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Comprehensive NEWS Analysis

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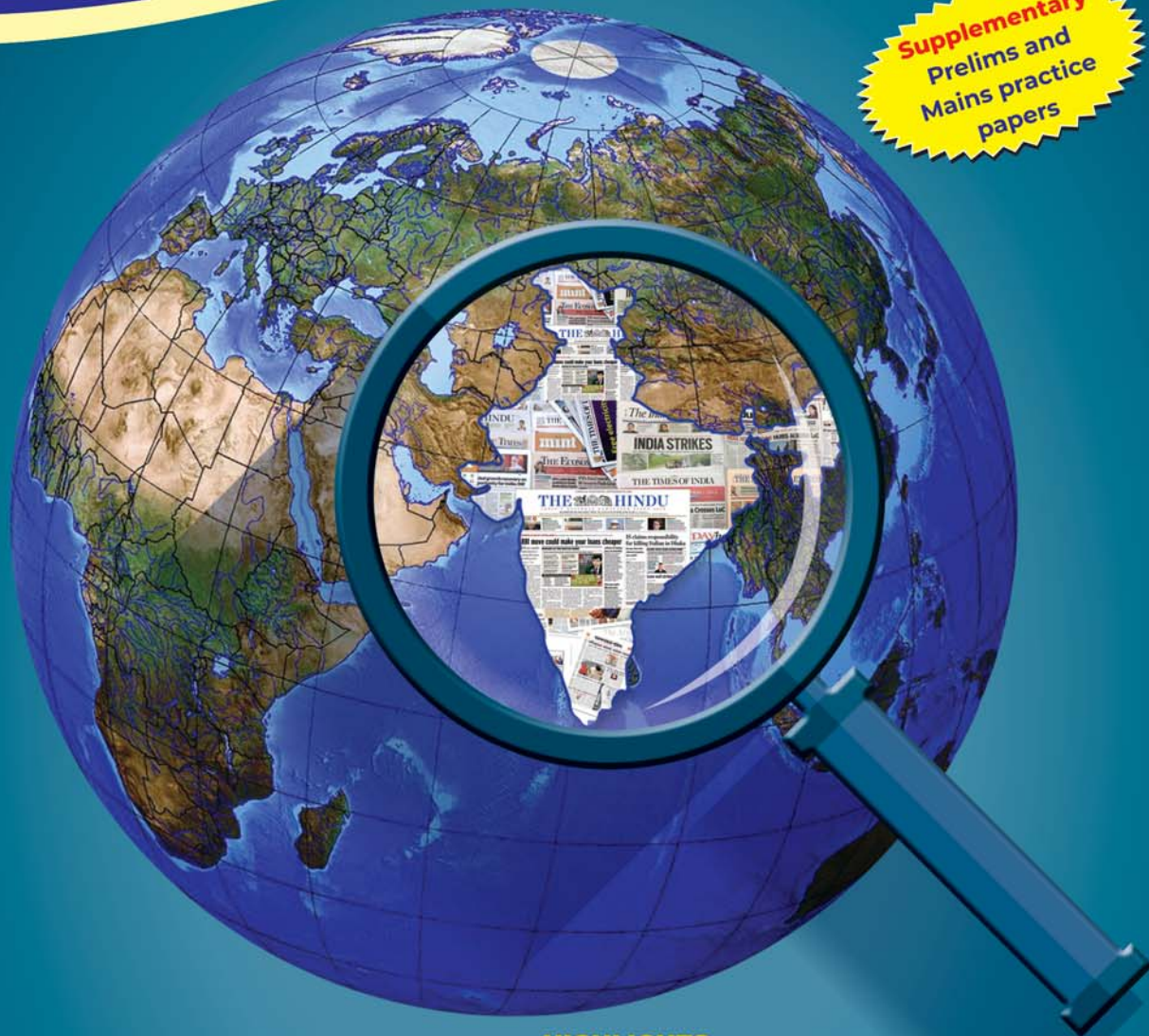
INDIA STRIKES

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Dear Students,

As part of my academic career I have had the good fortune of meeting some of the most amazing and highly motivated students. Of Course they had different aspirations in life. Some of them wanted to be Civil Servants and some wanted to be Mathematicians just to name a few vocations (there are many more). But what all of them had in common was their quest for knowledge. But as times change and young blood flows in, a plethora of changes took place in the learning ecosystem too. In this time and age of the digital uprising a new generation is taking over the reigns from the present, namely "The Millennials".

Srikanth Vinnakota
Editor-in-Chief

Now coming to *The Millennials*". They are a different brand altogether. Apart from their "out-of-the-box" career choices what seems interesting to me is the breath of fresh air they bring into all the conventional employment. I am truly inspired by their grit and determination in learning something new altogether like picking up a new language or playing an instrument or staying updated on day to day events happening somewhere else in the world. Also I believe that this attitude is needed these days because finding formal employment through regular means is getting difficult day by day because of the kind of competition that is there for such jobs. In that case having the knowledge of diverse topics would be "the feather in the hat" if not more to be able to not just secure employment for self but to be able to give employment to others as well. The aim of our magazine **'Samiksha'** is to equip the reader with this kind of information which is diverse, authentic and useful not only in the present day but also for the future.

Our publishing team which is a dynamic amalgamation of young and the experienced, puts together all the important happening of a month for you. The information is collected from authentic sources and the views expressed are carefully curated keeping in view the realities of our day and age. We pay utmost attention to the fact that our reader can be a college going student or a Civil Services Aspirant or for the matter of fact any other person who is just curious. We try our best to give a comprehensive 360 Degree view of the given topic and cover it in all dimensions possible. We deem it as our privilege to be able to serve the young of our society. In the words of Desiderius Erasmus; "The main hope of a nation lies in the proper education of its youth."

I take your leave and wish you happy reading.

CONTENTS

HUGE PENDENCIES OF CASES IN THE INDIAN COURTS

The Covid-19 pandemic has impacted virtually every aspect of socio-economic-political setup in India and quite obviously Judiciary hasn't been immune to it. By and large, the courts have not worked with a full caseload since March 2020.

As a result, when the lockdown of March 2020 was declared, there were 3.68 crore cases across all levels; which have already shot up to 4.42 crore.

These delays and inefficiencies arising from the heavy dockets in Indian courts have long been a matter of concern and complements the saying that justice delayed is justice denied. Thus Judicial reforms, if taken seriously, expeditious and effective justice can see the light of day.

Reasons for Delay

- Persisting Vacancies: Across India, there are vacancies against even the sanctioned strengths of courts and in the worst performing states those vacancies exceed 30 per cent.
  * Due to this, the average waiting period for trial in lower courts is around 10 years and 2-5 years in HCs.
- Poor State of Subordinate Judiciary: District courts across the country also suffer from inadequate infrastructure and poor working conditions, which need drastic improvement, particularly if they are to meet the digital expectations raised by the higher judiciary.
  * Also, there is a yawning digital divide between courts, practitioners and clients in metropolitan cities and those outside. Overcoming the hurdles of decrepit infrastructure and digital illiteracy will take years.
- Government, the Biggest Litigant: Poorly drafted orders have resulted in contested tax revenues equal to 4.7 per cent of the GDP and it is rising.
  * Crowding out investment: Roughly Rs 50,000 crore are locked up in stalled projects and investments are reducing. Both these complications have arisen because of injunctions and stay orders granted by the courts primarily due to poorly drafted and poorly reasoned orders.
- Less budgetary allocation: The budget allocated to the judiciary is between 0.08 and 0.09 per cent of the GDP. Only four countries — Japan, Norway, Australia and Iceland — have a lesser budget allocation and they do not have problems of pendency like India.

Way Forward

- Increasing Strength of Judicial Service: One of the solutions is to

substantially increase the strength of the judicial services by appointing more judges at the subordinate level — improvements must start from the bottom of the pyramid.

　＊ Strengthening the subordinate judiciary also means providing it with administrative and technical support and prospects for promotion, development and training.

　＊ Institutionalising All-India Judicial Service can be a step in the right direction.

● Adequate Budgeting: The appointments and improvements will require significant but absolutely necessary expenditure.

　＊ The recommendations of the Fifteenth Finance Commission and the India Justice Report 2020 have raised the issue and suggested ways to earmark and deploy funds.

● Hibernating Unnecessary PILs: The Supreme Court should mandate summary disposal of all 'hibernating' PILs – those pending for more than 10 years before HCs – if they do not concern a question of significant public policy or law.

● Correcting Historical Inequalities: Reforms in Judiciary should also encompass addressing social inequalities within the judiciary.

　＊ Women judges, and judges from historically-marginalised castes and classes must finally be given a fair share of seats at the table.

● Promoting Alternative Dispute Resolution: It should be mandated that all commercial litigation will be entertained only if there is an affidavit from the petitioner that mediation and conciliation have been attempted and have failed.

　＊ Mechanisms such as ADR (Alternate Dispute Resolution), Lok Adalats, Gram Nyayalayas should be effectively utilised.

Conclusion

Courts are sitting on a pendency bomb and it has never been more urgent to strengthen the judiciary. Thus, there is a need to take a holistic and realistic view of the present situation of the Indian Judiciary.

DIST, SUBORDINATE COURTS WORST-HIT

Dates	Supreme Court	High Courts	District/ Subordinate Courts
Dec 2018	56,994	49.8 lakh	2.9 crore
March 25, 2020	60,603	46.4 lakh	3.2 crore
June 23, 2020	60,628	48 lakh	3.3 crore
Jan 30, 2021	65,086	56.6 lakh	3.7 crore
April 15, 2021	67,279	57.5 lakh	3.8 crore

Note: The figures above are total pending cases in courts as on the given date.
Source: National Judicial Data Grid and SC

Quad & China's Wolf Warrior diplomacy

Chinese ambassador to Bangladesh warns Dhaka of significant damage to its relationship with Beijing if it joins the Quad, or the quadrilateral framework.

- Earlier, Bangladesh had only shown interest in being a part of the Indo-Pacific initiative because of its location in the Bay of Bengal.

- None of the countries that are part of the Quad have invited Dhaka to join it so far and have themselves made it clear many times that they are not keen on expanding the grouping yet.

- Quad is a strategic and security grouping under the Indo-Pacific framework aimed at restraining China's rise.

- However, the remarks by Chinese diplomats are example of its Wolf Warrior Diplomacy, which is a sign of its aggressive and assertive foreign policy.

- China is becoming abrasive brand of nationalism. Chinese communist Party embraced nationalism as a co-option strategy in the aftermath of the Tiananmen Square massacre.

- Such kind of foreign policies help it in domestic politics also.

WOLF WARRIOR DIPLOMACY: AN ANALYSIS

Meaning and Origin

- Wolf Warrior Diplomacy reinforces a presumed transition of Chinese diplomacy from conservative, passive, and low-key to assertive, proactive, and high-profile.

- 'Wolf-warrior diplomacy' is named after Chinese movies Wolf Warrior that highlight agents of Chinese special operation forces and boosted national pride and patriotism.

- Chinese diplomat 'Lijian Zhao' started the trend of 'wolf-warrior' diplomacy back in 2019 when he hit back at 'Susan Rice', former US president national security advisor, for her comments criticising the discrimination faced by Uyghurs in China.

Glimpse of China's Assertive or Wolf Warrior Diplomacy

- Chinese diplomats, since the March of 2020, are on an overdrive peddling fake news and trickeries and attacking all countries that sought accountability

for a crisis that has killed more than 2 million people and disrupted billions of lives all over the world.

- Chinese diplomats alleged that Australian soldiers serving in Afghanistan were involved in a number of unlawful killings and included a picture depicting an Australian soldier holding a knife to the throat of an Afghan child.
- China has turned Hong Kong from a democracy to a dictatorship overnight.
- China even conducted the horribly failed Galwan land grab from India in Ladakh.
- It has tried to do everything to isolate India in its own neighbourhood in an attempt to scuttle India's rise as a global power.

Chinese coastguard ship allegedly sank a Vietnamese fishing trawler near the Paracel Islands.

- When Vietnam protested, the Chinese foreign ministry responded by mentioning Vietnam's claims to the area as illegal.

The Chinese Ministry of Natural Resources and Ministry of Civil Affairs jointly announced the naming of 80 islands, reefs, seamounts, shoals, and ridges in the South China Sea, triggering angry protests from other claimants.

- The last time China named islands and other geographical features in the South China Sea was in 1983.

Whichever country raised question against China, its diplomats took hard jab on them.

Reasons behind China's resorting to wolf-warrior diplomacy

- Soaring Nationalism: This change did not occur suddenly. Since 2010, when China's GDP overtook Japan's as the world's second largest, the Chinese have become more confident and its foreign policy has become more assertive.
- As the Communist Party continues to promote nationalism, it has been on the rise.
- In recent years, Chinese President has advocated a fighting spirit on several occasions, whether speaking to soldiers or party officials.
- This has apparently raised the morale of Chinese officials and diplomats, and encouraged a more assertive style.
- Wolf-warrior diplomacy is evidenced not only in combative words but aggressive actions.
- **China's defence:** As China becomes more powerful, some other countries increasingly view its development as a threat to their national interests. These countries are generally unprepared or unwilling to accept China's rise.
- Wolf-warrior diplomacy is part of the Chinese government's endeavour to 'tell the China story'.
- The latest diplomatic offensive is also part of the official effort to project China as a great power leading the global fight against the COVID-19.
- China's image suffered during the crisis due to its bungled handling of the outbreak at the early stage and it was blamed for initially covering up the human-to-human transmission of the virus and not sharing complete information with the international community.
- From China's perspective, wolf-warrior diplomacy is a direct response to unfair approaches by other countries, especially the U.S., toward China and the Chinese people.
- Chinese diplomats's claim that the coronavirus might have been brought to Wuhan by the U.S. military was a response to U.S. politicians' calling it 'Chinese virus'.

Pre-emption is part of wolf warrior diplomacy and very much part of Beijing's strategic culture.

- In September 2007, Chinese media dubbed the annual Malabar exercises in the Bay of Bengal as the foundation for an "Asian Nato".

Hurting China's foreign policy

- There is no consensus within the Chinese foreign policy establishment on whether confrontational diplomacy is desirable or not.
- It is not easy for all Chinese diplomats to act as wolf-warriors.
- Wolf-warrior diplomacy is already hurting China's foreign policy, since it has generated pushback, such as Australia's calls for an independent probe into the coronavirus' origins.
- China's soft power is weak globally and such a belligerent *a*pproach will further damage China's global image.
- It is in contrast with its proud and glorious ancient civilization, which taught to remain humble, benevolent, and magnanimous.

RECENT DEVELOPMENTS AND INDIA'S GAIN

Bangladesh interest to join Indo-Pacific

- Bangladesh's interests in joining the Indo-Pacific initiative were aimed at strengthening its eco-

nomic ties with countries in this vast region and also for enhanced connectivity.

- Dhaka views Indo-Pacific purely from an economic perspective and considers Bay of Bengal area as part of the blue economy.

- For Bangladesh, getting part of any security alliance as such is difficult because it believes in non-aligned policies and it will make its bargaining power capacity difficult.

- Bangladesh, which supports China's Belt and Road Initiative, is open to similar infrastructure cooperation with the US, Japan and India.

China wary of Quad

- The recent remark of China against Bangladesh is not just part of its wolf warrior diplomacy but also its suspicion over the Quad (Quadrilateral Framework) grouping of US, India, Japan and Australia.

- One of the core agendas of QUAD is to ensure that the Indo-Pacific region remains inclusive, free and open.

- This assumes greater significance in light of the expansionist and at times belligerent approach of China in the region.

- Most nations in the region (Taiwan, Japan, Philippines, Vietnam, Malaysia, Brunei and India) have territorial or maritime security issues with China.

- China has been particularly aggressive in South China sea where it has refused to honour internationally accepted maritime laws and agreements.

So, while the QUAD may discuss economic, development, pandemic and other issues, the core issue will always remain security and defense to counter the growing military might of China that it is not averse to flexing from time to time.

Dragon showing its true nature: India's Gain

- China is always using tough language when it came to issues of its sovereignty and territorial integrity, and pushed back vigorously against any perceived attempts at interfering in its internal affairs.

- The new wolf warrior diplomacy confronts head-on any criticism of China in the public sphere. Chinese diplomats lecture host governments and don't always show up when summoned by foreign offices.

- The comments of the Chinese envoy against Dhaka point to the new kind of challenges that the Subcontinent' nations will face from the assertive superpower.

- Chinese ambassador was surely aware that the Quad has not invited Dhaka to join the party but still it simply laid down a red line for Bangladesh.

- The controversy in Dhaka will help South Asian nations to update their past images of Beijing.

- In the pursuit of its growing regional interests, China is no longer reluctant to intervene.

- India's South Asian neighbours, all of whom enjoy good relations with China, are only now getting a taste of Beijing's new diplomatic medicine.

- Delhi has learnt that too much diplomatic swag in the Subcontinent has tended to undermine the pursuit of India's regional objectives.

- Indian ambassadors have learnt the art of patience and are easily accessible to all the neighbouring countries.

- These countries have no political recourse at all in China's closed political system that has become so much tighter under President Xi.

- India's neighbours have always complained about India's inefficiency in implementing economic projects and contrasted this with China's speed and purposefulness.

- But now they are understanding the flip side of Chinese economic efficiency, which is the capacity to set and implement terms of cooperation that are not always in favour of the host nation.

CONCLUSION

China has been changed a lot as far as its economic and military power is concerned. It is playing offensive to keep its interests safe and wants no one to raise question on its activities. It is indicating the world that it is capable of playing a role of super power. In order to make this possible, China is resorting to wolf warrior diplomacy. However, this policy can harm China's own interest in the region and can help India to regain trust of its neighbours. The neighbours in the region are discovering that the things will not go that much easy with China. On other hand, striking a balance between firmly defending national interests and enhancing soft power is a great challenge in Chinese diplomacy today.

Defence Production for India

The second negative import list, which has been now rechristened as the positive list, has been delayed due to the ongoing pandemic and will be issued very soon by the Department of Military Affairs (DMA).

- The Additional Secretary Defence Production informed that the final version of the 'Defence Production and Export Promotion Policy (DPEPP) 2020' will also be put out very soon.

- The draft DPEPP 2020 was released in August last year for public feedback and once it comes into effect, it will serve as the overarching guiding document of the Defence Ministry for boosting domestic defence manufacturing as well as exports.

- The first negative import list issued last year had listed 101 military items that cannot be imported from abroad.

- As part of efforts to promote the role of the private sector in defence manufacturing, testing facilities of DPSUS and DRDO are being opened up for use by the private sector while new ones are planned to be set up under the Defence testing Infrastructure Scheme (DTIS).

- The DTIS proposes setting up six to eight greenfield testing facilities in partnership with the private sector with a total Grant-in-Aid of ₹ 400 crore, according to the Directorate General of Quality Assurance.

Defence Production and Export Promotion Policy (DPEPP), 2020

- The DPEPP, 2020 has been formulated by the Ministry of Defence as an overarching guiding document to provide a focused, structured and significant thrust to defence production capabilities of the country for self-reliance and exports.

Salient Features of DPEPP, 2020: The Policy brings out multiple strategies under the following focus areas:

1. Procurement Reforms
2. Indigenization & Support to MSMEs/Startups
3. Optimize Resource Allocation
4. Investment Promotion, FDI & Ease of Doing Business
5. Innovation and R&D
6. DPSUs and OFB
7. Quality Assurance & Testing Infrastructure

Export Promotion

Goals and Objectives

- To achieve a turnover of Rs. 1,75,000 crores including exports of Rs. 35,000 crores in Aerospace and Defence goods and services by 2025.

- To develop a dynamic, robust and competitive Defence industry, including Aerospace and Naval Shipbuilding industry to cater to the needs of Armed forces with quality products.

- To reduce the dependence on imports and take forward "Make in India" initiatives through domestic design and development.

- To promote the export of defence products and become part of the global defence value chains.

- To create an environment that encourages research and development (R&D), rewards innovation, creates Indian Intellectual Property (IP) ownership and promotes a robust and self-reliant defence industry.

Strategies outlined under the Policy

- Procurement Reforms
- Setting up of a Project Management Unit (PMU) for the development and production of the technologies involved, life cycle costs and the maintenance requirements of platforms, equipment and weapon systems.
- The policy aims to move away from the licensed production to design, develop and produce indigenously.
- It also aims to own the design rights and IP of the systems projected in the Long Term Integrated Perspective Plan (LTIPP) and a Technology Assessment Cell (TAC) will be created.
- The aim of setting up a TAC is to assess the industrial capability for design, development and production, including re-engineering for production of major systems like the armoured vehicles, fighter aircraft, helicopters and radars with the major industries in the country.

Indigenisation and Support to MSMEs/ Startups

- The aim of the indigenisation policy is to create an industry ecosystem to indigenise the imported components (including alloys and special materials) and submarines for defence equipment and platforms that are manufactured in India. 5000 such items are proposed to be indigenised by 2025.

- More than 50 startups are currently developing new 'fit-for-military-use' technologies/ products.

Optimise Resource Allocation

- The share of domestic procurement in the overall Defence Procurement is about 60 percent.
- There is a need to double the procurements from the current needs from the current Rs. 70,000 crores to Rs. 1,40,000 crores by 2025, in order to enhance the procurements from domestic industry.

Investment Promotion and Ease of Doing Business (EoDB)

- India is already a large aerospace market with increasing passenger traffic as well as increasing military expenditure, due to which the demand for aircraft (fixed and rotary wings) is also rising.
- Following segments have been identified as opportunities in the aerospace industry- aircraft build work, aircraft maintenance, Repair and Overhaul (MRO), helicopters, engine manufacturing and MRO work, line replaceable units, Unmanned Aerial Vehicles (UAVs) and upgrades and retrofits.
- The improvement in market size, demographic dividend and availability of diverse skill sets are evident from India's ranking in the World Bank's Ease of Doing Business (EoDB) index.
- The investments in the defence sector need to regularly sustain the steady supply of orders.

Innovation and R&D

- Innovations for Defence Excellence (iDEX) has been operationalised to provide necessary

incubation and infrastructure support to the startups in the defence area.

- iDEX would be further scaled up to engage with 300 more startups and development of 60 new technologies/ products during the next five years.
- The government has also launched Mission Raksha Gyan Shakti with an aim to promote a greater culture of innovation and technology development and file a higher number of patents in the Defence Public Sector Undertakings (DPSUs), Ordnance Factory Board (OFB). It would be scaled up for promoting the creation of Intellectual Property in the sector and its commercial utilisation.

FDI limit increased to 74% by automatic route

- The liberalisation of FDI in defence manufacturing, raising the limit under the automatic route to 74%, has opened the door to more joint ventures of foreign and Indian companies for defence manufacturing in India.
- It would also sustain domestic industrial activity in the research, design and manufacture of systems and subsystems.

Need and Significance of Indigenization in defence technology

1. Economic- Indigenization of defence procurement will help reduce the huge defence import bill. India was the largest importer in the past decade accounting for about 12% of global arms imports. It would also reduce the overall fiscal deficit of the government.
2. Security Imperative-Domestic

production reduces vulnerabilities during crises by reducing dependence on imported spares, ammunition and weapons. India being surrounded by porous borders and hostile neighbours needs to be self- sufficient and self-reliant in defence production to meet any unforeseen circumstances.

3. Technological- It keeps intact the technological expertise in the country and encourages spin-off technologies and innovation that often stem from it.

4. Promote Exports- production of high quality defence equipment within the country can facilitate its sale to other developing countries.

5. Employment Generation- it will lead to opening up of new industries as manufacturing hubs for defence procurement and thus create employment for a lot of people in various sectors like designing, manufacturing, innovating, etc.

6. Strategic- self-sufficiency in defence production is one of the fundamental steps in realizing the goal of being a global power.

Conclusion

Self-reliance in defence manufacturing is one of the crucial components of effective defence capability for any country and also important to maintain national sovereignty and achieve military superiority. Its attainment will also ensure strategic independence, cost effective defence equipment and can also lead to a reduction in the defence import bill. This can subsequently help in financing the physical as well as social infrastructure of the country. The government aspires to make India 'Atmanirbhar" or self-reliant and the defence sector is a crucial part of it. Above all, it will also strengthen India's aspirations of Asian century, SAGAR, secure Indo- Pacific and a multipolar world.

Climate Change Causing Shift in Earth's Axis

A study published in Geophysical Research Letters of the American Geophysical Union (AGU) says that due to the significant melting of glaciers because of global temperature rise, Earth's axis of rotation has been moving more than usual since the 1990s.

- While this change is not expected to affect daily life, it can change the length of the day by a few milliseconds.

Key Points

Earth's Axis of Rotation:

- It is the line along which it spins around itself as it revolves around the Sun.
  - ✳ Earth's axial tilt (also known as the obliquity of the ecliptic) is abo-ut 23.5 degrees. Due to this axial tilt, the sun shines on different lati-tudes at different angles through-out the year. This causes the seaso-ns.
- The points on which the axis intersects the planet's surface are the geograph-ical north and south poles.
  - ✳ The location of the poles is not fixed. The axis moves due to changes in how the Earth's mass is distributed around the planet. Thus, the poles move when the axis moves, and the movement is called "polar motion".
  - ✳ Generally, polar motion is caused by changes in the hydrosphere, atmosphere, oceans, or solid Earth. But now, climate change is adding to the degree with which the poles wander.
- According to NASA, data from the 20th century shows that the spin axis drifted about 10 centimetres per year. Meaning over a century, polar motion exceeds 10 metres.

Findings from the New Study:

- Since the 1990s, climate change has caused billions of tonnes of glacial ice to melt into oceans. This has caused the Earth's poles to move in new directions.
- The north pole has shifted in a new eastward direction since the 1990s, because of changes in the hydrosphere (meaning the way in which water is stored on Earth).
- From 1995 to 2020, the average speed of drift was 17 times faster than from 1981 to 1995.

- Also, in the last four decades, the poles moved by about 4 metres in distance.
- The calculations were based on satellite data from NASA's Gravity Recovery and Climate Experiment (GRACE) mission.
- Causes of Polar Drift:
  - ✳ **Ice Melting:**
- The faster ice melting under global warming was the most likely cause of the directional change of the polar drift in the 1990s.
- As glaciers melt, water mass redistributes, causing shifts in the planet's axis.
  - ✳ **Change in Non-Glacial Regions (Terrestrial Water Storage):**
- Due to climate change and unsustainable consumption of groundwater for irrigation and other anthropogenic activities.
  - ✳ **Groundwater Depletion:**
- As millions of tonnes of water from below the land is pumped out every year for drinking, industries or agriculture, most of it eventually joins the sea, thus redistributing the planet's mass.

Havana Syndrome

Recently, two US officials have shown symptoms of a mystery illness that is linked to Havana Syndrome.

- In 2020, a report by the National Academies of Sciences (NAS), US found directed microwave radiation to be the plausible cause of the Havana syndrome.
- Increasing number of cases is being considered a mass psychogenic illness.

Key Points

About:

- In late 2016, a few diplomats from the USA and their employees had reported certain usual symptoms during their stay in Havana, Cuba.
- They experienced some odd physical sensations and heard peculiar sounds, after which they started feeling sick.
- The US had even accused Cuba of carrying out sonic attacks. But Cuba denied the accusations of the sonic attacks and refused awareness of any such illness or syndrome.
- Ever since many bodies and institutions have been researching the cause of the Havana syndrome and many plausible factors have been discovered till date.
- The symptoms of the syndrome include Nausea, Severe headaches, Fatigue, Dizziness, Sleep problems, Hearing loss.
  - ✳ A few of those who had been affected more faced chronic issues like vestibular processing and cognitive problems.

