the 'Make-2' categories of the DAP 2020.
- In the Union Budget 2022, India earmarked Rs 84,598 crore - 68% of the military's capital acquisition budget - for purchasing locally produced weapons and systems to boost self-reliance in the defence sector, besides setting aside 25% of the defence R&D budget for private industry, startups and academia to encourage them to pursue design and development of military platforms.

### What is the 'Make' Category?

- The 'Make' category of capital acquisition is the cornerstone of the Make in India initiative that seeks to build indigenous capabilities through the involvement of both public and private sector.
- 'Make-I' refers to government-funded projects while 'Make-II' covers industry-funded programmes.
- Make-I involved in development of big-ticket platforms such as light tank and communication equipment with Indian security protocols.
- Make-II category involves prototype development of military hardware or its upgrade for import substitution for which no government funding is provided.
- The five projects approved under the industry-funded Make-II procedure are simulators for Apache attacks helicopters and Chinook multi-mission choppers, wearable robotic equipment for aircraft maintenance, autonomous combat vehicle and integrated surveillance and targeting system for mechanised forces.
- Another sub-category under 'Make' is 'Make-III' that covers military hardware that may not be designed and developed indigenously, but can be manufactured in the country for import substitution, and Indian firms may manufacture these in collaboration with foreign partners.

### What is DAP 2020?

- It enables the notification of a List of Weapons or Platforms that will be banned for import. It focuses on Foreign Direct Investment (FDI) in defence manufacturing and indigenization of the manufacturing prices. It also introduces several new ideas such as the need to incorporate artificial intelligence in platforms and systems, use of indigenous software in defence equipment and 'innovation' by Start-ups and MSMEs (Micro, Small and Medium Enterprises) as a new category of defence acquisition.
- It includes following procurement categories: Buy (Indian - Indigenously Designed Developed and Manufactured), Buy (Indian), Buy and Make (Indian), Buy (Global - Manufacture in India) and Buy (Global).
- It increases the Indigenous Content (IC) requirement for all projects from 40% to 50% earlier, depending on the category, to 50% to 60%.
- Only under procurement through Buy (Global), foreign vendors can have 30% IC from Indian companies.

## India as World's largest arms importer

**News:** India is amongst the world's largest arms importers, accounting for 11 per cent of global imports, according to the Stockholm International Peace Research Institute (SIPRI).

### Details:

- India's overall imports decreased by 21% between 2012-16 and 2017-21 but that it was still the world's biggest importer of military hardware. Russia, France and the US are India's biggest suppliers of arms, accounting for 46%, 27% and 12% of the country's imports in the last five years. India's share of global arms imports stood at 11% during 2017-21 compared to 14% in the previous five-year period.

- Russia's arms exports to India fell 47% between 2012-16 and 2017-21 even though the deliveries of several platforms including air defence systems and warships are pending. Russia was the largest supplier of major weapons and systems to India during the two comparative five-year periods.

### **Significance of the report**

- The report has come at a time when India's dependence on Russian military hardware, ranging from fighter jets to rifles and submarines to shoulder-fired missiles has come into sharp focus.
- Though India has been procuring US military hardware in growing numbers about 60% of the weapons inventory of the three services continues to be of Russian-origin.
- It is still unclear how the new sanctions against Russia could play out and the problems they could create for the armed forces in the short and long term.
- The possible impact of Russia's unprecedented economic isolation on India's military preparedness and the serviceability of weapons and equipment is threatened.
- India has major plans for arms imports because of perceived threats from China and Pakistan, and due to significant delays in indigenous production. The drop in India's arms imports is, therefore, probably a temporary result of its slow and complex procurement process as well as its shift in suppliers.

## **Disaster Management Plan for Panchayats**

**News:** Recently, the Union Minister of Rural Development & Panchayati Raj released the Disaster Management Plan of the Ministry of Panchayati Raj (DMP-MoPR).

### **Details:**

- It has been prepared with a larger perspective of community-based planning starting from Village to District Panchayat level. Under the Plan, every Indian village would have a "Village Disaster Management Plan" and every Panchayat would have their Disaster Management Plan.
- The aim is to build disaster resilience at the grassroots level among the Panchayats and establish a framework to align the disaster management measures in rural areas to that of the National Disaster Management Authority. It incorporates many innovations in addition to being in compliance with Disaster Management Act 2005, National Disaster Management Policy 2009, and guidelines issued by National Disaster Management Authority.
- It comprehensively covers areas such as:
  - Institutional arrangement for Disaster Management.
  - Hazard Risk, Vulnerability and Capacity Analysis.
  - Coherence of Disaster Risk Management across Resilient Development and Climate Change Action.
  - Disaster Specific Preventive and Mitigation Measures-Responsibility Framework.
  - Mainstreaming of Community Based Disaster Management Plan of Villages and Panchayats and so on.