Microwave Weapons:

- **Direct Energy Weapon (DEW):**
  - ✳ They are a type of direct energy weapons, which aim highly focused energy in the form of sonic, laser, or microwaves, at a target.
  - ✳ They release electromagnetic radiations which cause sensations in the human body.
  - ✳ Electromagnetic radiation heating the water in the human body makes a person feel dizziness and nausea.
- **Countries with Microwave Weapons:**
  - ✳ A number of countries are thought to have developed these weapons to target both humans and electronic systems.
  - ✳ China had first put on display its microwave weapon, called Poly WB-1, at an air show in 2014.
  - ✳ The US has also developed a prototype microwave-style weapon, which it calls the "Active Denial System", which is the first non-lethal, directed-energy, counter-personnel system with an extended range greater than currently fielded non-lethal weapons.
- **India's Plans for Directed Energy Weapons:**
  - ✳ Recently, the Defence Research and Development Organisation (DRDO) has announced its plans to develop (DEWs) using high-energy lasers and microwa-ves.
  - ✳ Development of DEWs is seen as particularly important in the context of India's worsening security environment, especially its ties with China.
- **Concerns:**
  - ✳ These weapons are a cause of concern as they can affect both machines and human beings.
  - ✳ They can cause long-term damages without leaving a single mark on the human body.

POLITY AND GOVERNANCE

Good Governance in India

India has been ranked 49th in the Chandler Good Governance Index (CGGI), which classifieds 104 countries in terms of government capabilities and outcomes.

- The CGGI is an annual index, built by government practitioners, for the government practitioners in measuring the capabilities and effectiveness of the governments around the world.

- It ranks 104 countries in the world.

- The Chandler Institute of governance (CIG) is an international not for profit organization, with headquarters in Singapore.

- Finland has topped the CGGI index, in which each country is measured over 50 open data points.

About the CGGI Index

- It shows the importance of measuring and investing in governance capabilities that matters.

- It highlights a key need for 'practicemics' in government. These are the people who combine a rigorous understanding of research and data with a practical and grounded sense of what governments need to do to succeed.

- It focuses on seven pillars:
- Leadership and foresight
- Robust laws and policies
- Strong institutions
- Financial stewardship
- Attractive marketplace
- Global influence and reputation
- Helping people rise

Objectives of the Index

- It supports government leaders and public officers worldwide in nation building and strengthening public institutional capacity through research, training and advisory work.

- It shares tools and frameworks for effective policymaking and also helps and empowers the nations to provide better services for its citizens.

Highlights of the index

- Seven of the top ten countries are from Europe, but there are four continents represented in the top 10, with Singapore first in Asia, New Zealand leading in Oceania and Canada for most in the Americas.

- All the top ten countries are high income countries as defined by the World Bank.

- Among the South Asian countries, India is ranked at 49th, Pakistan at 90th, Sri Lanka at 74th and Nepal at 92nd.

Good Governance in India

- Governance is defined as a process of decision-making and the process by which decisions are implemented or not implemented.

- In 1992, the World Bank defined good governance in its report entitled "Governance and Development" as a manner in which power is exercised in the management of a country's economic and social resources for development.

- It has eight major characteristics:
    1. Participatory
    2. Consensus-oriented
    3. Accountable
    4. Transparent
    5. Responsive
    6. Effective and efficient
    7. Equitable and inclusive
    8. Follows the rule of law

Good governance assures that corruption in a country is minimized, views of minorities are taken care of and the voices of the most vulnerable in the society are heard in the decision-making process.

8 Principles of Good Governance by the United Nations

1. Participation

a. According to this principle, people should be able to voice their opinions through legitimate immediate organisations or representatives. This includes men and women, vulnerable sections of the society, backward classes, as well as the minorities.

b. It also implies freedom of Association and expression ensured to the citizens.

2. Rule of Law

a. The legal framework of a country should be enforced impartially, especially on the human rights laws.

b. Without this principle, politics will follow the principle of matsya nyaya which means the strong will prevail over the weak.

3. Consensus Oriented

a. Ensuring consensus in decision-making makes sure that even if everyone does not achieve what they want to the fullest, a common minimum can be achieved by everyone and this will not be detrimental to anyone.

b. It thus mediates differing interests to meet the broad consensus on best interests of a community.

4. Equity and Inclusiveness

a. Good governance assures an equitable society where everyone has the opportunities to improve or maintain their well-being.

5. Effectiveness and Efficiency

a. Processes and institutions should be able to produce results that meet the needs of their community under resources of the community should be used in such a way that they produce the maximum output.

6. Accountability

a. The aim of good governance is betterment of the people and this cannot take place without the government being accountable to the people.

b. The government institutions, private sectors as well as the civil society organisations should be held accountable to the public and the institutional stakeholders.

7. Transparency

a. The information should be accessible to the public and should be understandable as well as monitored. It also means free media and access to information to them.

8. Responsiveness

a. Institutions and processes should serve all the stakeholders in a reasonable period of time.

Measures taken by the Government to Promote Good Governance in India

1. Good Governance Index- It has been launched by the Ministry of Personnel, Public Grievances and Pensions to determine the status of governance in the country. It assesses the impact of various interventions taken up by the State Government and UTs. The objective of the index is to provide quantifiable data to compare the state of governance in all states and UTs and enable them to formulate and implement suitable strategies for improving governance and shift to result oriented approaches and administration.

2. Good Governance Day- It is celebrated annually on 25th December to mark the birth anniversary of the former Prime Minister Atal Bihari Vajpayee. Its aim is to create awareness of accountability in government among the citizens of India.

3. National e-Governance Plan- It has the vision to "make all government services accessible to the common man in his locality, through common service delivery outlets and ensure efficiency, transparency & reliability of such services at affordable costs to realize the basic needs of the common man."

4. Right to Information Act, 2005- It plays an effective role in ensuring transparency in governance. it promotes

openness, transparency and accountability in the administration process by making the government and its processes open to public scrutiny.

5. E- Governance- the National e-Governance Plan aims to make all the government services accessible to the citizens through common service delivery outlets and ensure efficiency, transparency as well as reliability in such services at the most affordable prices. Programmes launched under this initiative include – PRA-GATI- (Pro Active Governance and Timely Implementation), Digital India Programme, Passport Seva Kendra, Online IT Returns, MCA21 for improving the speed and certainty in the delivery of services of Ministry of Corporate Affairs, etc.

Conclusion

There are certain challenges in the accomplishment of good governance like weak institutions, lack of participation and democratization, criminalization of politics, lack of social capital, corruption, etc. In the growing era of citizen friendly administration, it is important to address these challenges to achieve good governance that plays a paramount role in the transformation of predatory state to welfare state and insurers are transparent, accountable unintelligible governance systems absolutely free from bias and prejudices

Supreme Court: Guardian of Rights of Ordinary Citizens

A series of decisions made in the immediate week of swearing in of the new Chief Justice of India has rejuvenated the role of the Supreme Court as the guardian of rights of citizens of India.

Background:

- Recently Justice N.V.Ramana swore in as the 48th Chief Justice of India.
- The Supreme Court in the previous week ordered a shift of Siddique Kappan, a journalist arrested on way to Hathras from Delhi for covering the alleged rape and murder of the Dalit Girl to Delhi for better health facilities.
- The order was given to the Uttar Pradesh government which showed reluctance to the same.
- It has also time and again communicated with the Central government regarding the backdrops in managing the second wave of COVID-19 pandemic in the country.
- The SC has decided to discuss the use of the law of sedition as a tool to imprison social activists, journalists etc.
- CJI Raman, before swearing in, had already indicated that the legal community is bound to protect the interests of the vulnerable sections of the society from any anti social elements or human rights atrocities.
- Regarding the suo moto hearing on the case of distribution of essential services and supplies during the pandemic, the SC clarified that it doesn't want to interfere with the efforts of the High Court, rather supplement it.
- The Supreme Court also warned state governments to slam with contempt of court in case of attempts to silence the citizens from expressing their grievances.
- It made a clear statement in the ECI case that the media will not be stopped from reporting the comments made by the judges during the hearing as the discussions that goes on before the final judgement is equally important as the final orders.

History of Supreme Court:

- Under the Regulating Act of 1773, Supreme Court of Jurisdicature was established in Bengal with original and appellate jurisdictions.
- However, By the amendments made in 1781 the jurisdiction of the Supreme Court was defined within Calcutta, to administer the personal law of the litigant.
- In 1865, the Sadar Adalats and The Supreme Court were merged into three High courts at Bombay, Calcutta and Madras.
- The Government of India Act of 1935 provided for a Federal Court which was later set up in 1937.
- Post independence, the Federal court was replaced by the Supreme Court of India on 28 January, 1950. The First CJI of India was H.J.Kania.
- It also replaced the British Privy Council which was till then the highest court of appeal.
- The Jurisdiction of the Supreme Court was wider than that of the Federal Court established previously.

Indian Judicial System:

- Indian Judiciary follows an integrated, unified judicial system.
- Indian Judiciary follows a hierarchy of courts where the Supreme Court is at the apex position and other courts below it.

- Presently, the Supreme Court consists of thirty four judges including the Chief Justice of India. This number was increased in 2019 from 31 to 34.

- According to A-124, Judges of the Supreme Court are appointed by the President of India.

- The Chief Justice is appointed by the President in consultation with judges of the Supreme Court and High court as he deems necessary.

  However, in case of appointment of other judges, the consultation with the chief justice is obligatory.

- This system is different from the Judicial system of the US where a double system of courts is followed.

- Part V (Article 124 to 147) of Indian constitution deals with various aspects related to the Supreme Court, i.e., its organisation, jurisdiction, power etc.

- This is because of the crucial role that is played by the Supreme Court in the Indian democratic system- Federal court, Highest court of Appeal and guarantor of the fundamental rights enshrined in the Indian Constitution.

- The Supreme Court is the final interpreter and guardian of the Constitution.

- The laws made by the Supreme Court are binding on all courts in India. The functions and responsibilities of the Supreme Court are mentioned in the Indian Constitution.

- Along with being the interpreter and guardian of the Indian constitution, the Supreme court also has advisory and supervisory functions.

- Independence of the Supreme Court is assured through various Constitutional safeguards. This is ensured by –
  - ✳ Security of tenure
  - ✳ Mode of appointment
  - ✳ Fixed service conditions
  - ✳ Power to punish for its contempt
  - ✳ Freedom to appoint staff of SC

- The expenses of SC are charged on Consolidated fund of India. These expenses are non-votable by Parliament.

  However, with evolution in time and technology, the scope of jurisdiction of the Supreme court has only widened and the role it plays has become substantial.

Chief Justice:

- The Chief Justice of India is the chief judge of the Supreme Court.

  The Chief Justice of India is the highest ranking officer of Indian Judiciary

- The Indian Constitution does not provide for any procedure and criteria for appointment of Chief Justice of India.

- In the Second Judge Case (1993), the Supreme court opined that the senior most judge of the Supreme court should alone be appointed as the Chief Justice of India.

- CJI plays the role of administrative head of the Supreme Court, thus responsible for the functions like allocation of cases to constitutional benches, the number of judges that will hear a case.

- 'Master of Roster' is often used for CJI due to his privilege of constituting benches to hear cases.

- The oath of CJI and others appointed as judges of the Supreme Court of India is administered by the President of India.

Qualification of Judges –

- Should be a citizen of India

- The person should have been
  a) Judge of High Court for five years OR
  b) An advocate of a high court for ten years OR
  c) A distinguished jurist in the opinion of the President

- No minimum age for appointment as a judge of the Supreme Court is mentioned in the Constitution.

  Salaries and Allowances of the Judges of the Supreme Court are from time to time determined by the President.

  Tenure of Judges –No fixed tenure of Judges of SC is provided in the Constitution. Although, three provisions are mentioned regarding this –
  a) Holds office until he attains age of 65 years,
  b) He can resign from the office by writing to the President
  c) Can be removed from his office by the President on recommendation of the Parliament.

Removal of Judge –

- The judge can be removed from his office by order of the President. He can only order removal after an address by Parliament has been presented to him in the same session.

- The Removal can be done only on grounds of proved misbehaviour or incapacity.
- The Judges Enquiry Act of 1968 regulates the process relating to the removal of judge of the Supreme Court.
- No Judge of the Supreme Court has been impeached till now.

Seat of Supreme Court

Delhi is declared as the seat of SC by the Constitution. It also authorises the CJI to appoint other places as seats of SC. This decision can be taken on this only after approval by the President.

Jurisdiction of Supreme Court

The jurisdiction and powers of the Supreme Court can be classified under Original, appellate, advisory, writ jurisdiction. It has special powers as well.

- Original Jurisdiction- It settles disputes between Central and State and amongst States.
- Appellate Jurisdiction - conducts trials on appeals from lower courts in regards to Civil, criminal and Constitutional cases.
- Advisory Jurisdiction – According to A-143, It can advise the President on matters of public importance and law. However, the advice of SC is not binding on the President. He may or may not follow the opinion.
- Writ Jurisdiction - The SC is empowered to issue writs – Habeas corpus, mandamus, prohibition,quo warranto and certiorari for the enforcement of rights of citizens. However, writ jurisdiction is not exclusive to SC. High Courts are also empowered with the same.
- **Other Powers-**
- SC is empowered with the option of Judicial review- the power to examine the constitutionality of legal enactments and orders of Central and State governments. If SC finds it to be unconstitutional, it can declare it to be illegal.
- It can review its own judgements.
- It can grant special leave to any appeal from any order passed by any court in the territory of India.
- The decision of SC is final in matters related to elections of President and Vice President.
- It is authorised to dispose of cases of the High court itself by withdrawal of the case from HC.

Challenges faced by India Judiciary –

- Lack of Judges – The judge to population ratio is as low as only 20 judges per million people
- Large number of Pending cases – Over 57 lakh cases remain as backlogs in various high courts across the country.
- Vacancies in High Courts – Large numbers of vacancies are there in High Courts of India. The recruitment process is very slow.
- Lack of representation of Minorities in judicial system – There is only one woman and one Muslim as judge in the Supreme Court. There are no judges from Buddhist, Jain or other tribal communities.
- The courts are facing difficulty in proper functioning due to the current Pandemic ongoing across the country.

Way Forward –

- There is a need to expedite the recruitment process in order to fill in the gap between the number of judges and their requirement for clearance of backlogs.
- Clearance of backlogs must be prioritized.
- The legal community must remain independent from external influences. They should seek accountability from legislatures and executives for their actions
- The role of the supreme court is evolving with time.
- It must ensure that its role as protector of fundamental rights of citizens is prioritized and free and fair judgements are given to the aggrieved parties who rely on Indian judiciary for justice.
- Timely judgements must be assured as 'Justice delayed is justice denied'.
- Values like equality, liberty, fraternity etc are preserved by the Supreme Court.

PM Kisan first installment late

Amid the surge in COVID-19 cases, the wait of over 9 crore farmer families for the first installment of their PM Kisan payout for the financial year 2021- 22 is getting longer.

- As for the Ministry of Agriculture it may take some more days to transfer the installment of rupees 2000 for the period April to July to eligible farmer families under the Pradhan Mantri Kisan Samman Nidhi or the PM Kisan.
- Under the scheme, the government provides Rupees 6000 to eligible farmers' families in three equal installments during the course of the financial year.
- The first installment is due between April 1 and July 31.
- Last year, most of the beneficiaries received the money in their bank accounts between March 24 and April 20. However, this year

even with the end of April no farm household has received any money.

- The stated reason by the Agriculture Ministry's official is the wait for the states to complete the process of closure of lots and signing of RFTs or Request for Transfers.

- According to the guidelines of PM Kisan, State Nodal Officers (SNOs) authenticate the data of eligible farmers and upload them in batches from time to time on the portal.

- Based on the verified data, the SNOs sign the RFTs that contain the total number of beneficiaries under the scheme.

- The public finance management system (PFMS) then issues a fund transfer order (FTO), based on which the Department of Agriculture, Cooperation and Farmers' Welfare shows the transaction order for the mentioned amount, and then the installment is credited into the account of the beneficiary.

- The agricultural ministry also noted that due to covid 19 crisis, field teams are taking longer time to complete the verification process.

About PM- Kisan

- The pradhan mantri Kisan samman Nidhi or PM Kisan is the first universal basic income type of scheme targeted towards farmers.

- It is implemented as a central sector scheme by the Government of India.

- The scheme was initially targeted at the small and medium farmers but with the declining growth in the gross value added (GVA) in the agriculture sector, it was extended to all the farmers in May 2019.

- The aim of the scheme is to provide income support to the farmers in order to ease their liquidity needs to facilitate timely access to inputs.

- Under the scheme, an amount of rupees 6000 but here is transferred directly into the bank accounts of the farmers, subject to certain exclusion criteria related to higher income status.

- Government ministry- Ministry of Agriculture and Farmers Welfare

Objectives of the scheme

- To provide income support to all the eligible landholding farmers and their families.

- It aims to supplement the financial needs of the farmers to procure various inputs in order to ensure proper crop health and appropriate yields, an immense rate with the anticipated farm income.

Eligibility under the Scheme

Any small or marginal farmer should not fall under the following criteria to be eligible under the Pradhan Mantri Kisan Samman Nidhi Yojana. Some of the categories of beneficiaries who are not eligible for benefit under this scheme are:

- Any institutional land-holders.

- The farmer as well as any member of the family belonging to the following categories:

- Former and present holders of constitutional posts

- Former and present Ministers/ State Ministers

- Former or present members of Lok Sabha/ Rajya Sabha/ State Legislative Assemblies/ State Legislative Councils

- Former and present Mayors of Municipal Corporations

- Former and present Chairpersons of District Panchayats.

- Any serving or retired officers as well as employees under the Central/ State Government Ministries /Offices/Departments.

- All retired pensioners who get a monthly pension of Rs.10,000/- or more and belonging to the above category.

- Any individual who paid their income tax in the last assessment year is not eligible under this scheme.

- Professionals like Doctors, Engineers, Lawyers, Chartered Accountants, and Architects registered with Professional bodies and carrying out profession by undertaking practices.

Advantages of the Scheme

1. It eases the liquidity constraints for the farmers for procuring inputs especially when more than half of the Indian farming households do not have access to formal credit.

   a. This is extremely pertinent in India, as more than 50% of the farmers here rely on informal credit and 1/5 of the farmers purchase inputs on credit.

   b. Also, the producer support in India is very low when compared to the other countries and the scheme helps in supplementing that.

2. It aids modernization as it has significantly stimulated the Krishi Vigyan Kendra's impact on the adoption of modern cultivation techniques.

3. Since it has the potential to increase the net income of the farmers, it may enhance the farmers' risk-taking capacity, thus leading to undertaking riskier but comparatively productive investments.

4. There is no selection bias in choosing the beneficiaries under the scheme based on attributes like caste and land size.

Challenges in the Implementation of the Scheme

- Ad hoc export and import policies, lack of infrastructure and uncertainty in the agricultural markets has led to an adverse effect on agricultural productivity and stability of farm incomes.

- Given that India's poverty line is Rs.32 per person per day in the rural areas and Rs. 47 in the urban areas as per the Rangrajan Committee, the income support of Rs. 17 per day for a household which is the amount offered under the scheme, is largely insufficient for even bare minimum sustenance of the vulnerable farmers.

- Due to the volatile market and price fluctuations in the different regions across the country, it is important to index the cash transfers to local inflation.

- The scheme does not provide a clear design of transfers and a framework for effective grievance redressal.

- The delay in the payment of installments often undermines the actual objective of the scheme I.e., to provide credit to the vulnerable farmers to procure agricultural inputs.

Way Forward

- Any welfare measure especially those related to direct financial support should provide the farmers with adequate purchasing power to meet their daily basic requirements.

- Apart from financial support to the farmers, there are some basic issues on the structural level that need to be addressed in the agricultural sector like modern agricultural techniques, better infrastructure, better prices, etc.

- For the scheme to be implemented efficiently there is a need for back-end infrastructure and institutions.

What has really tripped up India's Covid efforts?

As per official data, we now have over three lakh cases and 3,000 deaths every day.

- In most cities across India there is great demand for ICUs and critical care beds, a shortage of oxygen and hoarding of key medicines.

- Our top scientists and bureaucrats have claimed that the second wave was indeed expected and we were prepared.

Reasons behind the surge

- A more infectious mutation of the virus: The 'double mutant' virus that scientists say is responsible for the spread of the pandemic in India, has a formal scientific classification: B.1.617.

- It has one key mutation in the spike protein similar to one found in the Brazilian and South African variants, and another already found in the B.1.427 and B.1.429 California variants.

The people not following COVID discipline.

Routine failure of our centralised scientific and administrative bureaucracy

Concerns:

- Non availability of data: US gives us several important facts, statewise, about the epidemic there, diligently collected by many university researchers.
  - ✳ None of these clinical facts are known for India. They are crucial for managing the epidemic.

- Lack of research: Our scientific agencies have not come up with any quantitative norm for preparedness or guidelines for states to follow, more sophisticated lifesaving services such as bed allocations or ambulance dispatch software.

- Scarcity of hospital beds: As tier I hospital capacity is exhausted, anxiety rises as only poorer quality tier II hospitals are available.
  - ✳ The supply chains of these hospitals are weak leading to shortages of oxygen and drugs.
  - ✳ Hoarding of services becomes endemic and mortality rises.

- Oxygen crisis: Assuming a critical care consumption of 15 kg per patient per day, the current India-wide demand of 4,000 MT indicates that about 2,60,000 patients are under critical care.
  - ✳ A peak rate of five deaths per million per day should be adopted as a planning objective in our National Disaster Management Plan.
  - ✳ The national capacity of 7,000 MT was not adequate and urgent measures were required.

TABLE 2: STRESS IN SELECT DISTRICTS OF MAHARASHTRA

Districts	30th March 2021				20th April 2021			
	DDR	Tier 1 Beds	Tier 2 Beds	Stress	DDR	Tier 1 Beds	Tier 2 Beds	Stress
Ahmednagar	3	430	2396	1	45	430	2827	2
Mumbai	11	7927	4718	0	50	8798	5134	1
Nanded	7	1349	817	1	24	1939	1156	2
Parbhani	5	363	281	1	8	363	400	2
Pune	14	6005	4044	0	37	6689	5638	1
Maharashtra	138	42642	36340	0	423	50356	45290	1

* Robust oxygen systems, that would support a pandemic, take time to put in place.

* The basics are the oxygen source and the options include gas cylinders, oxygen concentrators and oxygen generators.

* The neglect of oxygen systems has been partly market failure, partly lack of knowledge and anticipation, partly inertia.

* No National Plan for the epidemic: The Supreme Court has asked the Centre for a national plan on oxygen and vaccinations and the states for an affidavit stating their health infrastructure.

* Vaccine Demand-supply gap: According to recent estimates, existing producers in India will be unable to meet the country's vaccine requirements.

  * In terms of population share, less than 2% has received both vaccine doses, while less than 9% has received one dose.

  * A demand-supply mismatch has begun to appear as the coverage of the vaccine-eligible population expanded.

  * The United States Government had used a Cold War piece of legislation, the Defense Production Act, to restrict exports of vaccine culture and other essential materials.

  * There is a lack of the financial capacity to expand its production and companies are requesting a grant of $ 30 billion from the government.

* Vaccine pricing.

  * The government has not fixed the vaccine prices and has allowed the producers to pre-declare the prices they would charge from the State governments and private hospitals.

  * The new strategy fragments the market into three layers namely, central government procurement, State government procurement and the private hospitals.

  * This layering of the market would allow the producers to charge high prices from the State governments and private hospitals.

  * The new strategy would shift the burden of vaccination of the young population, namely, those between 18-44 years, entirely on the State governments.

  * Moreover, given their poor state of finances, most State governments may not be able to procure the required number of vaccine doses to meet the demands of the targeted population.

There was poor design of empirical and scientific systems, excessive centralisation and a failure of execution.

Way forward:

Deciding parameter of preparedness for pandemic

* Hospital beds: COVID-19 care is broadly organised as tier I consisting of large private hospitals, and well-equipped public hospitals in main cities.

  * Tier II of smaller private and public hospitals dotted across the state, and tier III of community or home care. Tier III is essentially a denial of service for a severe COVID patient.

  * Critical care is provided by tier I hospitals, and to some extent, tier II hospitals.

* Anticipating mortality: We should expect roughly one death per day from a 250-bed tier I critical care hospital, but three deaths from a 250-bed tier II hospital.

* For any hospital, computing the basic quality-of-care multiplier, that is, recording the mortality and duration of care is basic statistics.

* In fact, this, along with the number of beds in each tier, defines the preparedness of the district or the city.

* Given the daily death rate (DDR), it is now easy to estimate hospital utilisation and classify the stress level in a district.

Plan for oxygen:

* For an oxygen system to be developed there must be a good understanding of the local context.

* This includes the
  * systems that are already in use,
  * the local providers,
  * biomedical technician capacity,
  * reliability of power supplies (often power supplies are erratic and
  * power surges can damage concentrators, solar power is more stable) and
  * the size of local populations and projected oxygen needs.

* For now, governments and health services should invest in bedside oxygen concentrators and generators to supply whole hospital or district needs.

* Global agencies should support this in a similar way that vaccines are being scaled up through global partnerships like COVAX.

* Health services and their partners should conduct training programmes for health care workers in the use of oxygen technology.

Medical Oxygen

* The SARS-CoV-2 virus causes COVID-19 pneumonia and hypoxaemia.

* Hypoxaemia is a lack of oxygen in the blood. It is the most important complication of COVID-19 pneumonia and a major cause of death.

* In severe pneumonia, oxygen relieves hypoxaemia. It can allow time for the infection to clear and the lungs to heal.

An oxygen system

* It involves the equipment needed to detect hypoxaemia and give oxygen.

* This includes;
  * a small device called a pulse oximeter which is essential to detect hypoxaemia,
  * the source of oxygen (of which there are several options),
  * other technical equipment to give oxygen (such as flow meters and oxygen tubing), a small device called an oxygen analyser (which assesses the purity of oxygen from the source) and a power supply.
  * trained health workers, biomedical technicians and equipment maintenance are vital.

Ways to supply oxygen

* A single oxygen cylinder, which would supply one person, may last for between 24 to 72 hours depending on the severity of hypoxaemia and how much oxygen they need.

* Oxygen concentrators can provide oxygen to up to five children, or one or two sick adults, at a time.
  * These are devices that concentrate the oxygen from ambient air.
  * An oxygen concentrator is recommended by doctors to fulfil the shortage of oxygen in a person's body.
  * The atmosphere has 78 per cent nitrogen, 21 per cent oxygen and 1 per cent other gases.
  * An oxygen concentrator takes the ambient air and filters the oxygen from nitrogen.
  * Then the device releases the nitrogen back into the air and collects the oxygen, dispensing it to the patient through the pressure valve.
  * The oxygen that is concentrated in an oxygen concentrator holds 90 to 95 per cent purity.
  * It is not recommended for ICU patients as they are required to use liquid medical oxygen (LMO).

* Oxygen generators: They are large machines which generate oxygen from the air (about 5,000 litres per hour) and can fill between 30 to 50 cylinders per day

A key benefit of oxygen generators and concentrators is that they can supply a whole region or health service in a way that can be independent of private gas companies.

Vaccination plan:

- More open licensing for vaccines: There is a need for more open licensing of this vaccine to scale up production. This would enhance competition in the market, enabling the vaccines to reach every citizen in the country.

- Tackling duopoly in the vaccine market: The government should have urgently addressed the serious doubts over affordability of vaccines by ensuring a competitive market for vaccines.

- India needs more vaccine manufacturers to ensure uninterrupted supply.

- One positive step that the government has taken in this direction is to increase production of Bharat Biotech's vaccine through the involvement of three public sector undertakings, including Haffkine Institute.

COVID-19 is a long-game; the best time to start implementing effective plans may have been several years ago, but the next best time is now.

Maratha Reservation Struck Down: SC

Recently, the Supreme Court (SC) declared a Maharashtra law which provides reserve-ation benefits to the Maratha community, taking the quota limit in the State in excess of 50%, as unconstitutional.

Background:

- 2017: A 11-member commission headed by Retired Justice N G Gaikwad reco-mmended Marathas should be given reservation under Socially and Educati-onally Backward Class (SEBC).

102nd Amendment Act of 2018

- It introduced **Articles 338B and 342A in the Constitution.**

- **Article 338B** deals with the newly established National Commission for Backward Classes.

- **Article 342A** empowers the Presi-dent to specify the socially and educationally backward commun-ities in a State.

  ⁎ It says that it is for the Parlia-ment to include a community in the Central List for socially and backward classes for grant of reservation benefits.

- 2018: Maharashtra Assembly passed a Bill proposing 16% reservation for Maratha community.

- 2018: The Bombay High Court while upholding the reservation pointed out that instead of 16% it should be reduced to 12% in education and 13%in jobs.

- 2020: The SC stayed its implementation and referred the case to Chief Justice of India for a larger bench.

Current Ruling:

- **Violation of Fundamental Rights:**

  ⁎ A separate reservation for the Maratha community violates Articles 14 (right to equality) and 21 (due process of law).

  ⁎ Reservation breaching the 50% limit will create a society based on "caste rule".

  ⁎ The Maratha reservation of 12% and 13% (in education

and jobs) had increased the overall reservation ceiling to 64% and 65%, respectively.

  ⁎ In the *Indira Sawhney judgment* 1992, SC had categorically said 50% shall be the rule, only in certain exceptional and extraordinary situations for bringing far-flung and remote areas' population into mainstream said 50% rule can be relaxed.

- **No Further Benefits:**

  ⁎ Appointments made under the Maratha quota following the Bombay High Court judgment endorsing the State law would hold, but they would get no further benefits.

- **Deprived States of the Power to Identify SEBCs:**

  ⁎ There will only be a single list of SEBC with respect to each State and Union Territory notified by the President of

India, and that States can only make recommendations for inclusion or exclusion, with any subsequent change to be made only by Parliament.

� The Bench unanimously upheld the constitutional validity of the 102nd Constitution Amendment but differed on the question whether it affected the power of states to identify SEBCs.

- **Direction to NCBC:**
  � Asked the National Commission for Backward Classes (NCBC) to expedite the recommendation of SEBCs so that the President can publish the notification containing the list of SEBCs in relation to States and Union Territories expeditiously.

State of Working India 2021: One Year of Covid-19 Report

A report titled 'State of Working India 2021: One Year of Covid-19' brought out annually by Azim Premji University's Centre for Sustainable Employment, Bengaluru has been released.

- The report covers the period March 2020 to December 2020, dwells on the impact of one year of Covid--19 on employment, incomes, inequality and poverty.

Key Points

Impact on Employment:

- 100 million jobs were lost during the April-May 2020 lockdown.
- Though most of these workers had found employment by June 2020, about 15 million remained out of work.

Impact on Income:

- For an average household of four members, the monthly per capita income in October 2020 (Rs. 4,979) was still below its level in January 2020 (Rs. 5,989).
- Monthly earnings of workers fell on an average by 17% during the pandemic, with self employed and informal salaried workers facing the highest loss of earnings.

Informalisation:

- Post-lockdown, nearly half of salaried workers had moved into informal work, either as self-employed (30%), casual wage (10%) or informal salaried (9%).

Regressive Nature of Economic Impact:

- The bottom 20% of households earned nothing in the months of April and May 2020.
- On the other hand, the top 10% suffered the least during the lockdown, and only lost about 20% of their February income during the lockdown months.

Disproportionate Impact on Women:

- During the lockdown and in the post lockdown months, 61% of working men remained employed while 7% lost their job and did not return to work.
- But in the case of women, only 19% remained employed while 47% suffered a permanent job loss, "not returning to work even by the end of 2020".

Increase in Poverty Rate:

- The job loss and fall in earnings caused a large increase in poverty.
  � Households coped with the loss of income by decreasing their food intake, selli-ng assets and borrowing informally from friends, relatives and money-lenders.
  � With 230 million falling below the national minimum wage threshold of Rs. 375 per day during the pandemic, poverty rate has "increased by 15 percentage points in rural and nearly 20 percentage points in urban areas".

Suggestions

- As India confronts the second wave and what is possibly its worst humanitarian crisis in recent years, urgent policy measures are needed to support an already beleaguered population.
- The extra Public Distribution System (PDS) entitlements under Pradhan Mantri Garib Kalyan Yojana (PMGKY) need to be extended till the end of the year.
- Cash transfers of Rs. 5,000 for three months to as many vulnerable households as can be reached with the existing digital infrastructure, including but not limited to Jan Dhan accounts.
- MGNREGA (Mahatma National Gandhi Employment Guarantee Act) has played a vital role and its allocation needs to be expanded.
- A pilot urban employment programme can be launched in the worst hit districts, possibly focused on women workers.
- A Covid-19 hardship allowance of Rs. 30,000 (Rs.5,000 per month for six months) should be announced for 2.5 million Anganwadi and ASHA workers who have been at the frontlines of the grassroots fight against the virus.

Media Freedom in India

Recently, Supreme Court has given judgments regarding the freedom of media in reporting High court case hearings.

- Recently, the Supreme court had passed orders dismissing Election Commission's plea against Madras High Court's comments that Election commission should be singularly responsible for the deaths due to COVID-19 infection.

- The High court highlighted that this surge in COVID-19 cases was due to the failure of Election commission in ensuring COVID-19 precautions during the election rallies.

- Recently, Election commission conducted Assembly elections in four states - Assam, West Bengal, Tamil Nadu and Kerala.

- During the Election rallies mass gatherings were observed where social distancing rules and other COVID-19 precaution measures were breached by leaders as well as the public.

- The Supreme Court mentioned that the media cannot be restrained from reporting court proceedings. This came in the backdrop of the Election commission's plea for restraining media from reporting remarks made by the High Court.

- Meanwhile, the Supreme Court also took upon the High court to restrain on language for the harsh comments made by it.

- The Supreme Court also described the media as a powerful watchdog.

- The SC ruling on right of media to report the proceedings

of the court is seen as crucial for Indian democracy.

- The Supreme Court highlighted that the public should be made aware about the remarks made during court proceedings.

- The Supreme Court said this by showing the importance of court proceedings and discussions in arriving at the final judgements.

- It also reflects that the judges remain uninfluenced by the external forces and arrive at final judgement using their rational thinking.

- The judgment is seen as a welcome step.

Media - Fourth Pillar of Indian Democracy

- The Supreme Court ruling brought into light the crucial role played by the Media in democracy.

- Indian democracy consists of three pillars - Legislature, executive and judiciary. Media is deemed to be the fourth estate of democracy.

- Media is considered as the fourth pillar because of the role played by the media in laying the foundation of democracy.

- With development of technology, the scope of media has widened.

- Media has the power to shape the

public opinion regarding any matter by providing information to them.

- It plays a key role in changing the attitude of public and government towards social, political and other matters affecting the lives of people.

- Media plays an important role in connecting people to the government and vice versa.

- Media gives voice to the voiceless. Often, opinions and demands of minorities are clouded by opinions of powerful people. Media ensures that the voice of minorities does not go unheard.

- In a democracy, free flow of information cannot be emphasised enough. In order to make sure that there is free flow of information, a free and fair media is important.

- The Indian Constitution under Article 19 provides for freedom of speech and expression.

- The freedom of press is implied under this article which states that all citizens have the right to freedom of speech and expression.

- In Romesh Thapar Case (1950) the HC laid that the freedom of press lays the foundation of democratic organisations.

- However, several rights including Article 19 are not absolute in nature.

- The freedom of press in India has been a topic for debate for a long time.

Why Media should be free and fair?

- The need for Media to be free, fair, transparent and honest becomes necessary due to the significance of the role played by media.

- As media plays a role in imparting information, media requires to be accurate. Any error in displaying facts can lead to misinformation among the public.

- Free and Fair media allows exchange of information and ideas among people and administration. It allows for participative governance.

- As democracy is a people's government, it is important to consider public opinion during policy formulations and government actions. Media provides for a platform where people can voice their opinions.

- Media keeps a check on the functioning of government authorities and makes sure that no misuse of power takes place. However, if the media is partial, this function of media is not performed properly.

- If the freedom of the press is ensured, people will be able to exercise their rights and duties without fear.

Issues related to media

- Paid news - In today's time, it is observed that people are using different means like cash and gifts to influence the media.

- Yellow Journalism - In order to gather attention and attract people's gaze, news channels often use taggy headlines as breaking news.

- In race to achieve high TRPs, news of least relevance is telecasted by the media houses. Due to this, the real issues remain unnoticed.

- In order to gain sensationalism, the media often becomes jurists. They do not follow the due process of law and news is covered in a way similar to judicial trials.

- Media, in several instances, has lacked sensitivity in coverage of news which could affect an individual's dignity and privacy. Example - revelation of identities of rape victims

- News coverage by media like, 26/11 attack news, has led to compromise of national security.

- Due to ease of access to mass audiences due to reach of the media, tackling fake news is a challenge. Recent incidents of fake news have resulted in instigating hatred and violence among communities.

Supreme Court-

- India has an integrated judicial system with the Supreme Court at the top of the hierarchy of courts.

- Article 124 to 147 of Part V on Indian Constitution deals with the Supreme Court.

- The Supreme Court of India replaced the federal court and British Privy Council.

- The Supreme Court is the guarantor of fundamental rights of citizens.

- It is the final interpreter of Indian Constitution.

- The Supreme Court is the highest court of appeal.

- The Supreme Court, at present consists of 34 judges including the Chief Justice of India.

- The judges of the Supreme Court are appointed by the President.

- According to conventions and traditions, the senior most judge of the Supreme Court is appointed as the Chief Justice of India.

- The oath of judges of the Supreme Court is administered by the President.

- In the oath, the judge swears to
  1. Bear true faith and allegiance to the Indian Constitution.
  2. Uphold the sovereignty and integrity of India
  3. Uphold Indian Constitution and laws
  4. Duly and faithfully and to the best of his ability, knowledge and judgement perform the duties without fear , ill-will and affection.

- Indian Constitution does not provide for fixed tenure of judges but it provides for three provisions for this.

- The judge can only be removed from his office by President's order.

- Indian Constitution declares Delhi as the seat of the Supreme Court. However, other places can also be appointed as the seat of Supreme Court by the Chief Justice of India. Any such decision is only taken with approval by the President.

- The Supreme Court has the following jurisdiction - Original, Writ, Appellate, advisory along with other powers.

Election Commission-

1. EC is a constitutional body established by Article 324.
2. Election Commission is vested in responsibility to conduct free and fair elections to parliament, state legislatures, office of president and vice president of India.
3. EC is a permanent and independent body.
4. Indian constitution consists of provisions related to various aspects of election commission.
5. Composition of Election commission - According to the

constitution, Election commission shall consist of chief election commissioner and other election commissioners, the number of such officials fixed by the President from time to time.

6. The Chief Election Commissioner and other election commissioners are appointed by the President.

7. The election commissioners hold office for 6 years or till they attain the age of 65 years, whichever is earlier.

8. Functions of EC - Election commission's functions and powers can be categorised into administrative, advisory and quasi judicial functions.

9. Indian Constitution through various measures assures the independence of Election commission like -

✳ Security of Tenure

✳ Service conditions provided to the CEC cannot be changed to his disadvantages after the appointment.

✳ Other EC cannot be removed without recommendation of CEC.

Way Forward

- By quashing the plea from Election Commision, a constitutional body, the Supreme Court has let the citizens maintain faith in the judiciary as well as the media.

- It should also be considered that the Election commission, being a constitutional body, still has limited powers which led to the failure in following COVID-19 precautions during election rallies.

- However, this does not support Election Commission's plea to restrain the media from performing its functions.

- As Justice D.Y. Chandrachud highlighted the media as a 'powerful watchdog', it is important that media should be responsible and accountable for the information imparted to people.

- Media plays a sensitive role in ensuring freedom of speech and expression. However, there is a need to strike a balance between rights of citizens and free fair expression.

- Strict regulations are required to keep a check on media and to ensure that media ethics is followed and quality of information remains unquestioned.

- Media should function in order to preserve authenticity, transparency, non partisanship, honesty in imparting information.

Fake drugs and Black marketing during the pandemic

Courts have passed strictures against hoarders and black marketeers. Across the country, there have been arrests for diversion, hoarding and black-marketing of remdesivir, oximeters and oxygen cylinders.

- The Indian pharmaceutical industry has a domestic turnover of more than Rs.20,000 crores and exports over Rs.10,000 crores.

- It is also growing at the rate of over 10 per cent for the last decade and is said to be the fourth in the world in terms of volume.

Issues:

- Fake and substandard drugs

  ✳ A study done by Assocham about three years ago, estimated that one-third of drugs sold in India are fake.

  ✳ A clear distinction isn't always drawn between substandard and counterfeit, though they are distinct.

  ✳ It is difficult to quantify the morbidity and mortality effects of fake or substandard drugs, but they are substantial.

- Black marketing: A black market occurs when the price at which a product is sold is higher than an administratively determined price.

  ✳ E.g. Remdesivir is selling for Rs 70,000 a vial in black market because that price is significantly above MRP.

  ✳ Fake tests reports: Temporary outrage over fake RT-PCR test reports is misplaced, unless we decide to clamp down on everything fake.

Current regulatory systems in India

- Laying down regulatory measures and amendments to the Drugs and Cosmetics Act (D&CA), 1940, and Rules.

  ✳ The Drugs and Cosmetics Rules, 1945 are the set of rules under The Drugs and Cosmetics Act, 1940.

  ✳ It contains provisions for the classification of drugs under given schedules. It also contains the guidelines of drugs for their storage, sale, display, and prescription of each schedule.

  ✳ To approve licences as the Central Licence Approving Authority (CLAA) for the manufacture of large volume parenterals

and vaccines and operation of blood banks and such other drugs as may be notified by the government from time to time.

* There are various penal provisions under the Drugs and Cosmetics Act, 1940 for various kinds of offences.

* Manufacturing or sale of substandard items is punishable with imprisonment of at least 10 years, which may extend to imprisonment for life.

* There is also a provision for fine that will not be less than Rs 10 lakh rupees or three times the value of the confiscated items.

- The Essential Commodities (EC) Act, 1955 gives the government sweeping powers to ramp up production, regulate distribution, sale and even the price of goods declared as 'essential' in public interest.

- The Prevention of Blackmarketing and Maintenance of Supplies of Essential Commodities Act, 1980, even provides for preventive detention.

- There are also other laws like the Disaster Management Act and the Indian Penal code to protect consumer interest in these situations.

Govt. initiatives:

- Mashelkar committee: The Government of India constituted an Expert Committee under the chairmanship of Dr. R.A. Mashelkar to examine all the aspects regarding the regulatory infrastructure and the extent and problem of spurious / substandard drugs in the country.

- The Drugs & Cosmetics (Amendment) Act, 2008: It has recently been amended by the Drugs & Cosmetics (Amendment) Act, 2008 for providing more stringent penalties to those involved in the trade of spurious drugs.

* Some offences have become non-bailable. There are specially designated courts and regulatory infrastructure has been strengthened. There is also a whistle-blower scheme.

- Increasing the ambit of EC Act: Masks and hand sanitisers were declared as essential commodities due to shortage in the wake of the COVID-19 outbreak.

* The Ministry of Consumer Affairs, Food and Public Distribution, is authorising the states and the union territories to notify orders under the EC Act, 1955 by relaxing the requirement or prior concurrence of the central government.

Concerns:

- Loopholes in law: Legally, the Drugs and Cosmetics Act (DCA) has different categories of misbranded, adulterated and spurious drugs.

* The non-uniformity in the interpretation of the provisions of laws and their implementation and the varying levels of competence of the regulatory officials were the main reasons for failings of law.

- Poor enforcement: The 2003 Mashelkar Committee noted that although the Drugs and Cosmetics Act has been in force for the past 56 years, the level of enforcement in many States has been far from satisfactory.

* The problems in the regulatory system in the country were primarily due to inadequate or weak drug control infrastructure at the State and Central level.

* Weak penal action:Prosecutions, and convictions when prosecuted, of crimes under Drugs and Cosmetics Act, are low.

* Courts have ruled police officers can't register FIRs, arrest and prosecute (for cognisable crimes) under this law. That's the job of drugs inspectors.

- Poor testing infra at state level: As per the data collected by the committee, only 15 of the 26 States surveyed have functioning testing laboratories of which only seven were reasonably well equipped and staffed.

* The number of inspectors is also not sufficient to meet the workload and to monitor the quality of drugs.

* The committee has also noted that only 10 States have so far set up intelligence-cum-legal cells as recommended by the Hathi Committee.

- Inter-State complications: It opens up the possibilities of continuous proliferation and movement of substandard drugs.

* As a result, a drug manufactured in a State, with a weak regulatory mechanism is sold in another State freely as well as in the export market.

* A comparison of legislative provisions in other countries as given in the report shows that only in India is the subject of drugs controlled at the State level.

- The absence of controls at ports: Given the nature of coun-

tries that are likely to export to India - in the exporting countries, this also points to the absence of testing mechanisms at the Indian ports.

- Selling without prescriptions: Many Chemists sell without prescriptions and the nexus with doctors.

- Preference for cheaper drugs and consumer unawareness: If governments purchase pharmaceutical products on L1 (Lowermost price) basis, it's understandable that consumers should be price-sensitive, regardless of whether the drug is fake, sub-standard or expired.

- Very remunerative trade
  - ✳ Large-scale sickness in small scale pharmaceutical industry
  - ✳ Availability of improved printing technology that helps counterfeiting
  - ✳ Lack of coordination between various agencies.

- Too many retail and wholesale outlets
  - ✳ According to the Health Ministry, there are over 0.35 million sales outlets in the country (November 2002 data).
  - ✳ Inadequate cooperation between stakeholders
  - ✳ Lack of control by importing/ exporting countries
  - ✳ Widespread corruption and conflict of interests.

Way forward:

- Implementing Mashelkar committee recommendations: It has recommended a strong, well-equipped and professionally managed CDCSO, which could be the accorded the status of Central Drug Administration

(CDA), as the most appropriate solution.

- ✳ The 2002 Drug Policy called for setting up of a "world-class CDSCO by modernising, restructuring and reforming the existing system" rather than the National Drug Authority.

- ✳ It was expected to perform, especially in the post-2005 World Trade Organisation - Trade-related aspects of Intellectual Property Rights (WTO-TRIPS) situation.

- ✳ Production under supervision: Pharmaceutical products shouldn't be produced in the equivalent of garages and good manufacturing practices, and their enforcement is a generic issue.

Monitoring of, and control over, pharmaceuticals, however, ought to be much more stringent since it concerns the health of the citizens and the harm that spurious drugs can cause is far more serious than that caused by any other consumable good.

- ✳ Greater punitive action: There should be strong punitive action against those involved in drug-related cases of corruption.

- ✳ Improving inter-state coordination: All States should set up intelligence-cum-legal cells as recommended by the Hathi Committee.

- ✳ Tackling workload and to monitor the quality of drugs: A government task force set up in 1982 had recommended one inspector for every 25 manufacturing units and one for every 100 sales premises.

- Understanding black market and hoarding: The notion of a black

market is different, though the two can be related.

* When there is a shortage, temporary or otherwise, prices will be higher than expected. This is no different from surge pricing used by cab companies, or ambulances charging exorbitant prices now.

* We should also be careful about indiscriminately using terms like hoarder and blackmarketeer.

* A hoarder is anyone who stocks up items. In a similar vein, the crime isn't hoarding per se but of selling a drug without a licence.

- Checking black marketing: The state governments and the UT administrations should take urgent steps to ensure availability of these essential goods, by invoking provisions of the Essential Commodities (EC) Act, 1955.

* These measures include fixing of stock limits, capping of prices, enhancing production, inspection of accounts of dealers and other such actions.

MLA Local Area Development Fund

Recently, Rajasthan Government has approved a proposal to provide Rs. 3 crore each from the MLA Local Area Development (LAD) Fund to mobilise resources for Covid-19 Vaccination of the people in the age group of 18 to 44 years.

- For meeting the expenses, the fund for each legislator has been increased from Rs. 2.25 crore to Rs. 5 crore a year.

Key Points

Members of Legislative Assembly Local Area Development (MLA-LAD) Scheme:

- It is the States' version of a central government scheme - Members of Parliament Local Area Development Scheme (MPLAD).

- The objective of this scheme is to create local need based infrastructure, to create assets of public utility and to remove regional imbalances in development.

  * This scheme is implemented in rural areas as well as urban areas of a state.

- MLAs do not receive any money under this scheme. The government transfers it directly to the respective local authorities.

  * The legislators can only recommend works in their constituencies based on a set of guidelines.

  * Amounts per MLA varies across the states. Delhi has the highest allocation under MLALAD; each MLA can recommend works for up to Rs. 10 crore each year.

- The guidelines for use of MLA-LAD funds differ across states.

  * For example, Delhi MLAs can recommend the operation of fogging machines (to contain dengue mosquitoes), installation of CCTV cameras etc.

  * After the legislators give the list of developmental works, they are executed by the district authorities as per the government's financial, technical and administrative rules.

Members of Parliament Local Area Development Scheme (MPLAD):

- It is a Central Sector Scheme.

- It was announced in December 1993 and initially came under the control of the Ministry of Rural Development. Later, in October 1994, it was transferred to the Ministry of Statistics and Programme Implementation.

- Each year, MPs receive Rs. 5 crore in two instalments of Rs. 2.5 crore each. Funds under MPLAD Scheme are non-lapsable.

- Objective:

  * To enable MPs to recommend works of developmental nature with emphasis on the creation of durable community assets based on the locally felt needs to be taken up in their Constituencies.

  * Lok Sabha Members can recommend works within their constituencies and elected Members of Rajya Sabha can recommend works within the State they are elected from.

  * Nominated Members of both the Rajya Sabha and Lok Sabha can recommend works anywhere in the country.

  * To create durable assets of national priorities viz. drinking water, primary education, public health, sanitation and roads, etc.

- Since June 2016, the MPLAD funds can also be used for implementation of the schemes such as Swachh Bharat Abhiyan, Accessible India Campaign (Sugamya Bharat Abhiyan), conservation of water through rain water harvesting and Sansad Aadarsh Gram Yojana, etc.

- The Union Cabinet has given its nod to the temporary suspension of MPLAD Funds during 2020-21 and 2021-22 in view of the adverse impact of the outbreak of Covid-19 in India.

Covid-19 impact in Rural India

There have been growing concerns regarding the rise of COVID-19 infection in the rural parts of India. The first wave was limited to urban areas but the second wave has penetrated into the Indian villages.

- Various factors in the first wave prevented the spread of virus in the first wave - travel restrictions, limitations on social gatherings, lower population density in rural areas, ventilated houses, lower co-morbidities in rural populations etc.
- The situation did not put pressure on rural health infrastructure. However, in the second wave, it has changed.
- With increased social get-togethers during election rallies and religious gatherings have raised the risks of getting infected.
- The conditions of the healthcare system in Rural India varies from state to state. States like Tamil Nadu , Kerala have strong health infrastructure connecting even remote pockets with tribals being at risk even there.
- However, situations in central and north India are reversed. Health Infrastructure here is too weak and possesses multiple challenges in front of the administration.

Need for corrective measures to control the impact of COVID-19:

- Primary health care centres play a vital role in engagement with the local communities. Teams from these centres must conduct household visits in order to track COVID cases and symptoms.
- NSS and NCC members must be brought in for assistance in service delivery in the rural areas.
- States may be required to come up with their own treatment plans considering confusions in usage of recommended medications.
- Detailed plans should be worked out regarding transportation of severely ill patients to centres for advanced care and diagnosis.
- Travel between rural and urban areas should be restricted in order to control the rate of transmission.
- Massive social gatherings must be completely prohibited for a minimum 6 months of time period.
- Vaccination availability and distribution must be carried out in mission mode where people above 45 years and younger people with comorbidities are given priority.
- The guidelines laid down by the government is a welcome step in tackling pandemic spread in rural areas.
- The protocol rightly focuses on linking the village level facilities to primary health care centres and district hospitals.
- It also talks about ensuring provisions of basic medical requirements for COVID care.
- The Standard Operating Procedure has laid down separate protocols for patients with varying intensity of infections and also for isolation of asymptomatic carriers.
- It covers the aspects of trained human resources, i.e, anganwadi, ASHA workers etc.
- Under this, ANMs will be given training to conduct rapid antigen testing. However, due to lack of accuracy of the test may lead to COVID-19 infection not being detected.
- The SOP does not provide for urgent availability of RT-PCR testing kits in rural areas.
- It is also silent about upgrading the diagnostic facilities and increasing availability of vaccines in the rural areas.
- With ANMs, ASHA and Anganwadi workers being diverted towards pandemic management , other health and nutrition schemes are expected to be affected. Also, putting them on the frontline in rural areas will lead to an increase of work pressure on them.
- With the SOP in place, it should be realised that there will be a requirement of more doctors and other technical staff in rural areas to tackle the disease. Thus, steps should be immediately taken to ready rural India in case of COVID-19 case surge.
- Citizen volunteers and teams from PHCs must assist in cases of lack of knowledge related to technology required for vaccination registration and other tele-services.
- People above 30 years of age must be offered blood sugar and blood pressure screening.
- Also, the vaccination drive can be used for screening co-morbidities like hypertension and diabetes among the population aiding National Health Policy of 2017.
- Partnership between NGOs and other organisations can help in supportive social services.

- The CHOs and ANMs should be trained in performing Rapid Antigen Testing.
- The provision of Rapid Antigen Test (RAT) kits should be made at all public health facilities including Sub-centres (SCs)/ Health and Wellness Centres (HWCs) and Primary Health Centres (PHCs).
- The COVID-19 patients should also be counseled to isolate themselves till their test results are made available.
- Those people who are asymptomatic but have a history of high-risk exposure to COVID patients such as exposure of more than 15 mins without a mask within 6 feet distance, should be advised to quarantine and get tested as per ICMR protocol.
- Contact tracing should be done depending upon the intensity of the rise in cases, as per the Integrated Disease Surveillance Programme's guidelines for contact tracing of COVID-19 cases in community settings.
- Since nearly 80-85 percent of COVID-19 cases are asymptomatic or mildly symptomatic, these patients do not require hospitalisation and may be managed at home or in COVID care isolation facilities.
- Each village should have an adequate number of pulse oximeters and thermometers for COVID patients to monitor the health of active cases in home isolation.
- The Village Health Sanitation and Nutrition Committee should mobilize resources to make provisions for this equipment.
- The pulse oximeters and thermometers should be sanitised after each use with cotton or a cloth soaked in alcohol-based sanitizer.
- Follow-ups can be done for those undergoing home isolation through household visits by a frontline worker or volunteers following infection prevention practices including wearing of a medical mask and other precautions.
- Home isolation kits shall also be provided to all such cases which should include medicines including Paracetamol 500 mg, ivermectin, cough syrup and multivitamins as prescribed by the treating doctor.
- The patients or caregivers should keep monitoring their health and seek immediate medical attention if serious signs or symptoms develop such as difficulty in breathing or dip in oxygen.
- If SpO2 goes below 94 percent, the patient should be referred to a facility with an oxygen bed.

The patients under home isolation will be discharged after at least 10 days have passed from the onset of symptoms. No need for testing after completion of the home isolation period.

- To manage the pandemic in rural India, decentralised planning will play a crucial role. District authorities, police and health authorities must come together.

- Decision making based on data should be enabled by means of a reliable information system.
- Updated data must be available at district level for rapid responses.
- These data can further be analysed and used for resource allocation and planning at State level.
- The current pandemic will provide a platform for developing a design of a new health system which will further aid in universal health coverage.

Conclusion:

The health infrastructure planned for peri-urban, rural and tribal areas should be aligned to a 3-tier structure COVID Care Centre (CCC) to manage mild or asymptomatic cases and dedicated COVID Health Centre (DCHC) to manage moderate cases and dedicated COVID Hospital (DCH) to manage severe cases. Only through a decentralized process with more power to the local self-governing institutions, the impact of the virus can be curbed.