### **Significance:**

- India has been vulnerable, in varying degrees, to many natural as well as human-made disasters on account of its unique geo-climatic and socio-economic conditions.
- A natural disaster includes earthquakes, floods, landslides, cyclones, tsunamis, urban flood, droughts.
- A man-made disaster can be nuclear, biological and chemical. Different parts of the country are highly vulnerable to cyclones, floods, droughts, earthquakes, landslides, etc.
- The convergent and collective actions to envision, plan and implement community-based disaster management plans, would be a game changer in managing disasters comprehensively.
- All stakeholders including Panchayati Raj Institutions (PRI), elected representatives and functionaries of Panchayats etc. would participate in planning, implementation, monitoring and evaluation of the plan.
- The involvement of the community is the key factor in any disaster preparedness strategy and active participation of the community is vital to carry out and sustain the activities relating to disaster management in rural areas.
- This plan would be extremely useful for ensuring a participatory planning process for DMPs which is integrated with Gram Panchayat Development Plan (GPDP) for addressing disasters across the country and initiate a new era of community-based disaster management, convergence and collective action with programs and schemes of different Ministries / Departments.

## Indian Ocean Naval Symposium Maritime Exercise 2022

**News:** The maiden edition of Indian Ocean Naval Symposium (IONS) Maritime Exercise 2022 (IMEX-22) was conducted at Goa and in the Arabian Sea.

### IMEX-22

- The aim of the exercise was to enhance interoperability in Humanitarian Assistance and Disaster Relief (HADR) operations among member navies.
- The exercise is seen as a significant stepping stone for regional navies to collaborate and respond collectively to natural disasters in the region and paves way for further strengthening regional cooperation.

### About IONS:

- IONS is a premier forum for cooperation and collaboration among navies of littoral states of the Indian Ocean Region.
- There are 36 littoral states in the Indian Ocean which have been geographically grouped into the following four sub-regions.
- South Asian Littorals - Bangladesh, India, Maldives, Pakistan, Seychelles and Sri Lanka
- West Asian Littorals - Bahrain, Iran, Iraq, Kuwait, Oman, Qatar, Saudi Arabia, UAE and Yemen
- East African Littorals - Comoros, Djibouti, Egypt, Eritrea, France, Kenya, Madagascar, Mauritius, Mozambique, Somalia, South Africa, Sudan and Tanzania
- South East Asian and Australian Littorals - Australia, Indonesia, Malaysia, Myanmar, Singapore, Thailand and Timor Leste.
- The forum has promoted discussions on regional maritime issues, friendly relations and has significantly improved maritime security in the Indian ocean region.

### Other crucial groupings associated with IOR:

- Colombo Security Conclave
- Indian Ocean Rim Association
- Indian Ocean Commission
- Security and Growth for All in the region (SAGAR)
- Asia-Africa Growth Corridor

# General Studies – 4

## Ethics, Integrity & Aptitude

1. Ethics and Human Interface: Essence, determinants and consequences of Ethics in-human actions; dimensions of ethics; ethics - in private and public relationships. Human Values - lessons from the lives and teachings of great leaders, reformers and administrators; role of family society and educational institutions in inculcating values.
2. Attitude: content, structure, function; its influence and relation with thought and behaviour; moral and political attitudes; social influence and persuasion.
3. Aptitude and foundational values for Civil Service, integrity, impartiality and non-partisanship, objectivity, dedication to public service, empathy, tolerance and compassion towards the weaker-sections.
4. Emotional intelligence-concepts, and their utilities and application in administration and governance.
5. Contributions of moral thinkers and philosophers from India and world.
6. Public/Civil service values and Ethics in Public administration: Status and problems; ethical concerns and dilemmas in government and private institutions; laws, rules, regulations and conscience as sources of ethical guidance; accountability and ethical governance; strengthening of ethical and moral values in governance; ethical issues in international relations and funding; corporate governance.
7. Probity in Governance: Concept of public service; Philosophical basis of governance and probity; Information sharing and transparency in government, Right to Information, Codes of Ethics, Codes of Conduct, Citizen's Charters, Work culture, Quality of service delivery, Utilization of public funds, challenges of corruption.
8. Case Studies on above issues

## Humanitarian Corridors

**News:** Recently, Russia declared a temporary ceasefire in the Russia-Ukraine War to provide "humanitarian corridors" for civilians. As the war enters a likely deadlier phase, numerous civilians attempt to leave the country for safety and refuge, there must be humanitarian measures taken to reduce civilian casualties.

### What are Humanitarian Corridors?

- About: They are demilitarised zones, in a specific area and for a specific time — and both sides of an armed conflict agree to them. The United Nations (UN) considers humanitarian corridors to be one of several possible forms of a temporary pause of armed conflict.
- For example, through large-scale bombing of civilian targets — humanitarian corridors can provide crucial relief. The corridors are necessary when cities are under siege and the population is cut off from basic food supplies, electricity and water. Through these corridors, either food and medical aid can be brought to areas of conflict, or civilians can be evacuated. Access to humanitarian corridors is determined by the parties to the conflict. It's usually limited to neutral actors, the UN or aid organisations such as the Red Cross.
- They can also be used by UN observers, Non-governmental Organisations (NGOs) and journalists to gain access to contested areas where war crimes are being committed.