Bad to worse for women workers

The COVID-19 pandemic has destroyed millions of livelihoods and led to a sudden and large increase in poverty and a massive disruption of the labour market in India.

- Women workers, in particular, have borne a disproportionate burden.
- A report titled 'State of Working India 2021: One Year of Covid-19' brought out annually by Azim Premji University's Centre for Sustainable Employment, Bengaluru has been released.
- The report focuses on the impact of one year of Covid--19 on employment, incomes, inequality and poverty.

Constitutional Privileges for women in India

1. Equality before law for women (Article 14)

2. The State not to discriminate against any citizen on grounds only of religion, race, caste, sex, place of birth or any of them (Article 15 (i))

3. The State to make any special provision in favour of women and children (Article 15 (3))

4. Equality of opportunity for all citizens in matters relating to employment or appointment to any office under the State (Article 16)

5. The State to direct its policy towards securing for men and women equally the right to an adequate means of livelihood (Article 39(a)); and equal pay for equal work for both men and women (Article 39(d))

6. To promote justice, on a basis of equal opportunity and to provide free legal aid by suitable legislation or scheme or in any other way to ensure that opportunities for securing justice are not denied to any citizen by reason of economic or other disabilities (Article 39 A)

7. The State to make provision for securing just and humane conditions of work and for maternity relief (Article 42)

8. The State to promote with special care the educational and economic interests of the weaker sections of the people and to protect them from social injustice and all forms of exploitation (Article 46)

Government initiatives for generating women's employment

- Support to Training and Employment Programme for Women (STEP) Scheme: STEP Scheme aims to provide skills that give employability to women and to provide competencies and skill that enable women to become self-employed/entrepreneurs.

- The Scheme is intended to benefit women who are in the age group of 16 years and above across the country.

- Mahila e-haat: Mahila E-Haat is an initiative for meeting aspirations and needs of women entrepreneurs.

  * It is an online marketing platform for women, where participants can display their products.

  * It is an initiative for women across the country as a part of 'Digital India' and 'Stand Up India' initiatives.

  * The platform has been set up by the Ministry of Women and Child Development, Government of India under Rashtriya Mahila Kosh (RMK).

- Mahila Bank: The promotion of financial assets between female customers was one of the bank's main priorities. Research has shown that women's possession of assets decreases their risk of serious domestic abuse.

  * Mahila Coir Yojana: Mahila Coir Yojana (MCY) is the a women oriented self employment programme in the coir industry, which aims to providing self employment to rural women artisans in regions producing coir fibre. The conversion of coir fibre into yarn on motorized ratts in rural households provides scope for large scale employment, improvement in productivity and quality, better working conditions and higher income.

  * The scheme is being implemented by the Government through the Coir Board under its Coir Vikas Yojana.

- Women Entrepreneurship Platform (WEP): The Women Entrepreneurship Platform (WEP) is a first of its kind, unified access portal which brings together women from different parts of India to realize their entrepreneurial aspirations. It is an initiative of NITI Aayog.

  The initiative is aimed at building an ecosystem for women across India to realize their entrepreneurial aspirations, scale-up innovative initiatives and chalk-out sustainable, long-term strategies for their businesses.

Key points: Widening gender gap in employment

- Prior to 2020, the gender employment gap was large.

  * Only 18% of working-age women were employed as compared to 75% of men.

  * Reasons include a lack of good jobs, restrictive social norms, and the burden of household work.

- The pandemic has worsened the situation: Data from the Centre for Monitoring Indian Economy Pvt. Ltd. show that 61% of male workers were unaffected during the lockdown while only 19% of women experienced job security.

  * 47% of employed women who had lost jobs during the lock-

down, had not returned to work. The equivalent number for men was only 7%.

- **Reduced women workforce:** Nearly half of the women workers, irrespective of whether they were salaried, casual, or self-employed, withdrew from the workforce, as compared to only 11% of men.
  - ✳ Women tended to lose work disproportionately irrespective of the industry in which they were employed. For instance, the share of women in job losses in education was three times their share in that industry.
- **Women failing to regain jobs:** Men who did lose work were able to regain it at lower earnings, because they had the option of moving into fallback employment arrangements.
  - ✳ Thus, 33% of formal salaried men moved into self employment and 9% into daily wage work between late 2019 and late 2020.
  - ✳ In contrast, only 4% and 3% of formal salaried women moved into self employment and daily wage work, respectively.

There was a large increase in informal employment due to coronavirus.

  - ✳ Salaried employees fell back on self-employment and daily wage work.
  - ✳ Agriculture and trade emerged as the fallback sectors, while education, health and professional services sectors saw the highest outflow.
- **Informal jobs:** Women were more likely to enter as daily wage workers while men found avenues for self-employment.

- **Low wages:** Between September to October 2020, a daily wage worker earned about Rs 7,965 compared to a self-employed worker who earned nearly twice that at Rs 12,955.
- **Growing domestic work**
  - ✳ With schools closed and almost everyone limited to the confines of their homes, household responsibilities increased for women.
  - ✳ Married women and women from larger households were less likely to return to work, suggesting that the burden of care may be a reason for poor employment recovery.
  - ✳ The India Working Survey 2020 found that among employed men, the number of hours spent on paid work remained more or less unchanged after the pandemic.
  - ✳ But for women, the number of hours spent in domestic work increased manifold.
  - ✳ This increase in hours came without any accompanying relief in the hours spent on paid work

Increasing the burden of unpaid care work

Significance of women in the workforce

- **Economic progress of nation:** Increasing women's labour force participation by 10 percentage points could add $700 billion to India's GDP by 2025 (or a 1.4% increase).
- **Rise in household income and a relative sense of financial independence:**
  - ✳ Even small amounts earned by the women, mostly working part-time, can at once give

them a sense of feeling liberated, as they can take decisions on making small expenditures without depending on their husbands for money and approval.

  - ✳ In most cases, women spend their earnings to pay small expenses such as getting an LPG cylinder refilled, buy things for their children and even pay their school or tuition fees. Spending on self is very low on their priority.
  - ✳ Financial independence also boosts self-esteem and confidence of these women.
  - ✳ Even small amounts earned by the women, mostly working part-time, can at once give them a sense of feeling liberated, as they can take decisions on making small expenditure without depending on their husbands for money and approval.
- Socio-cultural-economic transformation - There are other benefits from getting women out of their homes to a place where they will share with other co-workers.
  - ✳ It begins the process of socio-cultural transformation in a rural society. One, the village gradually learns accept as normal for women, even the ones who keep their faces veiled, to step out of their home to work.
  - ✳ It can help greater integration in villages where caste and religious divisions run deep when women from diverse backgrounds work together.
  - ✳ The quality of conversations that these women hold undergoes a change.

Way forward:

- Expansion of the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) and the introduction of an urban employment guarantee targeted to women as soon as the most severe forms of mobility restrictions are lifted.

- Co-ordinated efforts by States to facilitate employment of women.

- Addressing immediate needs through the setting up of community kitchens, prioritising the opening of schools and *anganwadi* centres, and engagement with self-help groups for the production of personal protective equipment kits.

- A COVID-19 hardship allowance of at least ₹ 5,000 per month for six months should be announced for 2.5 million accredited social health activists and Anganwadi workers, most of whom are women.

- The draft National Employment Policy should systematically address the constraints around the participation of the women's workforce, both with respect to the availability of work and household responsibilities.

  * The pandemic has shown the necessity of adequate public investment in social infrastructure.

  * The government has fast-tracked the proposed National Employment Policy (NEP), which aims at formalisation of the country's 500 million workforce including migrants to ensure job and social security.

  * The policy will lay out a sectoral roadmap with incentives for employment generation

- Universal basic services programme that fills existing vacancies in the social sector and expands public investments in health, education, child and elderly care, and so on, to be prepared for future shocks.

  * This can help bring women into the workforce by directly creating employment for them but also by alleviating some of their domestic work burdens.

  * It will help overcome nutritional and educational deficits that we are likely to be confronted with as we emerge from this crisis.

The long-standing question of women's participation in India's economy has become more urgent with the pandemic disproportionately impacting women's paid work and increasing the burden of unpaid care work.

National Tribunals Commission

The union government has recently, abolished several appellate tribunals and authorities and transferred their jurisdiction to other existing judicial bodies through the Tribunals Reforms (Rationalisation and Conditions of Service) Ordinance 2021.

- The Centre began the process of rationalisation of tribunals in 2015.

- By the Finance Act, 2017, seven tribunals were abolished or merged based on functional similarity and their total number was reduced to 19 from 26.

- In February, 2021, the government introduced a bill to abolish some tribunals where the public at large is not litigant.

- Since the bill could not get parliamentary nod, an ordinance was issued.

- The Tribunals Reforms (Rationalisation and Conditions of Service) Ordinance, 2021, is issued by the Ministry of Law and Justice.

TRIBUNALS IN INDIA

Constitutionality of the Tribunals

- Tribunals have been a long-standing feature of the Indian judicial system.

- The Income Tax Appellate Tribunal was set up as early as 1941.

The 42nd Amendment to the Constitution introduced Part XIV-A which inserted Article 323-A and 323-B in to the Constitution.

- It empowered both the Parliament and state legislatures to establish administrative and other tribunals.

- With this insertion, tribunals, as an alternate method of adjudication, received constitutional legitimacy.

Categories of Tribunals

Administrative Tribunals: It is set-up by an act of parliament i.e., Administrative Tribunals Act, 1985 under Article 323 A of the Constitution.

- It adjudicates disputes and complaints with respect to recruit-

ment and conditions of service of persons appointed to the public service and posts in connection with the affairs of the Union and the States

- Under Article 323 B, the parliament and the state legislature are authorised to provide for the establishment of tribunals for the adjudication of disputes relating to the following matters:
  - ✳ Taxation
  - ✳ Foreign exchange, import and export
  - ✳ Industrial and labour
  - ✳ Land reforms
  - ✳ Ceiling on urban property
  - ✳ Elections to Parliament and state legislatures
  - ✳ Foodstuff
  - ✳ Rent and tenancy rights

Advantages of Tribunals

- Flexibility: The introduction of tribunals engendered flexibility and versatility in the judicial system of India.
- Speedy Justice: The core objective of the tribunal is to deliver quick and quality justice.
- Less Expensive: The Tribunals take less time to solve the cases as compared to the ordinary courts. As a result, the expenses are reduced.
- Relief to Courts: The system of administrative adjudication has lowered down the burden of the cases on the ordinary courts.

Problems with Tribunals

- Lack of independence: The principle of judicial independence traces its origins from the doctrine of separation of powers.
- But here ministries are parties before the very tribunals whose staff, finances, and administra-

tion are handled by them.

Administrative concerns: Three kinds of concerns fall under the ambit of administration:

- Discrepancies in qualifications: Different qualification requirements lead to varying competencies, maturity and status of members, which is problematic.
- Tenure and age of retirement: Uneven tenures also hamper the lack of institutional continuity.
- Nodal Ministries: There is a degree of variance in the appointment process, qualification of members, age of retirement, resources and infrastructure of different tribunals.

Jurisdiction of the High Courts: By passing the jurisdiction of High Courts have been the major criticisms against the tribunal system in India.

CHANGES BROUGHT BY THE ORDINANCE

- It has made amendments to the
  - ✳ Cinematograph Act
  - ✳ Copyright Act
  - ✳ Customs Act
  - ✳ Patents Act
  - ✳ Airports Authority of India Act
  - ✳ Trade Marks Act
  - ✳ Geographical Indications of Goods (registration and protection) Act
  - ✳ Protection of Plant Varieties and Farmers Rights Act
  - ✳ Control of National Highways (land and traffic) Act
  - ✳ Finance Act

In the Cinematograph Act, the appellate body will now be the high court. The FCAT was a statu-

tory body constituted to hear appeals of filmmakers aggrieved by Central Board of Film Certification (CBFC).

Search-cum-selection committees: The Finance Act, 2017 Act specifies that the Chairperson and Members of the Tribunals will be appointed by the central government on the recommendation of a Search-cum-Selection Committee. The Ordinance specifies that these Committees will consist of:

1. The Chief Justice of India, or a Supreme Court Judge nominated by him, as the Chairperson (with casting vote),
2. Two Secretaries nominated by the central government,
3. The sitting or outgoing Chairperson, or a retired Supreme Court Judge, or a retired Chief Justice of a High Court, and
4. The Secretary of the Ministry under which the Tribunal is constituted (with no voting right).

- Term of office: The term of office for the Chairperson of the tribunals will be of four years or till the attainment of the age of seventy years, whichever is earlier.
- For other members of the tribunals, the term will be of four years or till the age of sixty-seven years, whichever is earlier.

Concerns and Criticism of the Ordinance

- Bypassed the usual legislative process
- Abolished several tribunals such as the Film Certification Appellate Tribunal without any stakeholder consultation.
- Despite the Supreme Court's direction (Rojer Mathew v. South

Indian Bank (2019)), no judicial impact assessment was conducted prior to abolishing the tribunals through this Ordinance.

- Fixed four-year tenure for Chairpersons and members of tribunals by blatantly disregarding the court's direction for fixing a five-year term.
- No efforts to constitute a National Tribunals Commission (NTC).

NATIONAL TRIBUNALS COMMISSION (NTC): A WAY FOWARD

About NTC and it's objective

- It would be an independent umbrella body to supervise the functioning of tribunals. It will help in appointment of and disciplinary proceedings against members, and to take care of administrative and infrastructural needs of the tribunals.
- The idea of an NTC was first mooted in L. Chandra Kumar v. Union of India (1997).
- NTC would ensure the prioritization of tribunals and also independence from the executive.

Scope of NTC

- As it is essential for the NTC to be independent, it will work through its Board, the composition of which should be provided in the statute establishing it.
- The NTC will be responsible for supervising and administering all tribunals established under any Act of Parliament and not tribunals established pursuant to state legislations.
- Powers: NTC will establish a Secretariat for its administration and functioning.
- The NTC may also be empowered to establish different sub-committees, which would be entrusted to administer the tribunals under its scope.
- NTC would be empowered to set up and ideate any new tribunals in consultation with the central government and through Parliamentary approval.
- Remedying the Issues with Tribunals: NTC would help in the following issues:
  * Process of Appointment
  * Qualifications/Eligibility Criteria for Appointments to Tribunals
  * Reappointment
  * Tenure of Members
  * Post-tenure Restrictions
  * By-passing the Jurisdiction of High Courts
  * Removal of Members and other issues

Conclusion

The recent changes brought by the ordinance have faced many criticisms and to some extent seems failed to address the long pending issue of tribunals reforms. There is a need of developing an independent oversight body, National Tribunal Commission, that will protect the independence and guarantees the functional, operational and financial independence of the tribunals across India.

Cooperative Federalism : Covid-19 crisis

The pandemic has been a testing ground for both the Centre and the State. Many tussles have been observed between the Centre and state regarding allocation of resources, shortage of oxygen etc.

- Cooperative federalism has been

Why so many Centre-state tensions are breaking out now

the essence of Indian democracy.

- The first wave proved to be less disastrous than the ongoing wave due to several factors.
- Effective coordination and cooperation between the centre and the state was one of those.
- However, the last three months have witnessed several issues between Centre and State.
- The Chief ministers of various states have made allegations that the meetings with the PM are one way.
- Accusations have been made against the Union government for not listening to the State's views.
- Keeping the party politics aside, there is need for better coordination between the both.
- As Union Ministers and the PM has himself underlined centre-state cooperation is critical in this fight against COVID-19.
- Experts are of the opinion that as the pandemic develops in coming times, more challenges will be thrown upon the administration.
- In order to efficiently use the scarce resources available, centre and state should be on the same page
- The Prime Minister has outlined the importance of data collection and analyses. He has urged the district administration for the same.
- The collected information can

only prove to be successful if both the states and the centre use this and discuss the future course of action.

- A two way communication should be encouraged in order to enhance the efficiency of pandemic management. Both must cooperate to reaffirm the spirits of cooperative federalism.

Various hurdles to cooperative federalism in India:

1. Over-centralisation: As widely recognised, India is quasi-federal, with powers and resources being highly tilted in favour of the Union. The Union list has more items than the state list that enables more taxation power to centre. This acts as a major roadblock to cooperative federalism in India. Excessive central character, reduce active participation of states.

2. Ineffective inter-state council: The Constitution provided for institutions like inter-state councils to serve as a platform for consultation between the centre and the states. The inter-state council has just turned out as a platform of talks with less progress on real issues. Inter-state council has met twice in 50 years, and has not been taken seriously as a vehicle of cooperative federalism:

3. Presidential rule: The constitution has provided the President with power to take over state machinery in situations of state failure and emergency. Unfortunately, it has been misused by political parties to subvert state governments. Between 1947 and 1977, there were 44 instances

How Cooperative Federalism Works in India?

This policy has been worked in India in the following manner:
- Division of Powers,
- The supremacy of the Constitution,
- A Written Constitution,
- Rigidity,
- Authority of Courts.

Under this policy in the Constitution, Center has assigned dominant authority as evident from the following:
- States have to exercise their executive authority according to the law created by the Central government. It may not hamper the executive power of the Union within the States.
- Governors are appointed by the Central government to check the working of the States
- Centres have the authority to amend the legislative discretion of the state by taking permission from Rajyasabha

The centre has authority to acquire the executive of the States due to the queries like national security or failure of constitutional machinery of the State.

when the power to impose President's rule was exercised. In *S.R. Bommai v. Union of India* (1994), the limitation laid down by the Supreme Court has placed gentle breaks on exercise of this power, but it had limited effect.

4. Taxation: Taxation powers are another contentious issue between the state and the Central government. For example, in the Goods and Services Tax (GST) scenario, States have power to levy tax on sale of petrol, diesel, etc. and these would be revenues of the respective States. However, the GST Council is yet to recommend inclusion of these items under GST.

5. Under-represented in finance commission: States are under-represented. Re-commendations of the Finance Commission are placed before Parliament and States have no role in the debate. There is no provision for an aggrieved State to challenge the FC report or seek its enforcement.

6. Trust deficit: Trust deficit between Centre and States is widening. Several issues such as shrinkage of divisible pools plague Centre-State relations. Together, they make total cooperation difficult. Most state governments believe the thrust on federalism is limited to lofty ideas and big talks. Many States have shown their displeasure with the way the Centre has been dealing with the States. Recently, Kerala has used Article 131 to move against the centre due to displeasure over the Citizenship amendment act.

7. One size fits all approach: A 'One Size Fits All' approach had been used for years, not

taking into account the heterogeneity of different states and their local requirements. Due to this many states continue to suffer. Earlier planning commision and now Niti Aayog both have followed the same policy. This leads to difficulty in Policy implementation and working together.

Centre-State issues due to Covid crisis:

1. There has been reconciliation and repositioning between the Centre and states in the course of the response to the pandemic.

2. The Centre's efforts are now primarily focused on achieving economies of scale in vaccine procurement, knowledge production for setting standards and guidelines for the states, and mitigating interstate externalities.

3. States continue to play the dominant role in the execution of the actual response to the health crisis. In other words, the fundamental principles of comparative advantage prevailed, but they were organised on the basis of certain functional roles and responses.

4. In spite of health being a state subject, the response to collective threats linked to the subject required some kind of organisation of federal responsibilities on a functional basis.

5. A typical response is to recommend shifting subjects to the Concurrent List to enable an active role for the Centre. This is how the High-Level Group, constituted by the 15th Finance

Commission, recommended shifting health from the State to the Concurrent List. A similar recommendation was made earlier by the Ashok Chawla Committee for water.

6. The GST reforms is the most recent instance. The ongoing friction between the Centre and the states over GST reforms tells us that consensus-building is not a one-time exercise. It has to allow sustained dialogue and deliberation.

Measures to strengthen cooperative federalism:

1. Empowering states: NITI Aayog was formed to further empower and strengthen the states. NITI Aayog needs to act to provide the strategic policy vision for the government as well as deal with contingent issues. For example, the state should be empowered more to work to enable smart cities.

2. Economic empowerment: There are several ways through which a country can achieve higher growth and promote economic activities. One of the ways is to empower states towards optimum utilization of its resources such as infrastructure, buildings, transportation and most importantly its human resource.

3. Fostering cooperation: All states should compete with each other regarding policies and its effective implementation. The Union government can include States in how decisions are made and enforced. The Union must develop newer conventions to

foster cooperation. Aspirational district initiative has potential to foster cooperation at local level, enabling the states to work with the centre.

4. Taxation: States must be given more power to tax and more grants should be given to them. One size fits all policy needs to be changed with focus to specific needs of each state.

Conclusion

The new challenges and issues need the centre and various states to come together. Terrorism, militancy, organised crimes, problem of internally displaced persons, refugees issue, all these require that the country as a whole comes together. Cooperative federalism alone strengthens the nation from within by enabling it to withstand adversities and challenges because of its inherent resilience and malleability. Thus efforts must be made towards cooperative federalism.

Role of NGOs during the pandemic

The Prime Minister has called for active engagement of civil society in coping with the pandemic.

- The NITI Aayog reached out to more than 90,000 Non governmental organizations (NGOs) and civil society organisations (CSO), seeking assistance in delivering services to the poor as well as health and community workers.

- NGOs in every region have been tirelessly working on the ground to provide food, rations and hygiene kits to the poor.

- They are also performing the important task of creating aware-

ness about the virus and preventing its spread, educating people on social distancing, helping to combat the stigma, providing shelter and setting up community kitchens for those in need.

Non governmental organizations

- The World Bank defines NGOs as "Private organisations that pursue activities to relieve suffering, promote the interests of the poor, protect the environment, provide basic social services, or undertake community development.

- Also referred to as nonprofits, these organisations in India work independently, in cooperation with the government or in partnership with national or international organisations.

NGOs and community participation in India

- At the time of the first Five Year Plan (1951–1956), J D Sethi and other Gandhian economists had called for community participation.

  ∗ Community participation can be defined as the involvement of people in a community in projects to solve their own problems.

  ∗ At that point community groups collected money and supplemented government efforts for development.

- Transition towards NGOs: Later, the approach of community action took the form of NGOs.

  ∗ Nonprofits saw another growth stage in the 1960s when it was noticed that government programmes alone would not suffice for development.

- Foreign assistance and ODA

inflows facilitated several large-scale projects, but at the same time several of them also ended up with FCRA-related issues.

- The number of registered societies has increased manifold in the last 20 years, and the estimated total value of output of the 31.7 lakh societies registered in India is Rs 41,292 crore.

- They include relief agencies, charities and community organisations, tackle countless challenges related to the environment, education, health, poverty, women empowerment, child protection, social justice, human rights, relief work and much more.

Constitutional and legal provisions for NGOs in India

- Article 19(1)(c): The right to form associations

  ∗ It guarantees to all its citizens the right "to form associations, or unions or Co-Operative Societies."

  ∗ Under clause (4) of the Article 19 , however ,the State may by law impose reasonable restrictions on this right in the interest of public order or morality or the sovereignty and integrity of India.

- Article 43: The State shall endeavour to secure, by suitable legislation or economic organisation to promote cottage industries on an individual or co- operative basis in rural areas.

Registration

They are registered under the Societies Registration Act, 1860 in India.

- *Niti Aayog is envisaged to be appointed as the nodal agency* for the purpose of regis-

tration and accreditation of Voluntary organizations/NGOs seeking funding from the Government of India.

- The existing portal at Niti Aayog *(NGO-Darpan)* is aligned with accreditation-like functions.

Legislations regulating the finances of NGOs

- Foreign Contribution Regulation Act (FCRA), 2010

  ∗ It seeks to regulate the foreign contributions or donations to organizations and individuals in India .

  ∗ It is implemented by the Ministry of Home Affairs.

  ∗ The Act aims to curb such contributions which might be detrimental to the national interest.

  ∗ Any organisation, association or NGO in India cannot receive foreign funds if they do not have a license under the FCRA.

- The Foreign Exchange Management Act, 1999

  ∗ It aims for facilitating external trade and payments and for promoting the orderly development and maintenance of foreign exchange market in India".

  ∗ In 2016, the powers of the Ministry of Finance to monitor NGOs were placed under the FEMA.

Supreme Court guidelines

- Non-Government Organisations (NGOs) receiving substantial financing from the government are bound to give information to the public under the RTI Act.

An NGO substantially financed, directly or indirectly, by funds provided by the appropriate government would be a public authority.

NGOs: Need and significance

- The Government has enunciated the welfare *state as one of the Directive Principles of State Policy.*
  - ✳ The social organizations also have a role to play in providing basic needs and amenities to and addressing the problems of the downtrodden, destitute, and the weaker sections (women and children).
- There are issues of exclusion of women, children and marginalized communities in the development process.
- NGOs can and should play the "game changer" to pro-poor development through leadership on participatory research, community empowerment and search for development alternatives.
- Acts as bridge: In India, the voluntary sector bridges the gap between the government and the population of the country.
  - ✳ It identifies the needs of the community and provides its support and services, even in the most untouched and marginalized areas, where the government is not able to reach."

Concerns:

- Problems faced during pandemic:
  - ✳ Information asymmetry on various medical equipment, hospital delivery strategies and lack of clarity over the ever-changing rules and regulations by governments.
  - ✳ Lack of funding: Coronavirus has triggered a funding crisis for NGOs when they are needed most.
- The economic downturn means future aid budgets and donations are likely to decline.

- A liquidity fund could help NGOs cover overheads in the short term.
- Transparency and accountability: the NGO sector is yet to evolve any institutionalized framework, for ensuring good governance practices. Some of the local and national NGOs have been found involved in malpractices and acting irresponsibly.
- Foreign funding: More than 1,800 NGOs and academic institutes found to be violating laws pertaining to foreign funding have been banned by the government from receiving overseas funds recently.
- Accreditation: It is very difficult to distinguish whether an organization wants to work for the cause or has been set up only for the purpose of receiving government grants.
- Lack of data: Many of the NPIs traced had poor employment and financial records, and even if they did, they often refused to furnish their audited accounts, especially if they did not receive funds from statutory bodies.
- Security threats: Recently, the Union Home Ministry has identified some NGOs as security threats to the country.

Way forward

- Address specific issues involving the pandemic: NITI Aayog should engage government institutions that encourage public participation and also support new frameworks for crisis management that critically look into the weaknesses and failures of the existing ones in attracting community participation in an effective manner.
  - ✳ This would also help in NITI's

own goal of localisation of development as part of its Sustainable Development Goal (SDG) strategy.
- Leveraging ABCD: NITI should create mechanisms for facilitating the creation of a required space for community initiatives that are already playing an important role.
  - ✳ It should leverage advanced technologies (ABCD — artificial intelligence, blockchain, cloud computing and data analytics) for bridging demand-supply gaps.
  - ✳ NITI should rationalise select activities of communities and overcome the failure of the state where it is imminent.
- NITI should partner with willing state governments to explore the launch of platforms that promote cross-learning and experience-sharing to reduce the cost of operations and to avoid reinventing the wheel.
  - ✳ This may help in scaling up and, in some cases, overcome the asymmetric flow of information.
- Cutting red tape: The scope for the usual bureaucratic hassles should be minimised and opportunities for participation of communities in decision making and their implementation at local levels may be explored.
- Creating an ecosystem: The advantage for NITI is DARPAN, its portal for all voluntary organisations/non-governmental organisations engaged in development activities.
  - ✳ The challenge would be to work on an ecosystem that facilitates the entry of new actors, which have grown out of new social and economic policies.

* Several informal entities, start-ups and others, at times undefined, may also have to be engaged.

* Scaling up the micro models: Several micro-models are coming up, but few have a larger footprint. Small groups of students or one district collector or even a gurdwara are capable of reducing misery.

  * These micro-models need to be scaled up.

* A National Accreditation Council consisting of academicians, activist, retired bureaucrats should be made to ensure compliance by NGOs.

* There should be better coordination between Ministries of Home Affairs and Finance in terms of monitoring and regulating illicit and unaccounted funds.

* A regulatory mechanism to keep a watch on the financial activities of NGOs and voluntary organizations is the need of the hour.

We also have to realise that the state or the market cannot be the only provider for what citizens need. Effective social interactions and community participation can play an important role in scaling up some of the actions that have been found useful. The pandemic has placed before us ways in which community actions have contributed to resilience.

Limits in the POCSO Act

Protection of Children from Sexual Offences Act (POCSO) had been enacted to protect children from offences of sexual assault, sexual harassment and pornography but some limits and fundamental defects are surfacing in its legal and procedural methods.

* The Act was enacted in 2012 to provide a child-friendly system for trial underneath which the perpetrators could be punished.

* Recently many fundamental defects and drawbacks have been noticed in the POCSO Act.

POCSO Act and its Significance

* Gender neutral: It recognises that boys can be victims of sexual violence as well. It defines a child as someone under the age of 18.

* Increased the scope of reporting sexual crimes against children: It expanded the definition of sexual assault to include non-penetrative sexual assault as well as aggravated penetrative sexual assault (sections 3 to 10).

* It included punishment for persons in positions of trust of authority like public servants, staff of educational institutions, police etc.

Recognises sexual harassment of a child: It involves touching, and also stalking, making a child expose themselves or exposing themselves to a child, and so on.

Stringent punishment: It specifically lays down punishment for exposing children to, or using them to create child sexual abuse material (CSAM, also referred to as child pornography).

Lays down the procedures for reporting sexual crimes against children: Under section 19 of the Act, it is mandatory to report sexual crimes against children, includ-

ing when there is an apprehension that an offence under the Act has been committed.

This child protection law is also unique because it places the burden of proof on the accused, following 'guilty until proven innocent' unlike the IPC.

Inability to deal with historical cases:

* Cases involving child sexual abuse not amounting to rape as defined under Section 376 of the Indian Penal Code (IPC), and prior to the enactment of POCSO in 2012, would presumably be classified under the lesser offence of outraging the modesty of a woman.

* Any reporting of an offence, under Section 354 of the IPC, more than three years after the date of incident is barred by the CrPC. Provisions in the Criminal Procedure Code (CrPC) prohibit judicial magistrates from taking cognisance of cases beyond a specific time period.

* So historical reporting of child sexual offences which took place before 2012 has insurmountable legal barrier against the registration of historical child sexual offences.

Historical child sexual abuse: It refers to incidents that are reported late.

* These cases are not only confined to institutions but also include intra-familial abuse where it is difficult for the child to report the offence or offender at the earliest point in time.

Why it matters: Delays in reporting sexual abuse after a considerable passage of time from the date of offence may be due to factors such as;

* threats from the perpetrator

- fear of public humiliation, and
- absence of trustworthy confidant
- Accommodation syndrome: As per this, child keeps the abuse as a secret because of the fear that no one will believe the abuse, which leads to accommodative behaviour.
- Delayed reporting leads to lack of evidence to advance prosecution. It is believed that there would be less than 5% chance for gathering direct physical and medical evidence in such cases.

Other Loopholes in the Act

- Vagueness in the Act: In Satish Bandu Ragde v. The State of Maharashtra case Nagpur Bench of the Bombay High Courtheld that "skin-to-skin" contact is essential to constitute the offence defined under Section 7 of the Protection of Children from Sexual Offences Act, 2012 (POCSO Act) which deals with sexual offences against minors.
- Later on Supreme Court had to injunct the interpretation of 'skin-to-skin contact' given by the Bombay High Court.

The Act does not leave any possibility of consent given by persons under 18.

- This would mean that if a sixteen year old boy or girl had a nineteen year old sexual partner, the partner would be liable to be booked under the provisions of the POCSO Act.

The Act also does not provide any clarity on what happens when two minors engage in any kind of sexual activity.

- Technically, they are both Children in Need of Care and Protection (CNCP) and Children in Conflict with Law (CCLs).

Proving the age of the child: POCSO Act is silent on what documents are to be considered for determining the age of the child victim.

- But the provisions of Rule 12 of the Juvenile Justice Rules recognize only the birth certificate, the school certificate of the child, or the matriculation certificate.
- However, children who are only able to produce other documents – even a legal document such as a passport – have to undergo a bone ossification test. This test can give a rough estimate of the age of the child at best.

Similar to the law of rape under the IPC: The pronoun used for the accused is "he", thus, again, only a male can be booked for the offences under the relevant provisions of the POCSO Act.

- Though a victim under the POCSO Act can be any child irrespective of the gender but the accused still can only be a male and females are again given a protective shield, for reasons unknown.

- Saying that females do not subject children to forceful sexual assault is untrue.

Way Forward

- CrPC has had limitation provisions to avert delayed prosecution but the circumstances around child sexual abuse cannot and must not be viewed in the same manner as other criminal offences.
- Union Ministry of Law and Justice have clarified that no time limit shall apply for POCSO cases to strengthen the POCSO jurisprudence, but it still fails to address the plight of children who were victims of sexual abuse before 2012.
- There is an urgent need to reform and revise our laws to account for various developments such as historical reporting of child sexual abuse.
- Union government must frame guidelines to direct effective and purposeful prosecution in cases which are not covered by the POCSO.

INTERNATIONAL RELATIONS

Delay in India's Vaccine Maitri programme

India is unlikely to resume its Vaccine Maitri programme for the neighborhood, including Bangladesh, Nepal and Sri Lanka until at least to July, given the sudden shortage of vaccines amid the surge in COVID-19 cases, and the government's plan for vaccination for all adults set to start on May 1.

- India has had to suspend the export of both commercial and grant based vaccine doses, including to countries in the neighborhood which had already paid for the shipments, with the last batch going out at the beginning of April, after the 2nd wave of the pandemic hit India.

- the government is also not sure about when the supplies will be restored.

- India's last shipment to Bangladesh was a grant of 1 Lac doses sent on April 2nd while the commercial shipments have not been sent since February 21, when 20 lactose was shipped.

- Bangladesh had contracted for 30 million doses of Covishield at 5 million doses a month for six months, but only 7 million of the paid shipments actually arrived between January and February.

- Sri Lanka placed a commercial order for 1.5 million (15 lakh) doses of Covishield, of which just 5 lakh doses have arrived so far.

- Sri Lanka and Nepal were last sent shipments through the COVAX alliance on March 6 and 28, respectively, while commercial shipments stopped at the end of February.

- Sources said Bangladesh and Nepal have raised concerns about the interruption in supplies officially.

Vaccine Maitri or Vaccine Friendship Programme

- It is the official vaccine diplomacy program of India under its neighborhood first policy.

- In accordance with this policy, Bhutan and Maldives became the 1st Two countries to receive 150,000 and 100,000 vaccines respectively, on January 20, 2021.

- Bangladesh and Nepal received two million and one million doses on January 21. Myanmar received 1.5 million doses, Seychelles 50,000 doses, and Mauritius 100,000 doses on January 22.

Key Features of the Vaccine Maitri Programme

- It is based on India's foreign policy ideology of "Vasudaiva Kutumbakam"- The World is one Family.

- Under the programme, India decided to supply maiden India COVID-19 vaccines to its neighboring and key partner countries under the neighborhood first policy.

- Bhutan and Maldives are the first countries to get the vaccines followed by Bangladesh, Nepal, Myanmar and Seychelles.

- Followed by the above countries Sri Lanka, Afghanistan and Mauritius got the necessary vaccine doses.

- However, Pakistan was not among the beneficiaries of the above programme.

- The vaccines were supplied to the partner countries in a phased manner, keeping in mind the demand.

Vaccine Diplomacy

- It refers to that branch of global health diplomacy in which a nation uses the development or delivery of vaccines to strengthen its ties with other nations.

- It also includes the joint development of lifesaving vaccines and related technologies, with the major actors typically scientists that come together to work irrespective of the kind of diplomatic relationship between the participating countries.

Advantages for India

- Such kinds of measures could provide innovative opportunities to promote India's foreign policy as well as domestic relations between the nations in its neighborhood and across the globe.

- By financing shipments from India's assistance programs for cash strapped neighboring countries that desperately need such assistance, India shall own the long term goodwill offered by some idiot neighbors and across the Indian Ocean countries.

- In a recent move by China, it offered vaccines to Nepal, Afghanistan, Sri Lanka, and Bangladesh and it held a multilateral dialogue with the four countries and also Pakistan on anti epidemic prevention. The early shipment of vaccines from India to these countries could help encountering the Chinese vaccine and mask diplomacy in its neighborhood.

- It gives a leverage to India over the Western countries who are currently focused almost exclusively on their own problems as India is being appreciated for helping its neighbors and developing countries who could not afford the US and European vaccines.

- Beyond India's immediate neighbors, South Korea, Qatar, Bahrain, Saudi Arabia, Morocco and South Africa have all shown inclinations towards the purchase of vaccines from India which is estimated to be 60% of the global supply of inoculants.

- Such a measure will provide a boost through the farmer manufacturing in India and help India to become the pharmacy of the world that will have long term positive impacts for India.

- If India becomes the manufacturing hub to the COVID-19 vaccines across the world, it shall give a boost to the Indian economy.

- Such a move by India comes at a time when The WHO Director General criticized the moral corruption of the drug manufacturers from the richer countries for delaying distribution of vaccines and targeting shipments to the rich countries only. This could help India have a moral right to have a greater say in the international forums.

Earlier Diplomacy Measures by India

- India had earlier supplied Hydroxychloroquine, Remdesivir and Paracetamol tablets as well as diagnostic kits, ventilators, masks, gloves and other medical supplies to a large number of countries during the pandemic.

- Under the Partnerships for Accelerating Clinical Trials (PACT) programme, India has also provided training to several neighbouring countries to enhance and strengthen their clinical capabilities.

Issues with the Move

- It is being said that the export of vaccines from India to other countries has caused the current vaccine shortage in the country for its own citizens.

Conclusion

India needs to balance its domestic needs with its diplomatic commitments. The vaccination drive in India commenced in January, 2021 and is the world's largest vaccination drive. The current vaccine shortage in the country especially when India has been hit by the second wave has led to a dilemma in the minds of the people as well as the policymakers about the effectiveness of such a programme.

However, the strategic effectiveness of the programme cannot be ignored. Where some of the richest and most powerful nations in the world turned inwards and erected barriers, India opened its heart and purse strings as a responsible member of the world community. India's Vaccine Maitri initiative remains a pragmatic response to an unprecedented challenge facing humanity.

Middle East Reset After US departure

As the last troop of USA is going to leave Afghanistan, it is being seen as a departure of USA from Middle East. This major geopolitical movement will provide an opportunity of a reset to the area, though it is not easy to predict its future.

European interference in the Middle East

- Britain and France have had huge impacts on the Middle East over the past century.

- The sun never set on a British empire that had moved into Egypt in 1882, controlled much of the western Persian Gulf, and ran Iran's petroleum industry for 45 years after discovering oil there in 1908.

- The Brits and French held political control together with economic and cultural influence in almost all the colonized Middle Eastern entities from 1920s.

- The Britishers' control over Middle East got loose with the India's independence.

Middle East: Victim of Cold War

- The impact of the rivalry between Soviet Union and United States in the Cold War distorted internal politics and exacerbated regional conflicts in the Middle East.

- United States and Soviet Union were militarily and diplomatically engaged in the region, respectively in Turkey, Saudi Arabia and Iran, and Iranian Azerbaijan and Kurdistan.

- Reasons: Superpowers were aware of its importance, in terms of its strategic geographic loca-

Source: CIA Factbook
Simran Khosla/ GlobalPost

tion and its vast oilfields and gas deposits.

- In fact, from a geopolitical point of view, the region lays at the junction of three continents, immediately south to the border of Russia and the Caucasus and it is surrounded by four major seas, namely the Mediterranean, the Black and the Caspian Sea and the Indian Ocean.

- Before the end of the war, both United States and Soviet Union were already strategically interested in the Middle East's oil reserve.

- In fact, not only at the time were the great powers the World's major oil producers but also the war made them increasingly aware of the strategic role oil had acquired in warfare.

Decisive Role Played by USA

- For Long USA has been referred to as the indispensable nation or the world's policeman because of its activities in the Middle East.

- Following are the domains where USA has interfered:
  - ✳ Israel's security and Israel-Palestinian issue
  - ✳ Lebanon's civil war
  - ✳ Counter Extremism Project of Iran

  - ✳ Iraqi Freedom issue

- Afghanistan Peace process Ensuring oil supplies, competing with other powers, making regional peace, promoting democracy, and stamping out terrorism were other factors demanding massive American military, political and diplomatic investments in the region.

Possible Foreseeable Future of Middle East after USA departure

- Terrorism: Islamic state terror is still prevalent there. ISIS has recently shown its presence in the Afghanistan and some of the five 'stans' countries. Thinking that Islamic State has been defeated can prove to be a mistake.

- Oil: Any disruption to oil exportation from the Middle East will have an impact on the availability and price of oil, which in turn could cause economic disruption or recession. Europeans, Chinese, or Japanese still depend on Middle. Those nations would rather allow Iran to run roughshod over the Middle East than to defend their interests there with force.

- Israel: Israel is highly vulnerable, surrounded by an Arab-Islamic world that desires its destruc-

tion. Abandonment by the United States can jeopardize its security in any number of ways that could lead to unpredictable results, including a potential war between Israel and Iran that would threaten the use of nuclear weapons for the first time since 1945.

- Counter-proliferation: A significant increase in the number of states possessing nuclear weapons and ballistic missile technology would likely destabilize the international security environment.

- Refugees: Millions of refugees have departed their homelands in the Middle East for safer destinations.

- More than 5 million refugees, many of them from the Middle East, have arrived in the 28 states of the European Union, significantly destabilizing the domestic political climate of a number of countries, including Great Britain, France, Germany, Poland, and Hungary.

- A U.S. retrenchment from the Middle East, if it led to a war between Saudi Arabia, Israel, and Iran, would lead to another refugee crisis.

Reasons for USA' Departure

- Due to the fracking revolution in the USA, the country is now nearly self-sufficient in the production of oil and natural gas. Oil was one of the reasons for the presence of the Uncle Sam in the area.

- Domestic Political Reason: There is a notion among Americans after the regime of Trump that American tax payer money should not be wasted on killing innocents in the Middle East. To some extent the Biden adminis-

tration has the pressure to deal with the situation wisely.

- After the costly and prolonged military interventions in the Middle East, Washington has begun to see that it can't fix centuries-old conflicts in the region. Even more important, the US now has other urgent priorities. One among them is the challenge from an assertive China.

- China and Indo-Pacific Ocean: China has emerged as a new threat to the world geopolitics and the focus has been shifted to the Indo-Pacific area. China is becoming a major economical threat to USA.

- Forming Quad with Japan, Australia and India can be seen as some progressive steps in this direction. Many other players are also engaged to keep a check on the elephant in the room.

Stir among the Regional Powers

- There are some astonishing situations occurring in the region due to the US' decision of step back from the Middle East.

- Most of the regional actors either need alternate patrons or reduced tensions with their neighbours.

- Turkey has sensed that its weak economy cannot sustain the ambitious regional policies of its President Recep Tayyip Erdogan.

- After years of challenging Saudi leadership of the Islamic world, Turkey is planning a peace deal with Riyadh.

- Turkey is also trying to make nice with Egypt after years of trying to destabilise Cairo by support to the Muslim Brotherhood.

- After a long period of intense mutual hostility, Saudi Arabia and Iran are now exploring means to reduce bilateral tensions and moderate their proxy wars in the region.

- Saudi Arabia is also trying to heal the rift within the Gulf by ending the earlier effort to isolate Qatar.

- These changes come in the wake of the big moves last year by some Arab states — the UAE, Bahrain, Morocco and Sudan — to normalise ties with Israel.

- China and Russia have regional ambitions but they don't have the kind of strategic heft America brought to bear on the Middle East all these decades.

Dilemma among India and Pakistan

- Most likely other regional powers, India and Pakistan always assumed that USA will never change its position in Middle East. But now the both the countries must imagine a Middle East that is not micromanaged by the USA.

- India: India has made good relations with all the regional actors without a reference to their conflicts has been vindicated by the turn of events.

- Only Turkey turned hostile to India under Erdogan. Apart from this, India has managed to expand its ties with most regional actors. Hopefully, the new regional churn will encourage Turkey to take a fresh look at its relations with India.

- But in case of US withdrawal from Afghanistan it poses major challenges to the Subcontinent. For India American military presence used to keep a check on extrem-

ist forces and created conducive conditions for an Indian role in Afghanistan.

- Pakistan: Unlike Delhi, Rawalpindi will struggle to recalibrate its policies towards the Middle East. It may not able to overcome the domestic ideological opposition to establishing diplomatic ties with Israel despite the recognition that a normal relationship with the Jewish state serves Pakistan's interests.

- Pakistan also fell between the stools in coping with regional rivalries in the Middle East.

- Earlier, Pakistan planned to construct a new Islamic bloc with Turkey and Malaysia. His foreign minister publicly berated the Saudi-led Organisation of Islamic Cooperation for not rallying against India's constitutional changes in Jammu and Kashmir.

- Creating a new Islamic bloc cost Pakistan's deep economic crisis as its Arab Gulf friends call their loans to Islamabad. UAE and Saudi quickly retaliated against Pakistan.

- The incident of Pakistan's about-turn on Saudi Arabia underlines that the Subcontinent does not have the luxury of relying on old ideological tropes like pan-Islamism, pan-Arabism, or anti-Americanism in a region that is undergoing major transformations. Now, nationalism, economic interest, and regime security have trumped transcendental ideologies.

- In case of US withdrawal from Afghanistan, Pakistan has some serious challenges to face. The

American military presence in Afghanistan keeps the US utterly dependent on Pakistan for geographic access and operational support, it will decrease now.

- However, regional reset in the Middle East has coincided with efforts by India and Pakistan to cool their tensions.
- Now if there would be a successful dialogue between Pakistan and Saudi Arabia, it will indicate Saudi-Pak joint statement simply supporting a dialogue between India and Pakistan on all issues, including Kashmir.
- The ceasefire on the Line of Control in Kashmir announced at the end of February appears to be holding.

    US withdrawal from Afghanistan: It poses major challenges to the Subcontinent.

- For Pakistan: American military presence in Afghanistan keeps the US utterly dependent on Pakistan for geographic access and operational support. And that dependence in turn could be mobilised against India.

Conclusion

For now America is leaving Afghanistan and India and Pakistan will have to live with the consequences that include the triumphal return of the Taliban to power in Kabul. Terrorism in the whole Middle East as well as South Asia can evolve in the coming days. It would not be easy to predict the future of the Middle East block but for now the geopolitics is going to reset there. India needs to revisit its Afghanistan policy and it must keep check on the border terrorism sponsored by the Taliban.

G7 Foreign Ministers' Meet

Recently, Foreign Ministers from the Group of Seven (G7) countries (USA, UK, Canada, France, Germany, Italy and Japan) held a meeting in London, UK.

- The 47th G7 Summit will be held in June 2021. The UK is the host country.

Key Points

About:

Invited Guests:

- Australia, India, South Korea, South Africa and the Chair (Brunei Darussalam) of the Association of Southeast Asian Nations (ASEAN).
- Australia, India, South Korea and South Africa will also join the G7 Summit in June.

Discussions:

- Russia's Irresponsible and Destabilising Behaviour: This includes the large build-up of Russian military forces on Ukraine's borders and in illegally-annexed Crimea.
- Related to China: Human rights violations and abuses in Xinjiang and in Tibet, especially the targeting of Uyghurs, members of other ethnic and religious minority groups.
- Called on China to respect Hong Kong's high degree of autonomy and rights and freedoms (Basic Law).
- Condemned the military coup in Myanmar.
- Indo-Pacific:
- Support for the centrality of ASEAN on the Indo-Pacific.
- Reiterated the importance of maintaining a free and open Indo-Pacific which is inclusive and based on the rule of law, democratic values, territorial integrity, transparency, the protection of human rights and fundamental freedoms, and the peaceful resolution of disputes.
- International Rules-based Order:
- This can be described as a shared commitment by all countries to conduct their activities in accordance with agreed rules that evolve over time, such as international law, regional security arrangements, trade agreements, immigration protocols, and cultural arrangements.

Group of Seven (G7):

About:

- It is an intergovernmental organisation that was formed in 1975.

- The bloc meets annually to discuss issues of common interest like global economic governance, international security and energy policy.

- The G7 does not have a formal constitution or a fixed headquarters. The decisions taken by leaders during annual summits are non-binding.

- The groundwork for the summit, including matters to be discussed and follow-up meetings, is done by the "sherpas", who are generally personal representatives or members of diplomatic staff such as ambassadors.

- The leaders of important international organizations like European Union, IMF, World Bank and the United Nations are also invited.

Issues:

- Not all of the G7 countries are among the most advanced now. India is both a military and economic giant but isn't part of the G7. So, its expansion, just like that of the United Nations Security Council, is called for.

India and G7:

Previous Participation:

- The participation of India at the 45th summit in Biarritz, France, in August 2019 is a reflection of deepening strategic partnership and recognition of India as a major economic power.

- India was also invited for the 2020 summit hosted by the USA which could not take place due to the pandemic.

- Previously India had attended the G8 summit (it became G7 from G8 with the expulsion of Russia in 2014) five times between 2005 and 2009.

Significance of India's Engagement with G7:

- It provides an opportunity for India to develop cordial relations with developed countries.

- It will boost security cooperation with member countries in Indo-Pacific, particul-arly the Indian ocean.

- As current president of Brazil-Russia-India-China-South Africa (BRICS) and G20 president in 2023, India will play a key role driving in multilateral cooperation helping to build back better around the world.

Conflict between Israel and Palestine

The recent riots, mob violence, and airstrikes between Arabs and Jews tore through cities across Israel and Gaza continued to kill civilians.

Immediate background of the clash

- In the last week of April, 2021, Israeli security services removed metal barriers around the Damascus Gate in Jerusalem.

- It is the main thoroughfare for Palestinians in East Jerusalem entering the Old City to pray at the Al-Aqsa Mosque during the month of Ramadan.

- In the weeks that followed, Palestinians continued to protest Israeli police practices limiting access to the Old City's holy sites. It led to a number of clashes with police.

- During this period of time, tensions aroused in the Palestinian-majority Sheikh Jarrah neighborhood in East Jerusalem because the Israeli government ordered a number of Palestinian families to leave their homes.

- Israeli law allows Jews to reclaim property lost in the 1948 war but prevents Palestinians (including Palestinian citizens of Israel) from recovering property lost in the same war.

- The highly controversial decision has led to days of solidarity protests by Palestinians in East Jerusalem and clashes with police and Israeli Jews in adjacent neighborhoods.

- Against this already tense backdrop, on 10 May 2021, marked Jerusalem Day, commemorating the day Israel took control of the Old City and East Jerusalem during the 1967 war.

- Each year on this day, Israeli ultra-nationalists hold a Flag March through the city, often marked by harassment and provocations of Palestinian residents.

- As a result of the ongoing violence, this year's marches were re-routed and cancelled. Nonetheless, Israeli ultra-nationalist and pro-settlement-expansion politicians provocatively visited Sheikh Jarrah.

- The final move was when Israeli police raided the Al-Aqsa compound, firing rubber bullets and stun grenades at Palestinians throwing rocks.

- The incursion on the mosque, which is the third holiest site in Islam, outraged many.

- Referencing the raid and ongoing Israeli police presence in Sheikh Jarrah, Hamas and Islamic Jihad, another Palestinian militant group, launched a massive barrage of rockets toward Jerusalem and Tel Aviv for the first time in many years from Gaza.
- Israel also responded with an enormous bombardment of Gaza.

History of the Israel- Palestine Conflict

Beginning of the never-ending Conflict

- United Kingdom controlled the area, known as Palestine, after the ruler of area was defeated was defeated in WW1.
- It was the land inhabited by a Jewish minority and Arab majority.
- Tensions between the two peoples grew when Britain started a project, establishing a 'national home', in Palestine for Jewish people.
- For Jews, it was their ancestral home, but Palestinian Arabs also claimed the land and opposed the move.
- Between the 1920s and 40s, the more number of Jews arrived there because of persecution in Europe during the Holocaust of WWII.
- Violence between Jews and Arabs, and against British rule, escalated by this

    In 1947, the United Nations adopted Resolution 181, known as the Partition Plan.

- It sought to divide the British Mandate of Palestine into Arab and Jewish states with Jerusalem becoming an international city.
- That plan was accepted by Jewish leaders but rejected by the Arab side and never implemented.
- On May 14, 1948, the State of Israel was created, sparking the first Arab-Israeli War.
- The war ended in 1949 with Israel's victory and displacement of Palestinians into 3 places: the State of Israel, the West Bank (of the Jordan River), and the Gaza Strip.

Creation of Israel and the 'Catastrophe'

- British rulers left the area without settling the issue in 1948. At this moment Jewish leaders declared the creation of the state of Israel.
- As expected Palestinians objected and a war followed, with troops from neighbouring Arab countries invaded Israel.
- During the war, hundreds of thousands of Palestinians fled or were forced out of their homes (the catastrophe also called Al Nakba).
- In this war, Israel managed to control most of the territory.
- Jordan occupied land which became known as the West Bank, and Egypt occupied Gaza.
- Jerusalem was divided between Israeli forces in the West, and Jordanian forces in the East.

1967 War

- Israel occupied East Jerusalem and the West Bank, as well as most of the Syrian Golan Heights, and Gaza and the Egyptian Sinai peninsula.
- Most Palestinian refugees and their descendants live in Gaza and the West Bank, as well as in neighbouring Jordan, Syria and Lebanon.

Present Situation

- Israel still occupies the West Bank, and although it pulled out of Gaza the UN still regards that piece of land as part of occupied territory.
- Israel claims the whole of Jerusalem as its capital, while the Palestinians claim East Jerusalem as the capital of a future Palestinian state.
- The US is one of only a handful of countries to recognise Israel's claim to the whole of the city. Abraham Accord mediated by the USA was signed between Israel, UAE and Bahrain in 2020.
- Israel has built settlements in these areas and more than 600,000 Jews now live in Jerusalem.
- Palestinians consider it illegal under international law and are obstacles to peace.

ISRAEL'S IMPERIALISM

- The whole issue is a part of a long history of settler colonialism, where indigenous (Palestinians) were displaced and the UN decision was imposed on them. The Palestinian cause has been either forgotten or more or less abandoned.
- Israel's actions have the characteristic of imperial modes of governance:
    * dispossession of property
    * creation of second-class citizens
    * maintenance of oppressively governed enclaves
    * licence for state impunity
- Recent clashes at the Al-Aqsa Mosque can be seen as part of a long pattern of pushing out Palestinians from territory Israel wants to claim.

- Israel knows that a 19th century-style total ethnic expulsion is not possible.
- So, Israel is using a thousand cuts to dispossess Palestinians of their homes.
- This displacement or imposing unethical rule on Palestinians was earlier supported by Imperialist Britain in the early 20th century and the US now (mediated Abraham Accords).
- The imperial violence of Israel will only escalate terrorist violence of Hamas and Fatah. This can give opportunity to other players (Russia and Iran) of the world to jump into the chaos.

HOW MIDDLE EAST AND OTHERS RESPOND

- Issue of Jerusalem is emotional for Arab countries and their people.
- The recent tensions will test Israel's newfound relations with its new Arab neighbors, including the United Arab Emirates, Bahrain and Morocco, as well as neighboring Egypt and Jordan.
- The United Arab Emirates, Saudi Arabia, Bahrain and others have condemned Israel's actions in Jerusalem.
- United States supported Israel to defend itself from Hamas rocket attacks but mentioned Jerusalem must be a place of co-existence.
- European Union condemned Palestinian rocket attacks into Israel and called on all sides to aim for de-escalation and to prevent more civilian casualties. It also condemned evictions of Palestinian families in East Jerusalem, calling them illegal.
- India calls on both sides to avoid changing the status-quo on the ground and urged restraint of all

parties and to adhere to Security Council resolution 2334.