### **What are International conventions related to the Humanitarian Corridor?**

- Even before international organisations recognised humanitarian corridors, such zones were defined in armed conflicts including in World War II when Jewish children were evacuated from areas under Nazi control to the United Kingdom.
- Humanitarian corridors were defined in resolution 45/100 of the UNs' general assembly in 1990.
- It said that "relief corridors" are seen by the international community as an important instrument to back up the right of civilians to receive assistance during armed conflicts.
- It is also recognized in the Geneva Conventions of 1949 and their Additional Protocols of 1977.
- In 1992, the International Institute of Humanitarian Law from Sanremo in Italy defined the concept more specifically. "Humanitarian assistance can transit, in this case, through the so-called humanitarian corridors, which must be respected and protected by the relevant authorities and, if necessary, under the authority of the UN". Humanitarian corridors have been frequently used in the Syrian civil war, Libyan civil war, and Gaza war among other such conflict zones.

### **Associated Issues:**

- Since all sides need to agree to set up the corridors, Humanitarian corridors are difficult to enforce. There are many wars and conflicts where calls for civilian corridors or a pause in fighting have been made in vain.
- In the ongoing war in Yemen, for instance, the UN has so far failed in its negotiations. There is a risk of military or political abuse. For example, the corridors can be used to smuggle weapons and fuel into besieged cities.

# Short News for Prelims

## UPI123Pay

**News:** The Reserve Bank of India has launched a new Unified Payments Interface (UPI) payments solution for feature phone users dubbed 'UPI123Pay'.

### What is UPI123Pay?

- UPI '123PAY' is a three-step method to initiate and execute services for users which will work on simple phones. It will allow customers to use feature phones for almost all transactions except scan and pay.
- It doesn't need an internet connection for transactions. The new UPI payments system offers users four options to make payments without internet connectivity:
- Interactive Voice Response (IVR): Users would be required to initiate a secured call from their feature phones to a predetermined IVR number and complete UPI on-boarding formalities to be able to start making financial transactions like money transfer, mobile recharge, EMI repayment, balance check, among others.
- App-based functionality: One could also install an app on feature phone through which several UPI functions, available on smartphones, will be available on their feature phone, except scan and pay feature which is currently not available.
- Missed call facility: The missed call facility will allow users to access their bank account and perform routine transactions such as receiving, transferring funds, regular purchases, bill payments, etc., by giving a missed call on the number displayed at the merchant outlet. The customer will receive an incoming call to authenticate the transaction by entering UPI PIN.
- Proximity sound-based payments: One could utilise the proximity sound-based payments option, which uses sound waves to enable contactless, offline, and proximity data communication on any device.

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military preparedness and the serviceability of weapons and equipment is threatened.

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## Reserve Bank Innovation Hub

**News:** The Governor, Reserve Bank of India (RBI), Shri Shaktikanta Das inaugurated the Reserve Bank Innovation Hub (RBIH) today (March 24, 2022) in Bengaluru.

**About:** It has been setup as Section 8 company under the Companies Act, 2013 with an initial capital contribution of Rs.100 crore. It is wholly owned subsidiary of RBI.

### Purpose:

- RBIH aims to create an ecosystem that focuses on promoting access to financial services and products for the low-income population in the country.
- The Hub is expected to build an ecosystem for development of prototypes, patents and proofs of concept and promote cross-thinking, spanning regulatory domains and national boundaries.
- It intends to also mentor start-ups having maximum potential.
- RBI Innovation hub hosted Swanari TechSprint to create sustainable solutions for women-owned enterprises. Techsprint aimed to advance digital financial inclusion for women in India.

## Battle of Rezang La and Ahir Regiment Demand

**News:** Members of Ahir community have been demanding an Ahir Regiment in the Indian army. The community is known for the bravery shown by the Ahir troops of Haryana in the Battle of Rezang La in 1962.

**About Rezang La:** It is a mountain pass on the Line of actual control (LAC) in Ladakh.

### About the Battle:

- Troops from the 13 Kumaon Regiment defeated heavy Chinese People's Army Liberation incursion efforts in 1962
- Even in the most challenging circumstances and being outnumbered, the soldiers fought to the last man standing.

### Why Rezang La is important?

- The region is vital for the defence of Chushul as any invader reaching there would have free run at Leh.

## Medium Range Surface to Air Missiles (MRSAM)

- It is a high response, quick reaction, vertically launched supersonic missile, designed to neutralize enemy aerial threats – missiles, aircraft, guided bombs, helicopters.
- This MRSAM version is a Surface-to-Air Missile developed jointly by DRDO and Israel Aerospace Industries (IAI), Israel for use by the Indian Army.

## Pensilungpa Glacier

- Location – Zaskar Range, Ladakh
- It is retreating due to an increase in temperature and decrease in precipitation in the winters. Geologically, the Zaskar range is part of Tethys Himalaya.
- Marbal Pass and Zojila Pass are important passes of Zaskar range

## Shrinkflation

- It is the practice of reducing the size of the product while maintaining its sticker price. It is a form of hidden inflation.
- It is a strategy generally observed in companies, mainly in the food and beverage industries, to secretly boost profit margins or maintain them in the face of rising input costs. It is also referred to as package downsizing in business.