CONCLUSION

On humanitarian grounds, all stakeholders must come together and restraint from further deadly activities. There is concern that a third intifada could break out and that renewed tensions will escalate into large-scale violence. Israel must understand that by trying to dominate a people it will destroy the moral legitimacy of its own claims. The World leaders must remember that there is a continuous risk conflict if the Palestinian question is simply treated as an object of geo-political opportunism and not as a question of basic dignity and justice.

India - EU Relations

Recently, a virtual India-European Union leaders meeting was held between the Indian Prime Minister and 27 EU leaders.

- Due to the changing geopolitical circumstances around the world, the perception of India has been changed in Europe which can also be reflected in this virtual summit.
- In 2018, the EU released a new strategy for cooperation with India calling it a geopolitical pillar in a multipolar Asia that is essential for maintaining the balance of power in the region.
- From Indian perspective, collaboration with the EU can help in promoting peace, creating jobs, boosting the economy growth and enhancing sustainable development.
- Therefore, India and the EU appear to be natural partners and they need to leverage the existing opportunities in order to strengthen their multi sectoral cooperation.

Highlights of the Virtual Summit

- Resumption of Free Trade Agreement (FTA) talks- The most significant outcome of the virtual summit was that after about 8 years, both India and the EU decided to resume the negotiations for a comprehensive trade agreement between them.
- These talks were suspended in 2013 on failure by both sides to bridge their differences on some of the key issues like tariff reductions, patent protection, data security and the right of Indian professionals to work in Europe.
- Resumption of Bilateral Investment Treaty (BIT) talks- Both sides also agreed to com-

mence their talks for a standalone investment protection path and an accord on geographical indications.

- Connectivity Partnership- The virtual summit saw India and the EU launching an ambitious "connectivity partnership" in digital, energy, transport and people to people sectors that enables the 2 countries to pursue sustainable joint projects in regions spanning from Africa, Central Asia to the wider Indo Pacific.

India and the EU- Natural Partners

- Need of EU to pivot away from China- The EU recently signed a comprehensive agreement on investment with China. However, since the agreement drew a lot of criticism, its ratification has now been suspended because of diplomatic tensions.
- The European Parliament remains overwhelmingly opposed to this agreement since China imposed sanctions on some of its members, in response to the EU imposing sanctions against China for its treatment of Uighur Muslim minority community in the Xinjiang province of China.
- Economic logic- since the EU is the largest trading partner of India and the second largest export destination, strong India economic relations are self-evident for economic gains of both the countries. Further, India wants to showcase its commitment to open trade at a time of renewed focus on developing a domestic manufacturing base.
- Convergence in Indo Pacific theatre- The EU is being forced to reckon with the geopolitical implications of its foreign policy

imperatives and India is looking for substantive partnerships with like minded countries in order to bring stability to the Indo Pacific theatre.

- Moreover, India has also been looking beyond the bipolar geopolitical competition between the USA and China and has been constantly working towards the establishment of a multipolar world.
- Cooperation in global health- Given the current situation and looking at the severity of the current crisis created by the pandemic, health cooperation has assumed a new science among the countries. The member states of EU have rallied to support India by sending critical medical supplies in the last few weeks in recognition of India's role in helping others over the last year in overcoming the pandemic.
- Combating Climate Change- India can learn from a new industrial strategy called the Green Deal of the EU to render its carbon emission neutral by 2050. The EU and India can also endeavour transforming into carbon neutral economies by 2050 by investing in clean energies together. In India's efforts to increase the use of renewable energy in India, the investment and technology of Europe is of paramount importance.

Significance of the EU for India

1. Economic- The 27 member bloc is India's one of the largest trading partners and also a potential source of FDI. India has an untapped export potential of $39.9 billion in the EU and Western Europe. India and the EU are in the process of negotiating a bilat-

eral Broad-based Trade and Investment Agreement (BTIA).

2. Security- The EU Agency for Law Enforcement Cooperation or Europol and CBI are negotiating a working arrangement to support law enforcement authorities of EU member states and India to prevent and combat organised crime and terror. Indian Navy vessels are escorting WFP ships in the framework of the EU Atalanta operation against piracy off the coast of Somalia

3. Climate Change- The EU is one of the champions in dealing with the climate change crisis. India-EU climate and energy relations are guided by the India-EU Clean Energy and Climate Partnership aiming at reinforcing cooperation on clean energy and implementation of the Paris Agreement by strengthening joint activities for deployment of climate friendly energy sources, including solar and wind energy. Also, in 2018 the EU joined efforts with the International Solar Alliance, headquartered in India.

4. Strategic- The EU can be a reliable partner in countering China and its influence in our neighbourhood especially when it shares the goal of security in the Indo Pacific region. The EU officials described the recent India-China border standoff on the LAC as a matter of considerable concern.

5. Nuclear- It would involve collaboration in the civil nuclear energy sector, including

research and development aimed at the peaceful use of nuclear energy.

Challenges affecting the Relationship between India and EU

1. Trade Practices- The BTIA negotiations have remained deadlocked over growing differences regarding greater market access sought by both sides for merchandise exports. In addition, the EU is also critical about India's "protectionist" measures on tariffs and on opening up India's services sector for European Companies.

2. CAA and Art 370- The EU has been critical about the abrogation of Art 370 in Jammu and Kashmir and the passing of the Citizenship Amendment Act (CAA) which according to India is an internal and sovereign matter for it.

3. Lopsided Investments- India still has a lot of scope for improvement in investment especially when compared to EU investments in China.

Way Forward

- Negotiations for the formalisation of BTIA have been pending since 2007. A closer convergence between the two countries for finalisation of the deal as soon as possible.

- Addressing the mutual trust deficit, facilitating people's mobility and connectivity to improve mutual understanding and create opportunities for innovation and growth.

- Enhancing cooperation between India and EU on climate change, technology, security, etc.

- India can engage the EU member states to engage in the Indo pacific narrative at least geopolitically if not from a security point of view. This can help in mobilising massive economic resources for sustainable development of regional infrastructure, wield political influence and leverage its significant soft power to shape the Indo-Pacific discourse.

Conclusion

Post -Brexit EU finds itself in the midst of a growing need for recalibrating ties with its partner countries. In addition to this, the post pandemic world will give an opportunity for countries to re-evaluate the fundamentals of their engagement. India should critically review the availability of such arrangements in its negotiations, as also their operationalisation and effectiveness. This would also help in realising the vision of a self-reliant India that would entail localising an increasing share of value added along supply chains through investments and phase wise reduction of import tariffs with strategic partners including the European Union (EU).

India's Vaccine Diplomacy in Africa

The vaccine diplomacy has helped India in deepening its diplomatic relations with Africa.

- India exported vaccines to neighbours in South Asia as well as Seychelles, Myanmar and Mauritius.

- India provides 10 million vaccine doses to the African continent.

- Although India has immense social capital among African nations, it has not matched this in material ties, and China's economic and investment presence in Africa has been outstripping India's for many years.

History of India Africa Relations

- India and Africa shared long historical roots. Peoples of the two parts of the world have interacted at the levels of economics, politics, and socio-cultural practices.

- There have been trade transactions in both natural and human resources.

- Natural resources include cotton, spices, and other foodstuffs.

- Human resources became items of trade when African slaves crossed the Indian Ocean to parts of Asia, including India.

India, just like many African countries, was once a former British colony, for over two centuries.

- India's fight for independence inspired many African nationalists.

- The then newly independent Indian government also helped African nationalist movements to achieve their goals.

There has been exchange of ideas, education opportunities, religious beliefs, and medical drugs and equipment over the years.

Relations since Independence

- In Economic terms: Indian companies operated in areas of chemical fertilizer production, production of medicine, the transport sector, and information technology.

- Indian exports textiles, foodstuffs, tea, spices, sugar, footwear, blankets, sewing machines, paper, plastics, drugs,

and bicycles, among others to Africa.

- India helped African countries in economic hardships from the late 1970s onwards. This included convening the:
- Non-Aligned Summit in 1979, in Havana, Cuba.
- The Caracas Program of Action followed this in May 1981.
- The aim of these initiatives was to encourage South-South cooperation.
- Agriculture, technical assistance, and trade are the main areas of interaction between the two blocks.

In Political terms: India always supported human rights and democratic governments in Africa.

- It was for this reason; India once severed diplomatic ties with South Africa on Apartheid issue. India extended economic sanctions against the South African government, until the 1990s.
- India opposed the minority regimes of Portuguese Africa (especially in Angola and Mozambique) and South Rhodesia, following the enactment of the Unilateral Declaration of Independence (UDI) in 1965.
- India sent thousands of its troops to help return the country to conditions of peace and stability when the Congo crisis broke out between 1960 and 1965.
- India has also provided guidance to African electoral bodies on conducting elections in democratic systems.

In Socio-Cultural terms: There have been bilateral high-level exchange visits between Indian leaders and those of African countries, including at the top level of the prime minister and state president.

- Indian Prime Minister, Jawaharlal Nehru was one of the first world leaders to visit the then newly independent Sudan in July 1957.
- On the part of the Sudanese government, Prime Minister and later President of Sudan, Ismail El Azhari, also paid state visits to India in 1955 and 1967.

- Indian government offered scholarships to thousands of African students to study in Indian universities such as University of New Delhi and Bombay University.
- The funds for such scholarships were generated from the India Technical and Economic Cooperation (ITEC) program established in 1963/64.

India's Foreign Policy towards Africa after Indepen-dence: India was one of the key organizers of the Asian-African Conference, held in Bandung, Indonesia, in 1955.

- India and the other Non-Aligned Movement (NAM) members committed themselves to do the following things:
- Promote trade and economic development and cooperation in the Asia-African region.
- Enhance the development of cultural cooperation between the Asian and African countries, some of which had been hampered by centuries of European colonial rule.
- Promote the extension of human rights and self-determination for the African countries.
- As the African countries gained independence, from 1956 onward, the Indian government did not hesitate to establish formal diplomatic relations and offices there.

China in Africa:

- China's Chequebook Diplomacy: India's presence in Africa has lagged significantly behind China.
- China has become Africa's largest trading partner and now with the Belt and Road Initiative (BRI) projects, China is offering

more than simply large infra-structure projects and invest-ments.

- Recently, its donation diplomacy during Covid Pandemic raises Beijing's profile as a leading provider of humanitarian assis-tance and public goods in the global public health sector.

- China relies heavily on diplomat-ic support and cooperation from African countries on key issues in multilateral fora. For instance;

- Beijing used African support for securing a win for Chinese candi-dates as the head of Food and Agriculture Organization (FAO) and in the World Health Organization (WHO).

- China's control on the ports of African countries can pose threat to India's maritime trade.

Favourable Conditions for India

- African countries still remember their shared commitment with India to resisting colonialism, and shaping an international order that they hoped would be markedly different from the pre-vious era.

- The presence of an influential Indian diaspora has helped India in building meaningful and posi-tive, relationships with many African countries, which China is currently aspiring to acquire.

- This positive relationship has paid off when the India-Africa Framework for Strategic Cooperation signed in 2015 which provided impetus to India-Africa trade.

Many African nations have understood that Chinese Companies are new flag bearers of neo-imperialism.

- While Companies such as Tata Motors, Bharti Airtel and the Aditya Birla Group are seen as beneficial for Africa.

Other Concerns and Challenges

- The world recognises the African continent as a mounting con-sumer base.

- So, not only China, many other countries such as European Union, Japan and the U.S are attracting African nations by their Africa-centered strategy.

There are issues of security threats and conflicts in some parts of Africa which are serious con-cerns for investors in the region.

Growing presence of Terrorists organization like Boko Haram and Islamic State are also threat for investors.

Race related incidents and vio-lence against African students in India is also a matter of concern in trade ties between India and Africa.

India's vaccine diplomacy faced setback due to its Covid-19 surge in country.

Way Forward

- India's investments in Africa should be kept at a comparable pace with that of China.

- India acquired social capital in Africa through the historical, political, economic and people-to-people ties which is welcomed by African countries. Now this is the time to seize the opportuni-ties.

- India's diplomatic presence must be increased in Africa.

- India need to mitigate race relat-ed incidents and violence against African students in India which in turn can damage that goodwill in no time at the grass root level.

- There is a need to identify the emerging areas for development like blue economy and rich mar-itime resources, technology and fintech, Defence and Security, and Maritime Security etc.

China's increasing presence in Indian Ocean Region

Recently, Srilankan Parliament passed a bill related to Colombo Port City which is a project backed by Chinese government.

- The bill was passed with a com-plete majority.

- The bill was passed despite opposition raised by civil soci-eties and opposition parties that the bill will violate Sri Lanka's sovereignty and will lead to cre-ation of a 'Chinese enclave' with-in Sri Lanka's territory.

- The opposition party leaders warned about the emergence of similar circumstances that led to civil war in the country.

- Petitions were filed in the Sri Lankan Supreme Court.

- However, the Supreme Court rec-ommended minor amendments in the bill which the government agreed for.

- Thus, leading to passing of the bill.

- The Colombo Port City Economic Commission Bill talks about -

1. Setting up of commission that shall gov-ern the Colombo Port City project.

2. The commission shall have the power to decide on investments, tax breaks, cus-toms etc. and other terms for investors.

3. The CPC will not lie under parliament laws and parlia-mentary panels.

4. The President of Sri Lanka is empowered to nominate the members of the committee.

5. He is also empowered for complete exclusion of Cabinet from being 'collectively responsible'.

- The bill appears to be a controversial bill citing the expansionist policy of China that has pushed Sri Lanka into a debt cycle.

- In 2017, Sri Lanka leased Hambantota Port to Chinese government for a tenure of 99 years.

- Both the ports are strategic assets that China is investing in.

Colombo Port City-

- The Colombo Port City is a special economic zone and an International financial centre located in Colombo, Sri Lanka.

- This project was launched in 2014 when the Chinese Premier Xi Jinping visited Sri Lanka.

- The Colombo Port City project has been opposed due to several reasons -

1. As the project is being developed in Sri Lanka's coastal region, environmental activists have raised concerns about potential damage to the environment that will be caused due to the project.

2. Fishermen have also raised concerns regarding the project.

3. Maritime security experts have said that the significant presence and control of Chinese authorities over the Sri Lankan region can threaten Sri Lanka's sovereignty and possess potential risk for the country.

4. The project has also been criticised for lack of transparency and chinese involvement.

5. However, the Chinese envoy had said that both the chinese backed projects - Hambantota and Port City will prove as twin engines for Sri Lanka's growth.

6. The project is expected to boost employment generation and also attract investments.

China - Sri Lanka Relations-

- Both the countries have enjoyed close relations since the past.

- The countries have good political and economic cooperation.

- Presently, China is the largest investor in Sri Lanka.

- Sri Lanka is a major 'pearl' in China's string of pearl policy.

- China has been a key provider of military equipment to Sri Lanka.

- China is Sri Lanka's largest importer and trading partner.

- Both the countries enjoy deep historical and cultural ties that dates back to more than a century.

String of Pearls Policy-

- A geopolitical theory referring to the Chinese developments in the Indian Ocean Region.

- China is heavily investing in developing ports in the neighbouring countries like Sri Lanka, Myanmar, Pakistan, Bangladesh.

- These ports are being developed in a manner that threatens India's interests in the region.

- The string of pearls is said to be encircling India in order to establish Chinese dominance over the Indian Ocean region.

- China is carrying out its vision of 'string of pearls' through debt trap diplomacy and other engagements.

- This policy will provide enhanced presence of Chinese military, threatening the security of other nations present in the Indian Ocean Region.

- The String of Pearls policy is an ambitious chain of projects which will give a push to China's aim to become a superpower.

India's concerns due to growing presence of China-

- China is rapidly investing and developing ports in the neighbouring countries -
  * Gwadar Port - Pakistan
  * Kyaukpyu Port - Myanmar
  * Hambantota Port - China
  * Chittagong Port - Bangladesh
  * This will lead to an increase in the presence of Chinese military in Indian Ocean Region threatening India's maritime security.

- India's major concern is about the threat to India's energy security. India imports 70% of its oil through IOR. Chinese presence in Indian ocean will lead to its dominance over the region, thus, leading to more control over sea routes in the IOR.

- With China's presence , India may divert its resources into development of defence technology. This, however, will lead to hampering India's growth.

- India presently enjoys a significant amount of dominance over Indian Ocean Region. Chinese presence in the region will deteriorate India's control and dominance over the region.

- China's diplomacy and engagement with other countries in the IOR may potentially lead to change in arrangements in the South East Asian region.
- China's support to Pakistan has always been a concern to India.With development of Gwadar Port, China can use the Indian ocean region for conducting military warfare in the region.
- Many countries may shift their support towards China due to its dominance and control over the region which may affect India's ambition to become a super power in the area.

India's response to growing presence of China in IOR-

- Act East Policy - Through Act East Policy, India is pushing for engagement with countries ASEAN countries to promote economic cooperation and agreements on strategic and military cooperation.
- The Act East Policy will ensure that balance of power is maintained in the region and also counter China's growing dominance.
- India in partnership with Japan has planned for the Asia Africa Economic Corridor for socio-economic development of Asia- African region.This has been seen as a counter response against China's Belt and Road Initiative.
- India has announced several projects in partnership with

other countries for enhancing regional connectivity in the area like BBIN initiative etc.
- India is building ports and enhancing its presence in the region like Sabang Port (Indonesia), Sittwe Port (Myanmar) etc.
- India has partnered with Singapore which has granted access to Singapore's Changi Naval Base.
- India is conducting and participating in joint naval exercises in the IOR region. Example - Malabar Exercise between India, Japan and Australia , Ekuverin Exercise between India and Myanmar.
- QUAD is an essential component in curbing China's dominance in the region. India is part of QUAD which also consists of America, Japan and Australia as its members. It will push for economic, military cooperation between the countries and development of Indo-Pacific Region.

- India is also focussing on modernizing its naval power.
- India has been providing assistance to neighbouring countries in times of crisis - Vaccine Maitri is the recent one where India is providing COVID-19 vaccines to countries like Bangladesh, Myanmar etc.
- India is actively engaging in regional and sub regional collaborations like Indian Ocean Rim Association, ASEAN, Indian Ocean Commission, BIMSTEC etc.

Way Forward-

- India has been making efforts in order to tackle Chinese presence in the IOR. However, this can be done through collaboration and cooperation with other countries in the region.
- Peace and stability in the Indian ocean region is not only beneficial for India but for the world. Thus, Balance of power is required to be maintained in the region.

ECONOMY

A patently wrong regime

India and South Africa have jointly moved a proposal at the WTO's Trade Related Intellectual Property Rights (TRIPS) council for a waiver to help more countries get access to medicines and vaccines during the pandemic.

- Covid-19 vaccines have been developed in developed countries by big pharma companies.
- India and South Africa have proposed intellectual proper-ty rights waiver at WTO to make vaccines easily available to poor countries as well.
- The rich countries oppose the move.
- Fifty-seven WTO members have backed the proposal, but the EU, U.S., Japan and Cana-da have opposed the idea, stressing the import-ance of intellectual property for innovation.

The issue: Right to access Covid-19 vaccine and drugs

- The rich countries are where most researches are happen-ing. These researches require a lot of

Intellectual property rights (IPR)

- They are legal rights aimed at protecting the creations of the intellect, such as inventions, the appearance of products, literary, artistic and scientific works and signs, among others.
- Four Types of Intellectual Properties
  - ✻ Copyrights, Patents, Trademarks, and Trade Secrets

Patent laws

- A patent is a conferral by the state of an exclusive right to make, use and sell an inventive product or process.
- Patent laws are usually justified on three distinct grounds:
  - ✻ on the idea that people have something of a natural and moral right to claim control over their inventions;
  - ✻ on the utilitarian premise that exclusive licenses promote invention and therefore benefit society as a whole; and
  - ✻ on the belief that individuals must be allowed to benefit from the fruits of their labour and merit, that when a person toils to produce an object, the toil and the object become inseparable.

money. Hence, they are now supporting the right to protect their intellectual property—vaccines and drugs.

- The TRIPS waiver is 'the priority agenda' for the multilateral trade body WTO.

Case for waiver

- India and South Africa have argued that waiver is necessary as several developing and poor countries were not in a position to utilise the TRIPS flexibilities for importing and exporting pharmaceuticals.
- TRIPS flexibilities warrant compulsory licensing mechanisms in countries for using generic versions of patented medicines.
- It is important to approve the COVID-19 waiver for equitable access to medicines under the

Trade Related Intellectual Property Rights (TRIPS) Agreement.

- Quick and efficient vaccination is the surest route to achieving global herd immunity against the virus.

  ✳ Countries will be in a position, among other things, to facilitate a free exchange of know-how and technology surrounding the production of vaccines.

Promoting invention and the state's obligation of providing basic healthcare

- The colonial-era laws that the country inherited expressly allowed for pharmaceutical patents.
- But in 1959, a committee chaired by Justice N. Rajagopala Ayyangar noted that access to drugs at affordable prices suffered severely on account of the existing regime.
- The committee found that foreign corporations used patents, and injunctions secured from courts, to suppress competition from Indian entities, and thus, medicines were priced at exorbitant rates.
- The Patents Act, 1970 held that monopolies over pharmaceutical drugs be altogether removed, with protections offered only over claims to processes.
- This change in rule allowed generic manufacturers in India to grow.
- As a result, life-saving drugs were made available to people at more affordable prices.

Objections of developed countries

- Promoting innovation: Unless corporations are rewarded for

Trade-Related Aspects of Intellectual Property Rights (TRIPS)

- It covers most forms of intellectual property including copyright, patents, geographical indications, trademarks, industrial designs, trade secrets, and exclusionary rights over new plant varieties.
- TRIPS came into force on 1 January 1995.
- The TRIPS Agreement is a minimum standards agreement, which allows Members to provide more extensive protection of intellectual property if they so wish.

The three main features of the Agreement are:

- Standards. In respect of each of the main areas of intellectual property covered by the TRIPS Agreement, the Agreement sets out the minimum standards of protection to be provided by each Member.
- Enforcement. The second main set of provisions deals with domestic procedures and remedies for the enforcement of intellectual property rights.
- Dispute settlement. The Agreement makes disputes between WTO Members about the respect of the TRIPS obligations subject to the WTO's dispute settlement procedures.

In addition the Agreement provides for certain basic principles, such as national and most-favoured-nation treatment, and some general rules to ensure that procedural difficulties in acquiring or maintaining IPRs do not nullify the substantive benefits that should flow from the Agreement

their inventions, they would be unable to recoup amounts invested by them in research and development.

  ✳ That without the right to monopolise production there will be no incentive to innovate.

Counter arguments:

- Public funding of research: The idea that patents are the only means available to promote innovation is obsolete.

  ✳ Public money accounted for more than 97% of the funding towards the development of the Oxford/AstraZeneca vaccine.

- Focus on the developed world only: It's also been clear for some time now that its research is usually driven towards diseases that afflict people in the developed world.

  ✳ Therefore, the claim that a removal of patents would somehow invade on a company's ability to recoup costs is simply untrue.

- Vaccine nationalism: It may leave poor people around the globe watching preparations for inoculations against the coronavirus in some rich nations and wondering if and when they will be vaccinated.
- Effect of the TRIPS agreement
- Compelling signatories to introduce intellectual property laws like those in the global north was unjustified.

The drugs that reduced AIDS deaths in developed nations were placed out of reach for the rest of the world.

- It was only when Indian companies began to manufacture generic versions of these medicines that the prices came down.

Way forward

- Prize fund: The economist Joseph Stiglitz is one of many who has proposed a prize fund for medical research in place of patents.
  - ✻ Under the current system, "those unfortunate enough to have the disease are forced to pay the price.
  - ✻ A system that replaces patents with prizes will be "more efficient and more equitable", in that incentives for research will flow from public funds while ensuring that the biases associated with monopolies are removed.
- The unequal vaccine policy put in place by the Indian state is indefensible. But at the same time, we cannot overlook the need for global collective action.
  - ✻ If nation states are to act as a force of good, they must each attend to the demands of global justice.

The pandemic has demonstrated to us just how iniquitous the existing world order is. We cannot continue to persist with rules granting monopolies which place the right to access basic healthcare in a position of constant peril.

Model Insurance Villages

The Insurance Regulatory and Development Authority of India (IRDAI) has mooted the concept of 'Model Insurance Village (MIV)' to boost insurance penetration in rural areas.

- According to the Economic Survey for 2020-21, India's insurance penetration, which was at 2.71% in 2001, has steadily increased to 3.76% in 2019, but stayed much below the global average of 7.23%.
- Recently, the Parliament has passed the Insurance Amendment Bill 2021 to increase the foreign direct investment (FDI) limit in the insurance sector to 74% from 49%.

Key Points

Concept of Model Insurance Village (MIV):

- The idea is to offer comprehensive insurance protection to all the major insurable risks that villagers are exposed to and make available covers at affordable or subsidised cost.
- In order to make the premium affordable, financial support needs to be explored through NABARD, other institutions, CSR (Corporate Social Responsibility) funds, government support and support from reinsurance companies.
- It may be implemented in a minimum of 500 villages in different districts of the country in the first year and increased to 1,000 villages in the subsequent two years.
- Every general insurance company and reinsurance company accepting general insurance business and having offices in India needs to be involved for piloting the concept.

Possible Offerings under MIV:

- Weather Index product or hybrid product combining weather index and indemnity-based insurance protection for various crops that remains

uncovered under Pradhan Mantri Fasal Bima Yojna (PMFBY).
- Flexible Farm Insurance Package Policies targeting comprehensive needs of crops, livestock, farmer, farm implements.
- Separate products for high value agriculture, contract farming and corporate farming community as their needs are different.
- States can be offered macro insurance covers based on predefined parametric weather indexes covering large complex risks arising out of natural catastrophes affecting the agriculture ecosystem and rural economy.

Challenges in Spreading Insurance to Rural Areas:

- Lack of awareness, limited choice of insurance products, absence of people-friendly and transparent claim settlement mechanisms, and weak network of insurance firms, are some of the issues and challenges in advancing growth of rural insurance business.

Insurance Regulatory and Development Authority of India

- Following the recommendations of the Malhotra Committee report, in 1999, the Insurance Regulatory and Development Authority (IRDA) was constituted as an autonomous body to regulate and develop the insurance industry.
- The IRDA was incorporated as a statutory body in April 2000.
- The key objectives of the IRDA include the promotion of competition so as to enhance customer satisfaction through increased consumer choice and lower premiums while ensuring the finan-

cial security of the insurance market.

- It is headquartered in Hydera bad.

RBI's Measures to Fight Covid-Second Wave

Recently, the Reserve Bank of India (RBI) announced a series of measures to support the nation's fight against the second wave of Covid-19 infections.

- The measures form the first part of a calibrated and comprehensive strategy against the pandemic.

- Earlier in 2020 also the RBI took measures to help deal with the economic fall out of the pandemic.

Key Points

Term Liquidity Facility for Supporting Healthcare Infrastructure:

- Term Liquidity Facility of Rs. 50,000 crore with tenure of up to 3 years, at repo rate, to ease access to credit for providers of emergency health services.

- Under the scheme, banks will provide fresh lending support to a wide range of entities, including vaccine manufacturers, importers/suppliers of vaccines and priority medical devices, hospitals/dispensaries, pathology labs, manufacturers and suppliers of oxygen and ventilators, and logistics firms.

- These loans will continue to be classified under priority sector till repayment or maturity, whichever is earlier.

  ∗ This lending facility will be available up to 31st, March 2022.

Special Long Term Repo Operations for Small Finance Banks:

- RBI would conduct special three-year long-term repo operations (SLTRO) of Rs. 10,000 crore at repo rate for small finance banks (SFBs).

  ∗ Long Term Repo Operation is a tool under which the central bank provides one-year to three-year money to banks at the prevailing repo rate, accepting government securities with matching or higher tenure as the collateral.

- The SFBs would be able to deploy these funds for fresh lending of up to Rs. 10 lakh per borrower.

- This is to provide further support to small business units, micro and small industries, and other unorganised sector entities adversely affected during the current wave of the pandemic.

Priority Sector Lending:

- Small Finance Banks (SFBs) are now permitted to regard fresh on-lending to Microfinance institutions (MFIs) with asset size up to Rs. 500 crore, as priority sector lending.

  ∗ This facility will be available up to 31st, March 2022.

Credit flow to MSME Entrepreneurs:

- To further incentivize inclusion of unbanked Micro, Small and Medium Enterprises (MSMEs) into banking system, exemption provided in February, 2021 wherein scheduled banks were allowed to deduct credit given to new MSME borrowers from Net Time & Demand Liabilities for calculation of Cash Reserve Ratio (CRR), is now extended to 31st

December, 2021.

Stress Resolution Framework 2.0:

- This Framework is to relieve stress faced by most vulnerable categories of borrowers – namely individuals, borrowers and MSMEs.

- Individuals, borrowers and MSMEs who have not availed any restructuring will be eligible to be considered under Resolution Framework 2.0.

- For individuals and small businesses who have availed restructuring of loans under Resolution Framework 1.0, lending institutions can now extend residual tenure up to a total period of 2 years.

  ∗ Lending institutions are now permitted to review working capital sanction limits, as a one-time measure.

Floating Provisions and Countercyclical Provisioning Buffer:

- In order to mitigate the pandemic related stress on banks and as a measure to enable capital conservation, banks are being allowed to utilise 100% of floating provisions held by them as 31st December, 2020, for making specific provisions for Non-Performing Assets (NPAs).

- Countercyclical provisioning buffers and floating provisions broadly refer to the specific amount that banks need to set aside in good times above the mandatory provisioning requirement as prescribed by RBI, these are used only in contingencies or extraordinary times of economic or system-wide downturns. Banks have started

building such reserves since 2010.

Relaxation of Overdraft Facility for States:

- To enable the State governments to better manage their fiscal situation in terms of their cash flows and market borrowings, the maximum number of days of overdraft (OD) in a quarter is being increased from 36 to 50 days and the number of consecutive days of OD from 14 to 21 days.
  - ✳ This facility is available up to 30th September, 2021.
  - ✳ Earlier, the Ways and Means Advance (WMA) limits of states were enhanced.

Rationalization of Knowing Your Customer (KYC) Norms:

- The RBI has also decided to extend the scope of video KYC (know-your-customer) or V-CIP (video-based customer identification process) for new categories of customers such as proprietorship firms, authorised signatories and beneficial owners of legal entities.

Way Forward

- In order to match the devastating speed of the virus, swift, wide-ranging, sequenced and well-timed actions which reach out to various sections, including the most vulnerable, have to be taken.
- India has mounted a valiant defence to ramp up vaccines and medical support while fighting rise in infections and mortalities in the second wave, after having flattened infections. Shoring up livelihoods and restoring normalcy in access to workplaces, education and incomes becomes an imperative in such a situation.

Small Savings Instruments

Recently, the central government withdrew its orders of reducing the rates on all small savings instruments/schemes.

Key Points

About:

- Small savings instruments help individuals achieve their financial goals over a particular period.
- They are the major source of household savings in India.
- The small savings instrument basket comprises 12 instruments.
- Collections from all small savings instruments are credited to the National Small Savings Fund (NSSF).

Classification:

- Small savings instruments can be classified under three heads:
- Postal Deposits: (comprising savings account, recurring deposits, time deposits of varying maturities and monthly income scheme).
- Savings Certificates: National Small Savings Certificate (NSC) and Kisan Vikas Patra (KVP).
- Social Security Schemes: Sukanya Samriddhi Scheme, Public Provident Fund (PPF) and Senior Citizens' Savings Scheme (SCSS).

Rates of Small Saving Instruments:

- The rates for small saving instruments are announced quarterly.
- Theoretically, the rate changes is based on yields of government securities of corresponding maturity. However, political factors also influence the rate change.

- The Shyamala Gopinath panel (2010) constituted on the Small Saving Scheme had suggested a market-linked interest rate system for small savings schemes.

Asian Development Outlook 2021: ADB

According to the report Asian Development Outlook (ADO) 2021, the second wave of Covid-19 can put India's economic recovery at "risk".

- ✳ ADO is a series of annual economic reports on the Developing Member Countries (DMCs) of the Asian Development Bank (ADB).

Key Points

GDP Projections:

- **For India:**
  - ✳ Gross Domestic Product (GDP) will rebound strongly by 11% in Fiscal Year (FY) 2021-22 due to continued economic recovery boosted by increased public investment, vaccine rollout, and a surge in domestic demand.
  - ✳ India's economic growth to moderate to 7% in FY 2022-23.
  - ✳ The economy is expected to have contracted by 8% in FY 2020-21 in line with the government's second advance estimate.
- **For Developing Asia:**
  - ✳ The economic growth is set to rebound to 7.3% in 2021-22. This follows a 0.2% contraction last year.
  - ✳ Developing Asia comprises 46 members of ADB list on the basis of geographic group.

- These include new industrialized economies, countries in Central Asia, East Asia, South Asia, Southeast Asia and the Pacific.
- India is also part of Developing Asia.

Challenges:

- Pandemic remains the biggest risk for the region (Developing Asia) as potential delays in vaccine rollouts or significant new outbreaks could undermine growth.
- Increasing geopolitical tensions, production bottlenecks, financial turmoil from tightening financial conditions, and long-term scarring like learning losses due to school closures are among other risk factors.

Costs of Pandemic-induced School Closures:

- Countries are using distance learning, but this is only partially effective as many students lack access to computers and the internet.
- These disruptions will affect the skills students acquire and, eventually, their productivity and earnings as future workers.
- Learning losses range from 8% of a year of learning in the Pacific, where schools have mostly stayed open, to 55% in South Asia, where school closures have been longest.
- The present value of students' future earning reductions is estimated at USD 1.25 trillion for developing Asia, equivalent to 5.4% of the region's GDP in 2020.

Analysis for India:

- Increased government expenditure on health care, water, and sanitation will strengthen the

country's resilience against future pandemics.
- Private investment is expected to pick up on improving sentiment and risk appetite, as well as accommodative credit conditions (i.e. making money less expensive to borrow and encouraging more spending).
- Domestic demand is expected to remain the main driver of growth.
  - ✳ A faster vaccine rollout will boost urban demand for services, while the rural demand will be boosted by robust agriculture growth and continued government support to farmers by expanding irrigation, improving value chains, and increasing farm loan limits.
- The government's push to the manufacturing sector through the production-linked incentive scheme will expand domestic production and help integrate domestic manufacturing with global supply chains.

India is largely dependent on oil imports from the middle-east to meet its domestic fuel consumption needs. India should enhance its refining capabilities and also look into "energy diversification" to make a balance between its imports and export costs.

- In the past few decades, differences in refining capacities of western countries and Asian nations have been observed.
- Various data has revealed that refining capacity in the Asia Pacific region has skyrocketed within 40 years since 1980.
- This year, China is set to replace the US as the world's largest crude oil processor in the world

due to its high refining capacity.
- Along with China, India is also rapidly expanding its refining capacity. India is expected to produce 8 million barrels a day around 2025.
- This rapid expansion is due to the rise in oil demands in the region.
- It is being observed that the refineries in Asia and Middle East have also started to supply to other markets along with the local ones.
- Several data have indicated the expansion of refined product production in the Asia Pacific region.
- The refineries in the region not only export within Asia but also to other European and western countries.
- On one hand , the refining capacity of countries in the Asia Pacific region is pacing quickly. On the other hand, western and European nations have been facing an insufficiency of refining capacity to meet their demands. The US and other western European countries depend on other countries for meeting their demands of refined oil products.
- The US depends on other foreign suppliers despite the shale boom and steadily increasing refining capacities.
- The substantial difference in refining capacities between these countries is expected to remain the same in the near future .
- North America and western European countries will not likely invest in new refineries. On the other hand, new refineries are expected to operationalise in the Asia Pacific region adding to the existing production capacities.

- Strict environmental regulations will make it difficult for the plant to be upgraded or transformed.
- With plants being shut off and strict regulations, people have witnessed unemployment as a consequence of outsourcing of manufacturing.
- Job losses have fuelled public anger and affected domestic politics Fuel has become a necessity in the present time. Shortage of fuel may lead to heavy criticism of outsourcing policy.

India's crude oil requirements:

- It is estimated that India consumes around 60,00,000 barrels of crude oil every day.

Out of that, it imports approximately 55,00,000 barrels/day making the country the third-largest crude market in the world.

- On a monthly basis, on average, 70 loaded VLCC (very large crude carriers) which accounts for almost 10 percent of the global tanker market — bring crude oil to India.
- Approximately 50 percent of this oil is discharged in and around the Jamnagar area and then carried by pipelines to refineries in Jamnagar, Mathura, Panipat, Bina and Bhatinda.
- Around 50 per cent of these imports are sourced from the Middle-East which includes Saudi Arabia, Kuwait, Abu Dhabi, Iran and Iraq.

How does the rise in crude oil prices affect India?

- If prices of crude oil continue to rise, the government may have to roll back its decision of the tax hike on petroleum products. This will adversely affect the fiscal balance and the ability of the government to invest in capital expenditure.
- It may adversely affect private consumption because of higher fuel bills.
- Companies that benefited from lower oil prices(which make petroleum base end products) may also see a margin erosion as passing higher input costs to the consumer could be difficult at this stage.
- If oil prices manage to move up, some of the gains will also be reversed. When oil prices were coming down in 2014, every $10 fall in oil prices reduced inflation based on Wholesale Price Index and Consumer Price Index by 0.5 and 0.2 percentage points, respectively. The impact on the current account deficit was 0.5% of the gross domestic product (GDP) and it improved the fiscal balance by 0.1% of GDP. A price reversal is likely to have an opposite impact.
- Besides, oil prices have risen at a time when economic activity in India is expected to take a hit in the short run because of the ongoing currency crunch in the system.
  - ✻ Higher oil prices will also widen the current account deficit while the rupee has been under pressure because of a strengthening dollar.

Way Forward:

HELP has retained the structure of the previous NELP and fixed the existing loopholes and disadvantages in the earlier policy by introducing the following changes:

- A single-window license for all hydrocarbon exploration granted once under a single policy and licensing regime.
- It has the provision for Open Acreage licensing which means that any E&P company wishing to bid on an exploration block currently not covered by any exploration license granted to another party. The Government examines the Expression of Interest and justification.
  - ✻ If it is suitable for the award, the government calls for competitive bids after obtaining necessary clearances from environmental and other agencies.

- The contracts will be granted on the basis of competitive bidding in which the bidders will need to quote revenue sharing at two levels designated "lower revenue point" and "higher revenue point". Such a revenue share at any revenue point between these points should be calculated by linear interpolation. The bidder sharing the highest revenue at net present values with the Government will get maximum weightage in this parameter.

- Deepwater and ultra-deepwater areas will be covered under a regime of concessional royalty for revenue sharing. Seven years of operation will be royalty-free at first for these areas and thereafter the concessional royalty rates would be 5% for deepwater and 2% for ultra-deepwater areas. Shallow water fields will also have concessional rates at 7.5% instead of 10% keeping in mind the risk /return profile of the exploration block.

- The contractor will be provided the freedom to price and market hydrocarbons produced and sold in the domestic market. The revenue share of the market is calculated based on international crude oil prices or actual price.

- The new HELP will boost the creation of exploration business for oil and gas by simplifying the petroleum exploration license and help to reduce import dependence. This will have a domino effect which will create new job opportunities in the oil and gas sector as well as reduce disputes and corruption as the government will not have too much discretionary power over petroleum exploration licenses.

Regulations Review Authority 2.0

Recently, the Reserve Bank Of India (RBI) has constituted an Advisory Group to assist the second Regulations Review Authority (RRA 2.0).

- The RBI has set up the RRA 2.0, initially for a period of one year from 1st May, 2021, with a view to streamline regulations and reduce the compliance burden of regulated entities.

Key Points

Background:

- In 1999, the RBI had set up a Regulations Review Authority (RRA) for reviewing the regulations, circulars, reporting systems, based on the feedback from the public, banks, and financial institutions.

RRA 2.0:

- It will focus on streamlining regulatory instructions, reducing compliance burden of the regulated entities by simplifying procedures and reducing reporting requireme-nts, wherever possible.

  ✳ It will also obtain feedback from regulated entities.

  ✳ Regulated entities include commercial banks, urban co-operative banks, Non-Banking Financial Companies.

Reserve Bank of India

Formation:

- RBI was established on 1st April, 1935 in accordance with the provisions of the Reserve Bank of India Act, 1934.

- Though originally privately owned, since nationalization in 1949, the Reserve Bank is fully owned by the Government of India.

Major Functions:

- Monetary Authority: Formulates, implements and monitors the monetary policy.

  ✳ Recent Initiative: Government

Securities Acquisition Programme (G-SAP).

- Regulator and supervisor of the financial system: Prescribes broad parameters of banking operations within which the country's banking and financial system functions.
- Manager of Foreign Exchange: Manages the Foreign Exchange Management Act, 1999.
- Issuer of currency: Issues and exchanges or destroys currency and coins not fit for circulation.
- Developmental role: Performs a wide range of promotional functions to support national objectives.
- Regulator and Supervisor of Payment and Settlement Systems: Introduces and upgrades safe and efficient modes of payment systems in the country to meet the requirements of the public at large.
  * Recent Initiatives: Digital Payments Index, Payments Infrastructure Development Fund
  * National Payments Corporation of India (NPCI), an umbrella organisation for all retail payments systems in India, was set up with the guidance and support of the RBI and Indian Banks' Association (IBA).
- Related Functions:
  * Banker to the Government: performs merchant banking function for the central and the state governments; also acts as their banker.
  * Banker to banks: maintains banking accounts of all scheduled banks.
  * The Ways and Means

Advances (WMA) are short-term loan facilities which allow the Centre and states to borrow funds from the RBI to bridge their temporary mismatch between expenditure and receipts.

Post Devolution Revenue Deficit

The Ministry of Finance has released the second monthly instalment of Post Devolution Revenue Deficit (PDRD) Grant of Rs. 9,871 crore for the year 2021-22 to 17 States.

Key Points

About the Post Devolution Revenue Deficit (PDRD):

- The Centre provides the Post Devolution Revenue Deficit Grant to the States under Article 275 of the Constitution.
- The grants are released as per the recommendations of the Finance Commission in monthly installments to meet the gap in Revenue Accounts of the States post-devolution (of the divisible tax pool of the Centre).
- The 15th Finance Commission has recommended post devolution revenue deficit grants amounting to about Rs. 3 trillion over the five-year period ending FY26.
  * The number of states qualifying for the revenue deficit grants decreases from 17 in FY22, the first year of the award period to 6 in FY26, the last year.
  * The eligibility of States to receive this grant and the quantum of grant was decided by the Commission based on the gap between assess-

ment of revenue and expenditure of the State.

- States Recommended for PDRD Grants:
  * Over the five-year period, Andhra Pradesh, Assam, Haryana, Himachal Pradesh, Karnataka, Kerala, Manipur, Meghalaya, Mizoram, Nagaland, Punjab, Rajasthan, Sikkim, Tamil Nadu, Tripura, Uttarakhand and West Bengal are recommended to be provided with the deficit grants. The Ministry of Finance has accepted the recommendation.

Article 275 of the Constitution:

- It provides for the payment of such sums as Parliament may by law provide as grants-in aid to such States as Parliament may determine to be in need of assistance.
- The grants are paid out of the Consolidated Fund of India in each year, and different sums may be fixed for different States.
- These grants are to be of the nature of capital and recurring sums as may be necessary.
- These aim to enable that State to meet the costs of such schemes of development as may be undertaken by it with the approval of the Government of India for the purpose of promoting the welfare of the Scheduled Tribes in that State or raising the level of administration of the Scheduled Areas there in to that of the administration of the rest of the areas of that State.
- Grants are primarily intended to correct Inter-State disparities in financial resources and to coordinate the maintenance and expansion of the welfare

schemes of the State Governments on a uniform national level.

Revenue Account and Capital Account

- A revenue account includes all the revenue receipts also known as current receipts of the government. These receipts include tax revenues and other revenues of the government.
- A capital account is an account that includes the capital receipts and the payments. It basically includes assets as well as liabilities of the government. Capital receipts comprise the loans or capital that are raised by governments by different means.

Centre State Financial Relations

Constitutional Provisions:

- Indian Constitution has made elaborate provisions, relating to the distribution of the taxes as well as non-tax revenues and the power of borrowing, supplemented by provisions for grants-in-aid by the Union to the States.
- Article 268 to 293 in Part XII deals with the provisions of financial relations between Centre and States.

Taxing Powers:

- The Constitution divides the taxing powers between the Centre and the states as follows:
- The Parliament has exclusive power to levy taxes on subjects enumerated in the Union List, the state legislature has exclusive power to levy taxes on subjects enumerated in the State List.
- Both can levy taxes on the subjects enumerated in Concurrent List whereas residuary power of taxation lies with Parliament only.

Distribution of the Tax Revenue:

- Duties Levied by the Union but Collected and Appropriated by the States (Article 268):
  - ❋ Includes stamp duties on bills of exchange, cheques, etc.
- Taxes Levied as well as Collected by the Union, but Assigned to the States (Article 269):
  - ❋ These include taxes on the sale and purchase of goods (other than newspapers) in the course of inter-state trade or commerce or the taxes on the consignment of goods in the course of inter-state trade or commerce.
- Levy and Collection of Goods and Services Tax in Course of Inter-State Trade or Commerce (Article 269-A):
  - ❋ The Goods and Services Tax (GST) on supplies in the course of inter-state trade or commerce are levied and collected by the Centre.
  - ❋ But, this tax is divided between the Centre and the States in the manner provided by Parliament on the recommendations of the GST Council.
- Taxes Levied and Collected by the Union but Distributed between the Union and the States (Article 270):
  - ❋ This category includes all taxes and duties referred to in the Union List except the following:
  - ❋ Duties and taxes referred to in Articles 268, 269 and 269-A.

  - ❋ Surcharge on taxes and duties referred to in Article 271 (this goes to the Centre exclusively).
  - ❋ Any cess levied for specific purposes.

Grants-in-Aid:

- Besides sharing of taxes between the Centre and the States, the Constitution provides for Grants-in-aid to the States from the Central resources. There are two types of grants:
- Statutory Grants (Article 275): These grants are given by the Parliament out of the Consolidated Fund of India to such States which are in need of assistance. Different States may be granted different sums.
  - ❋ Specific grants are also given to promote the welfare of scheduled tribes in a state or to raise the level of administration of the Scheduled areas therein.
- Discretionary Grants (Article 282): It empowers both the Centre and the states to make any grants for any public purpose, even if it is not within their respective legislative competence.
  - ❋ Under this provision, the Centre makes grants to the states. These grants are known as discretionary grants, the reason being that the Centre is under no obligation to give these grants and the matter lies within its discretion.
  - ❋ These grants have a two-fold purpose: to help the state financially to fulfil plan targets; and to give some leverage to the Centre to influence and coordinate state action to effectuate the national plan.

NITI Aayog's Report for a Digitally Inclusive Bharat

The NITI Aayog and Master card have released a report titled 'Connected Commerce: Creating a Roadmap for a Digitally Inclusive Bharat'.

* ✶ The report identifies challenges in accelerating Digital Financial Inclusion (DFI) in India and provides recommendations for making digital services accessible to its 1.3 billion citizens.

Key Points

Challenges:

* **Demand Side Gap:**
  * ✶ Lot of effort has been put to attain DFI and much success on the supply side of DFI has been seen (e-governance, the JAM trinity, Goods and Services Tax, Direct Benefit Transfer (DBT) schemes).
  * ✶ However, the break in the digital financial flow comes at the last mile, where account holders mostly withdraw cash for their end-use.

* **Unsuccessful Agri-Techs:**
  * ✶ Agriculture, with its allied sectors, provides livelihood to a large section of the Indian population. Over the years, agriculture's contribution to national GDP has declined from 34% in 1983-84 to just 16% in 2018-19.
  * ✶ Most agri-techs have not succeeded in digitizing financial transactions for farmers or enabling formal credit at lower rates of interest by leveraging transaction data.

* Inability of MSMEs to Access Formal Finance:
  * ✶ Micro, Small and Medium Enterprises (MSMEs) have been a key growth driver for the Indian economy. According to a 2020 Report, the category employed some 110 million people, or over 40% of India's non-farm workforce.
  * ✶ The lack of proper documentation, bankable collateral, credit history and non-standard financials force them to access informal credit at interest rates that are double of those from formal lenders.

* **Trust and Security in Digital Commerce:**
  * ✶ The surge in digital transactions has increased the risk for possible security breaches, both for consumers and businesses.
  * ✶ A Medici report of June 2020 says 40,000 cyber-attacks targeted the IT infrastructure of the banking sector in India.

* **Digitally Accessible Transit Systems:**
  * ✶ With the onset of the pandemic, there is an increasing need for transit systems to be further integrated with contactless payments in India.
  * ✶ Globally, the trend is toward open-loop transit systems, with interoperable payment solutions allowing travelers to switch between different modes of transport with a connected payments network.

Recommendations:

* For market players, it is critical to address the gap on the demand side by creating user-friendly digital products and services that encourage the behavioral transition from cash to digital.
  * ✶ A significantly successful example is that of FASTag.

* Strengthening the payment infrastructure to promote a level playing field for Non-Banking Financial Companies (NBFCs) and banks.

* Digitizing registration and compliance processes and diversifying credit sources to enable growth opportunities for MSMEs.

* Building information sharing systems, including a 'fraud repository', and ensuring that online digital commerce platforms carry warnings to alert consumers to the risk of frauds.

* Enabling agricultural NBFCs to access low-cost capital and deploy a 'phygital' (physical + digital) model for achieving better long-term digital outcomes. Digitizing land records will also provide a major boost to the sector.

* To make city transit seamlessly accessible to all with minimal crowding and queues, leveraging existing smartphones and contactless cards, and aim for an inclusive, interoperable, and fully open system.

Digital Financial Inclusion Initiatives Taken in India

Jan Dhan-Aadhar-Mobile (JAM) Trinity:

* The combination of Aadhaar, Pradhan Mantri Jan-Dhan Yojana (PMJDY), and a surge in mobile communication has reshaped the way citizens access government services.

* As per the estimates in March 2020, the total number of benefi-

ciaries under Jan Dhan scheme have been more than 380 million.

Expansion of Financial Services in Rural and Semi-Urban Areas:

- Reserve Bank of India (RBI) and National Bank for Agriculture and Rural Development (NABARD) have taken initiatives to promote financial inclusion in rural areas. These include:
  * Opening of bank branches in remote areas,
  * Issuing Kisan Credit Cards (KCC),
  * Linkage of self-help groups (SHGs) with banks,
  * Increasing the number of Automated Teller Machines (ATMs),
  * Business correspondents model of Banking
  * Payment Infrastructure Development Fund (PIDF) scheme, etc.

Promotion of Secure Digital Payments:

- With the strengthening of the Unified Payment Interface (UPI) by National Payments Corporation of India (NPCI), digital payments have been made secure, compared to the past.
- The Aadhar-enabled Payment System (AEPS) enables an Aadhar Enabled Bank Account (AEBA) to be used at any place and at any time, using micro ATMs.
- The payment system has been made more accessible due to offline transaction-enabling platforms, like Unstructured Supplementary Service Data (USSD), which makes it possible to use mobile banking services without internet, even on a basic

mobile handset.

Enhancing Financial Literacy:

- The Reserve Bank of India has undertaken a project titled "Project Financial Literacy".
  * The Objective of the project is to disseminate information regarding the central bank and general banking concepts to various target groups, including, school and college going children, women, rural and urban poor, defence personnel and senior citizens.
- Pocket Money is a flagship programme of Securities and Exchange Board of India (SEBI) and National Institute of Securities Market (NISM) aimed at increasing financial literacy among school students.

Pradhan Mantri Garib Kalyan Ann Yojana

Recently, thirteen states have started distributing foodgrains under the Pradhan Mantri Garib Kalyan Ann Yojana (PMGKAY).

The scheme has been rolled out again for two months (May and June 2021) as the country's healthcare infrastructure has reached its capacity and several states have taken steps like complete lockdown, night curfew to contain the spread of the disease.

Key Points

About:

- PMGKAY is a part of Pradhan Mantri Garib Kalyan Package (PMGKP) to help the poor fight the battle against Covid-19.
- Its nodal Ministry is the Ministry of Finance.
- It was initially announced for a three month period (April, May

and June 2020), covering 80 crore ration cardholders. Later it was extended till November 2020.

- However in April 2021, the government had announced its decision to restart the PMGKAY.
- The scheme aimed at providing each person who is covered under the National Food Security Act 2013 with an additional 5 kg grains (wheat or rice) for free, in addition to the 5 kg of subsidised foodgrain already provided through the Public Distribution System (PDS).
- The new version of the PMGKAY lacks one of its important components which was there in 2020 PMGKAY i:e free-of-cost 1 kg pulses per month to each household covered under the NFSA.

Expenditure:

- Government of India will bear all expenditure of over Rs. 26,000 crore on account of food subsidy and Central assistance to states/UTs on account of intra-state transportation etc.

Allocation Till Now:

- Out of a total monthly allocation of 39.69 lakh Metric Tonnes (MT) under the PMGKAY, 15.55 lakh MT have been lifted by states.
- 1.01 lakh MT have been distributed to 2.03 crore beneficiaries till May 2021.

Challenge:

- A key issue is that the beneficiaries of the National Food Security Act are based on the last census (2011). The number of food-insecure people has increased since then and they remain uncovered.

World Bank on Report On Global Remittances

According to the latest edition of the World Bank's Migration and Development Brief, despite Covid-19, remittance flows remained resilient in 2020, registering a smaller decline than previously projected.

Remittance

- **A remittance is money** sent to another party, usually one in another country.
- The sender is typically an **immigrant** and the **recipient a relative back home.**
- Remittances represent one of the **largest sources of income** for people **in low-income and developing nations. It often exceeds** the amount of **direct investment and official development assistance.**
- Remittances help families **afford food, healthcare, and basic needs.**
- **India is the world's** biggest **recipient of remittances.** Remittances bolsters India's **fo-reign exchange reserves** and helps fund its **current account deficit.**

Key Points

Remittance Inflow of India:

- India being at top, received over USD 83 billion in remittances in 2020, a drop of just 0.2 per cent from the previous year, despite a pandemic that devast-ated the world economy.
  - ❊ India's remittances fell by just 0.2% in 2020, with much of the decline due to a 17% drop in remittances from the Unit-ed Arab Emirates, which offs-et resilient flows from the United States and other host countries.
  - ❊ In 2019, India had received USD 83.3 billion in remittances.

Global Remittances

- China is second in terms of global remittances in 2020.
  - ❊ China received USD 59.5 billion in remittances in 2020.
- India and China are followed by Mexico, the Philippines, Egypt, Pakistan, France and Bangladesh.

Remittance outflow :

- Remittance outflow was the maximum from the United States (USD 68 billion), followed by UAE, Saudi Arabia, Switzerland, Germany, and China.

Reason for the Steady Flow of Remittances:

- Fiscal stimulus that resulted in better-than-expected economic conditions in host countries.
- Shift in flows from cash to digital and from informal to formal channels.
- Cyclical movements in oil prices and currency exchange rates.

SWAMIH Fund

Recently, the Government of India's Special Window for Affordable & Mid-Income Housing (SWAMIH) completed its first residential project.

- The residential project - Rivali Park, located in suburban Mumbai, was the first housing project in India to have received funding under the SWAMIH Fund.

Key Points

About the SWAMIH Fund:

- This is a government backed fund that was set up as a Category-II AIF (Alternate Investment Fund) debt fund registered with SEBI, launched in 2019.
- SWAMIH Investment Fund was formed to complete construction of stalled, RERA-registered

affordable and mid-income category housing projects which are stuck due to paucity of funds.

- The Investment Manager of the Fund is SBICAP Ventures, a wholly-owned subsidiary of SBI Capital Markets, which in turn is a wholly-owned subsidiary of the State Bank of India.

- The Sponsor of the Fund is the Secretary, Department of Economic Affairs, Ministry of Finance, on behalf of the Government of India.

Alternative Investment Fund (AIF):

- AIF means any fund established or incorporated in India which is a privately pooled investment vehicle which collects funds from sophisticated investors, whether Indian or foreign, for investing it in accordance with a defined investment policy for the benefit of its investors.

- Regulation 2(1)(b) of Securities and Exchange Board of India (SEBI) Regulations (AIFs), 2012 lays down the definition of AIFs.

  ∗ Through a company, or a Limited Liability Partnership (LLP), an Alternative Investment Fund can be established.

- AIF does not include funds covered under the SEBI (Mutual Funds) Regulations, 1996, SEBI (Collective Investment Schemes) Regulations, 1999 or any other regulations of the Board to regulate fund management activities.

- Other exemptions include family trusts, employee welfare trusts or gratuity trusts.

Categories of AIFs:

- **Category-I AIFs:**

- These funds are invested in businesses that have the potential to grow financially such as StartUps, Small and Medium Enterprises.

- The government encourages investments in these ventures as they have a positive impact on the economy with regards to high output and job creation.

- Examples include Infrastructure Funds, Angel Funds, Venture Capital Funds and Social Venture Funds.

- **Category-II AIFs:**

- Under this category, funds that are invested in equity securities and debt securities are included. Those funds not already under Category I and III respectively are also included. No concession is given by the government for any investment made for Category II AIFS.

- Examples include Real Estate Funds, Debt Fund, Private Equity Funds.

- **Category-III AIFs:**

- Category-III AIFs are those funds which give returns under a short period of time. These funds use complex and diverse trading strategies to achieve their goals. There is no known concession or incentive given towards these funds specifically by the government.

- Examples include Hedge Funds, Private Investment in Public Equity Funds, etc.

National Programme on Advanced Chemistry Cell Battery Storage

The Union Cabinet has approved a Rs. 18,100-crore Production Linked Incentive (PLI) scheme for manufacturers of Advanced Chemistry Cell (ACC) battery storage, to reduce imports.

- The scheme is called the National Programme on Advanced Chemistry Cell Battery Storage (NPACC). It is under the Ministry of Heavy Industries & Public Enterprises.

Key Points

PLI Scheme:

- It aims to give companies incentives on incremental sales from products manufactured in domestic units.

- It invites foreign companies to set units in India, however, it also aims to encourage local companies to set up or expand existing manufacturing units.

- The PLI Scheme has also been approved for sectors such as automobiles, pharmaceuticals, IT hardware including laptops, mobile phones & telecom equipment, white goods, chemical cells and textiles, etc.

Advanced Chemistry Cell (ACC):

- ACCs are the new generation of advanced storage technologies that can store electric energy either as electrochemical or as chemical energy and convert it back to electric energy as and when required.

- Such battery storages will cater

not only to electric vehicles but also to the consumer electronics industry and electricity grids.

About NPACC Scheme:

- The plan is to set up 50 gigawatt hour (GWh) manufacturing capacity for ACC batteries by attracting investments totaling Rs. 45,000 crore.
- Requires each selected ACC battery Storage manufacturer to set-up an ACC manufacturing facility of minimum 5 GWh capacity, achieve a domestic value addition of at least 25% and incur the mandatory investment Rs.225 crore /GWh within 2 Years.
- Furthermore, the beneficiary firms need to ensure a minimum 60% domestic value addition at the Project level within five years.
- The incentive will be disbursed over a period of five years. It will be paid out on the basis of sales, energy efficiency, battery life cycle, and localization levels.

Expected Benefits from NPACC Scheme:

- Facilitate demand creation for battery storage in India.
- Facilitate Make-in-India and Atmanirbhar Bharat.
- Facilitate demand for Electric Vehicles (EVs), which are proven to be significantly less polluting.
  - ✳ A key contributing factor to reduce India's GreenHouse Gas (GHG) emissions.
- Import substitution of around Rs. 20,000 crore every year.
- Impetus to Research & Development to achieve higher specific energy density and cycles in ACC.

- Promote newer and niche cell technologies.

Coronavirus crisis and gaps in social security cover

COVID-19 has rendered low-paid, informal workers, who constitute 91% of the workforce, totally hapless, pushing them further into poverty.

- India's estimated 450 million informal workers comprise 90% of its total workforce, with 5-10 million workers added annually.
- An informal sector or grey economy is the part of any economy that is neither taxed nor monitored by any form of government.
- About half of India's GDP is informal.
- Job loss: According to Oxfam's latest global report, out of the total 122 million who lost their jobs in 2020, 75% were lost in the informal sector.
- India's Parliament in September 2020 passed a Social Security Code (SS Code 2020).
- The SS Code 2020 merges existing social security laws and attempts to include in-formal workers within the ambit of social security administration.
- However, an examination of the code reveals that unive-rsalisation of social security remains an unfulfilled aspi-ration.

Gaps in the code

- Maternity benefit: Under the SS Code, the provision of maternity benefit has not been made universal. Mate-rnity benefit is presently applicable for establishme-nts employing 10 workers or more.

  - ✳ The definition of 'Establishment' in the proposed code did not include the unorganised sector.
  - ✳ Hence, women engaged in the unorganised sector would remain outside the purview of maternity benefit.

The Social Security Code Act, 2020

The SS Code 2020 amalgamates and rationalises the provisions of eight existing central labour laws. Of these acts, employees provident fund, employees state insurance (ESI), maternity benefit, gratuity are entirely for organised sector workers.

- It proposes to form a National Social Security Board that would recommend suitable schemes for the different sections of unorganised sector workers.
- It proposes to bring unorganised sector, gig workers and platform workers under the ambit of social security schemes, including life and disability insurance, health and maternity benefits, provident fund and skill upgradation.
- It also proposes to empower the centre to constitute a social security fund for provision of social security for the unorganised workers, platform workers or gig workers or any such class of workers.

Key provisions
Registrations:

- The draft rules provide for Aadhaar-based registration, including self-registration by unorganised workers, gig workers and platform workers on the portal of the Central government.
- The rules also provide for the

Aadhaar-based registration of Building and Other Construction Workers Welfare Board (BOCW) on a portal of the Centre, State government or the BOCW welfare board of the State.

- Where a building worker migrates from one State to another he shall be entitled to get benefits in the State where he is currently working.

- Also, it shall be the responsibility of the Building Workers Welfare Board of that State to provide benefits to such a worker.

Procedural efficiency

- The rules also provide for a single electronic registration of an establishment, including for cancellation in case the business is closed.

The BOCW cess:

- It would be calculated by the employer on the basis of the cost of construction according to the rates of the State Public Works Department or the Central Public Works Department or the documents submitted to the Real Estate Regulatory Authority.

- The rate of interest for delayed payment of such cess has been reduced from 2% every month or part of a month to 1%.

Other provisions:

- Under the existing rules, the assessing officer has the power to direct that no material or machinery can be removed or disturbed from the construction site.

- Such power for indefinitely stopping of construction work has been withdrawn.

Also, the assessing officer can visit the construction site only

CHART 1: TYPES OF LABOUR LAWS

CONDITIONS OF WORK
- Factories Act, 1948
- The Contract Labour (Regulation & Abolition) Act, 1970
- Shops and Commercial Establishments Act

WAGES & REMUNERATION
- The Minimum Wages Act, 1948
- Payment of Wages Act, 1936

SOCIAL SECURITY
- Employees' Provident Fund Act, 1952
- Workmen's Compensation Act, 1923
- Employees State Insurance Act, 1948

EMPLOYMENT SECURITY & INDUSTRIAL RELATIONS
- The Industrial Disputes Act, 1947
- Industrial Establishments (Standing Orders) Act, 1946

CHART 2: WAGE GAPS BETWEEN SUB-GROUPS & GENDER, 2011-12 (%)

■ Male ■ Female
Source: ILO estimates based on NSSO data

Regular urban workers — Male 100, Female 78
Regular rural workers — Male 69, Female 43
Casual urban workers — Male 39, Female 24
Casual rural workers — Male 32, Female 22

CHART 3: WAGE GROWTH IN ORGANISED MANUFACTURING SECTOR IS ALSO DECLINING

Source: Annual Survey of Industries, Ind-Ra

FY01-05: 4%
FY06-10: 8.1%
FY11-15: 11.7%
FY16-18: 6.5%

with the prior approval of the secretary of the Building and Other Construction Workers Board.

- Employees Provident Fund: The SS Code maintains that the Employees' Provident Fund Scheme will remain applicable, as before, to every establishment in which 20 or more employees are employed.

  ✳ Thus, for informal sector workers, access to employees' provident fund remains unfulfilled too in the new code.

- Payment of gratuity: Gratuity shall be payable to eligible employees by every shop or establishment in which 10 or more employees are employed, or were employed, on any day of

the preceding 12 months.

  ✳ But although payment of gratuity was expanded in the new Code, it still remains inaccessible for a vast majority of informal workers.

- Free basic curative health care is not in scope of the code. If we leave out the allocation for the COVID-19 vaccine (still mostly unused), then the FY22 health Budget is actually lower. It is insufficient for the whole population, leave alone the informal workers.

- Failing to delineate it from gig work and unorganised work: A categorical clarification could ensure that social security measures are provided to workers without compromising the quali-

- ties of platform work.
- Misclassification of platform workers as 'independent contractors' instead of employee status: Granting employee status to platform workers, guarantees minimum wage and welfare benefits.
- Given the temporary nature of workers in the gig economy, there are question marks over social security for them.
  * Flexibility of the platform
  * The algorithm of a platform affects pricing per unit of work, allocation of work, and hours.
  * To enter the platform economy, workers rely on intensive loan schemes, often facilitated by platform aggregator companies.
  * This results in dependence on platform companies and reduces flexibility.
- Undefined stakeholder:
  * The Code states the provision of basic welfare measures as a joint responsibility of the Central government, platform aggregators, and workers.
  * However, it does not state which stakeholder is responsible for delivering what quantum of welfare.
- For employees' state insurance, the existing employee threshold has been withdrawn and now the central government can extend ESI benefits to any organisation irrespective of the number of workers employed therein.
  * However, there are areas of ambiguity and overlapping too.
- Problem with mandatory registration: It proposes that both the central and State governments will formulate schemes for unorganised workers.
  * The basic onus lies on informal workers registering as beneficiaries. Registration is a prerequisite for universal coverage.
  * Digital literacy: Online registration places a further challenge as most informal workers lack digital literacy and connectivity.
  * Migrant workers: Most informal workers are footloose casual workers (26% of all workers) and self-employed (46% of all). Furnishing proof of livelihood and income details in the absence of tangible employer-employee relations is very difficult.
- Inter-State cooperation: Further, as unorganised workers are spread across the length and breadth of India, inter-State arrangement and cooperation becomes imperative. The code does not provide for such eventualities.
- Basic security cover: All unorganised workers should have basic social security coverage, irrespective of labour market classifications. The code fails to undertake such inclusion in a meaningful way.

The informal workers have no social security (including free basic curative care in public clinics and hospitals, the elderly have no old age pensions, the dying have no death/disability insurance or life insurance).

Way forward:

- Basic structure: Ideally, the central government should conceptualise a basic structure, which if successful, should be adopted by States after necessary customisation.
  * Without such a basic structure, implications of this code would be too varied across States to be administered.
- Formalising the workforce: The provision of social security could be used to formalise the workforce to a certain extent.
  * Employers could have been made to own up to the responsibility of providing social security to their workers.
- Strengthening MSME: Nearly 40% of the informal workforce is employed with MSMEs. Therefore, it is natural that the strengthening of MSME will lead to economic recovery, employment generation, and formalization of the economy.
- To mitigate operational breakdowns in providing welfare services, a tripartite effort by the State, companies, and workers to identify where workers fall on the spectrum of flexibility and dependence on platform companies is critical.
- A socio-legal acknowledgement of the heterogeneity of work in the gig economy, and the ascription of joint accountability to the State and platform companies for the delivery of social services is necessary.

FDI Inflow Touches $82 Bn in FY21

In the Financial Year 2020-21, India sees growth of 10% (to $82 bn) in Foreign Direct Investment (FDI). FDI equity investments rise 19% to $60 bil-

lion.

- In 2019-20, India had received $74.39 billion in FDI, with almost $50 billion coming in the form of equity investments.

Key Points

Top Investors:

- Singapore emerged as the top investor with almost a third of all investments, followed by the US which accounted for 23% of FDI and Mauritius from where 9% of the foreign capital flows originated.

Sharpest Growth from Saudi Arabia:

- The sharpest growth among the top 10 FDI-origin countries was recorded from Saudi Arabia.
- Investments jumped from $90 millio-n in 2019-20 to $2.8 billion in 2020-21.

FDI Equity:

- FDI equity flows from the US more than doubled during the year compa-red with 2019-20, while investments from the UK surged 44%.

Top FDI Destinations;

- Gujarat was the top FDI destination in 2020-21, accounting for 37% of the foreign equity inflows, followed by Maharashtra (2nd) which got 27% of the equity inflows.
- Karnataka (3rd) accounted for another 13% of the equity investments.

Top Sectors:

- Computer software and hardware has emerged as the top sector during 2020-21 with about 44% share of the total FDI equity inflow.

- These are followed by construction (infrastructure) activities (13%) and services sector (8%), respectively.

Foreign Direct Investment

- Definition: FDI is the process whereby residents of one country (the home country) acquire ownership of assets for the purpose of controlling the production, distribution and other activities of a firm in another country (the host country).
- It is different from Foreign Portfolio Investment where the foreign entity merely buys stocks and bonds of a company. FPI does not provide the investor with control over the business.
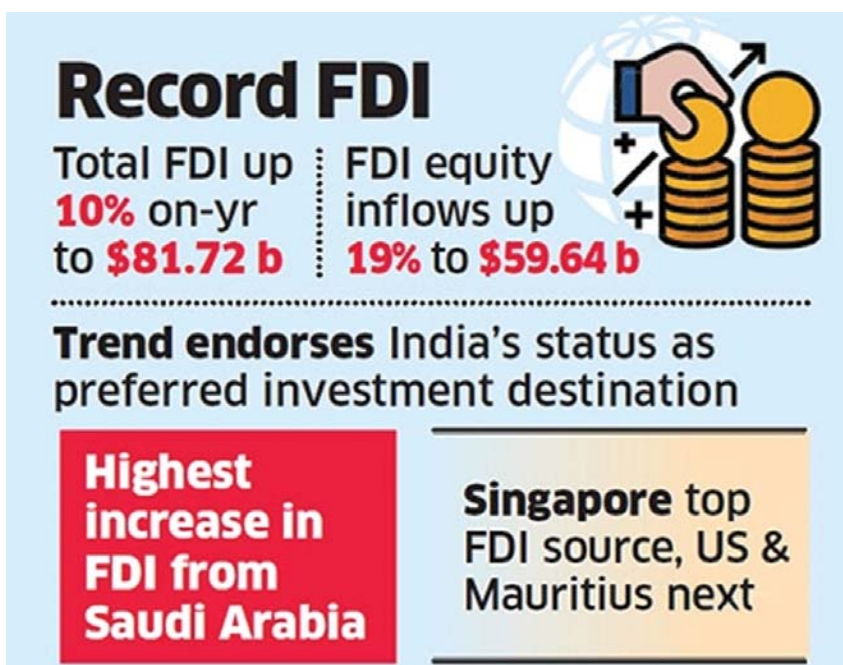
Three Components:

- Equity capital is the foreign direct investor's purchase of shares of an enterprise in a country other than its own.
- Reinvested earnings comprise the direct investors' share of earnings not distributed as dividends by affiliates, or earnings not remitted to the direct investor. Such retained profits by affiliates are reinvested.
- Intra-company loans or intra-company debt transactions refer to short- or long-term borrowing and lending of funds between direct investors (or enterprises) and affiliate enterprises.

Routes through which India gets FDI:

- Automatic Route: In this, the foreign entity does not require the prior approval of the government or the RBI.
- Government Route: In this, the foreign entity has to take the approval of the government.
  * The Foreign Investment Facilitation Portal (FIFP) facilitates the single window clearance of applications which are through approval route.
  * It is administered by the Department for Promotion of Industry and Internal Trade (DPIIT), Ministry of Commerce and Industry.

Record FDI

Total FDI up **10%** on-yr to **$81.72 b** : FDI equity inflows up **19%** to **$59.64 b**

Trend endorses India's status as preferred investment destination

Highest increase in FDI from Saudi Arabia

Singapore top FDI source, US & Mauritius next

Government Measures to Promote FDI:

- In 2020, factors such as a swift response in combating the Covid crisis, favourable demographics, impressive mobile and internet penetration, massive consumption and technology uptake, played an important role in attracting the investments.

- Launch of Schemes attracting investments, such as, National technical Textile Mission, Production Linked Incentive Scheme, Pradhan Mantri Kisan SAMPADA Yojana, etc.
    - ✱ The government has elaborated upon the initiatives under the Atmanirbhar Bharat to encourage investments in different sectors.

- As a part of its Make in India initiative to promote domestic manufacturing, India deregulated FDI rules for several sectors over the last few years.

MCA 21 Version 3.0

Recently, the government launched the first phase of the latest update to its digital corporate compliance portal, Ministry of Corporate Affairs (MCA) 21 Version 3.0.

- It will help in improving Ease of Doing Business in India. India ranked 63rd out of 190 countries in Ease Doing Business 2020: World Bank Report.

Key Points

About:

- It will leverage the use of latest technologies to further streamline the Corporate Compliance and stakeholders experience.

- MCA 21 has been part of Mission Mode projects of the Government of India.
    - ✱ MCA21 Version 3.0 is part of the 2021 Budget announcement.
    - ✱ MCA21 is the online portal of the Ministry of Corporate Affairs (MCA) that has made all company related information accessible to various stakeholders and the general public. It was launched in 2006.

- The entire project is proposed to be launched within the Financial Year 2021-22 and will be data analytics and machine learning driven.

- The MCA21 V3.0 in its entirety will not only improve the existing services and modules, but will also create new functionalities like e-adjudication, compliance management system, advanced helpdesk, feedback services, user dashboards, self-reporting tools and revamped master data services.
    - ✱ It comprises a revamped website, new email services for MCA Officers and two new modules, namely, e. Book and e. Consultation.

Objective:

- It is designed to fully automate all processes related to the proactive enforcement and compliance of the legal requirements under the Companies Act, 1956, New Companies Act, 2013 and Limited Liability Partnership Act, 2008. This will help the business community to meet their statutory obligations.

Benefits:

- Easy access to the updated legislations along with a tracking mechanism for historical changes in law.

- It will give new meaning to corporate compliance culture and will further enhance the trust and confidence in the Corporate regulatory and governance system.

Other Measures taken to Improve Ease of Doing Business:

- Integrated Incorporation Form :
    - ✱ Simplified Proforma for Incorporating Company Electronically (SPICe) was introduced which extends 8 services from three Ministries through a single form.

- RUN – Reserve Unique Name:
    - ✱ It is a web service used for reserving a name for a new company or for changing its existing name. The web service helps verify whether the name chosen for the company is unique.

- Insolvency and Bankruptcy Code:
    - ✱ The Insolvency and Bankruptcy Code of 2016 has introduced new dimensions in resolving insolvency in India. It is India's first comprehensive legislation of corporate insolvency.

GEOGRAPHY AND ENVIRONMENT

India's Road to Clean Energy and Natural Gas

As India is committed towards sailing its long clean energy goals, it must not forget to focus on its natural gas or green energy basket.

India's Clean Energy Targets

- Indian government had set a target of installing of installing 175 GW of renewable energy capacity by the year 2022.
- It includes 100 GW from solar, 60 GW from wind, 10 GW from bio-power and 5 GW from small hydro-power.

    Later, India set a target of 450 gigawatts of renewable energy capacity by 2030.

- India's total energy generation capacity today is about 380 gigawatts, out of which 90 gigawatts are of renewable energy, not including large hydropower stations.

    As per Council on Energy, Environment and Water (CEEW), India would need to generate at least 83 per cent of its electricity from (non-hydropower) renewable energy sources in order to reach net-zero by 2050.

- India's 80% of electricity comes from burning coal, oil and biomass.
- India is strongly committed to enable its Paris Agreement commitments and its companies are taking many efforts to ramp up capacity.

Concerns

- There are many challenges like the impact of Covid-19 on the projects, and missing deadlines, which needs to be addressed by focussing on the stepping stones.
- Before making targets and starting debates of deadlines Indian policy makers must look into making its fossil fuel energy basket a green one.

Making Natural Gas the 'Next Stop'

- To meet the targets, whatever are the deadlines or dates for decarbonisation, India must focus on its fossil fuel energy basket.
- A Wise Step: Increasing natural gas is a feasible prospect because;

- this increase will not generate the headwinds that the alternative of shutting down coal mines might,
- it doesn't not require industries to invest heavily in retrofitting their systems,
- it allows the government to meet its objective of providing secure and affordable energy to everyone without degrading the environment,
- it can be achieved through executive ordinance and without the need for legislative approval.

Steps to increase the share of natural gas

- Prioritise natural gas: Authorities should put this in their 'must list'. Prioritizing and recognising its versatility is important. As it is abundantly found in earth, especially within the Asian/ME subcontinent, it has multiple uses and it is the greenest of all fossil fuels.
- Improve the current disincentivising policy distortions:The authorities and officials must look into the current disincentivising policy distortions. The

pricing of natural gas is a puzzling issue with several price formulae:

- for gas produced from domestic fields by the public sector companies
- for gas produced by private companies
- for production from deep waters offshore under high temperature etc.

The taxation system is regressive in nature. The customers located at a distance from the source of gas pay a higher price than those closer to the source, which result into the dampening of demand. Also, gas is not under GST.

Revamp the structure of the industry: Gas Authority of India Ltd (GAIL) has its reach on most of the part of the sector. It is engaged in production, transportation and marketing of gas, which allows it to leverage its ownership of the bulk of the gas pipelines to deny its competitors access to the market.

- Though the policy calls for assured and common access to all marketers but still GAIL can bend the policy to its advantage without breaching it.
- Like other developed countries, who have solved this issue, India also needs to tackled this conflict-of-interest situation by separating the upstream (pro-

UPSTREAM	MIDSTREAM	DOWNSTREAM
EXPLORATION & PRODUCTION	ENERGY INFRASTRUCTURE	END MARKET USERS
Discovery and production of oil and natural gas	Transportation of oil and gas via pipes and storage of excess	Marketing and distribution of refined oil and gas to end users
• Oil & Gas Exploration & Production • Coal & Consumable Fuels • Oil & Gas Drilling • Oil & Gas Services and Equipment	• Crude Oil & Refined Products Pipeline & Storage • Diversified Midstream Pipeline & Storage • Marine Shipping & Transportation • Natural Gas Gathering & Processing • Natural Gas Pipeline & Storage • Oil Field Services	• Oil & Gas Refining • Oil & Gas Marketing & Distribution • Commercial / Residential • Industrial Gases • Diversified & Specialty Chemicals • Utilities & Power Generation

duction/import) and downstream (marketing) interests from transportation.

- GAIL's activities should be limited to pipeline construction and transportation

There is a need of institutional mechanism to enable better coordination between the central and state governments.

National Pipeline Grid

- Rakesh Mohan Committee Report on Transport: With respect to the movement of liquids and gases via pipeline, a National Pipeline Grid could be established along the lines of the National Electricity Grid. In "The India Infrastructure Report" he included Electricity, gas, water supply, telecom, roads, industrial parks, railways, ports, airports, urban infrastructure, and storage as infrastructure.

- Reasons why India has not yet constructed a national pipeline grid: The Centre and state have clashed over issues like land acquisition, pipeline routing; and royalty payments.

- Centre-state differences have also delayed the construction of import facilities and the creation of gas markets.

National Gas Grid: These pipelines have been authorized by Petroleum and Natural Gas Regulatory Board (PNGRB) and are at various stages of execution viz. Pre-Project activities/laying/testing/commissioning etc.

Status of Indian Renewable Energy Industry

- Indian renewable energy sector occupies fourth position as far as renewable energy market is concerned in the world.

- As of 2019, India ranked fifth in wind power, fifth in solar power and fourth in renewable power installed capacity.

- As per the latest report, India's installed renewable energy capacity stood at 90.39 GW by November 2020.

- Solar and wind comprised 36.91 GW and 38.43 GW, respectively.

- Biomass and small hydro power constituted 10.14 GW and 4.74 GW, respectively.

- Power generation from renewable energy sources in India reached 127.01 billion units (BU) in FY20

India's Emission Trajectory

- India's emission intensity decreased by 21% over the period 2005-2014 while total emissions continue to grow.

- India's emission intensity reduction by 2030 is projected to be even lower.

Significance of Renewable Energy

- Renewable energy's deployment final goal in India is to advance economic development, improve energy security, improve access to energy, and mitigate climate change.

- Sustainable development is possible by use of sustainable energy and by ensuring access to affordable, reliable, sustainable, and modern energy for citizens.
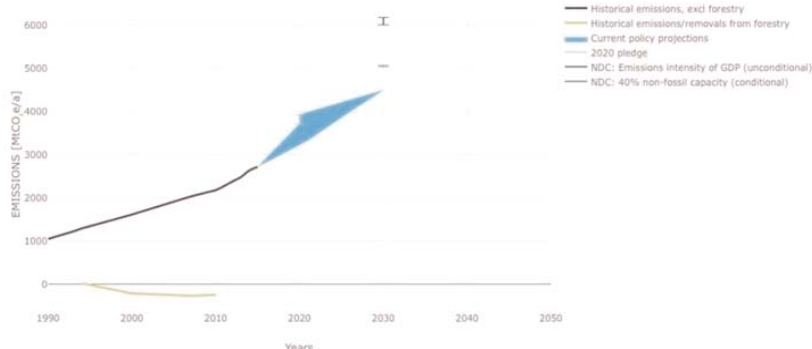
- It is highly expected that the renewable energy sector can create a large number of domestic jobs over the following years.

Concerns and Challenges

- Low Investor Sentiment: Renewable market is experiencing low investor sentiment due to delayed or non-payment by discoms to clean energy developers.

- Safeguard duty on imported solar panels and lack of funding are other important concerns.

- Storage Issue: Indian renewable market also face storage issue, though advanced battery technologies could enable rapid deployment of rooftop solar installations but it involves high costs.

- Land: Renewable projects needs ample land which is another key challenge in India as the high cost reflects on the price of electricity.

Covid-19: The pandemic have had major impact on energy systems not only in India but all around the world. It curbs investments and threatens to slow the expansion of key clean energy technologies.

- Missing deadlines: Only a few states and Union territories are on target to meet their targets for 2022. Telangana, Andaman and Nicobar Islands, and

India's Initiatives for Renewable Energy

- In August 2020, the government announced plans to offer land near its ports to companies for building solar equipment factories.
- India plans to add 30 GW of renewable energy capacity along a desert on its western border such as Gujarat and Rajasthan.
- Ministry of New and Renewable Energy (MNRE) has decided to provide custom and excise duty benefits to the solar rooftop sector, which will lower the cost of setting up as well as generate power, thus boosting growth.
- Delhi Government decided to shut down thermal power plant in Rajghat and develop it into 5,000 KW solar park.
- Rajasthan Government, in Budget 2019-20, exempted solar energy from electricity duty and focussed on the utilization of solar power in its agriculture and public health sectors.
- A new Hydropower policy for 2018-28 was drafted for the growth of hydro projects in the country.
- The Government of India has announced plans to implement a US$ 238 million National Mission on advanced ultra-supercritical technologies for cleaner coal utilisation.
- The Ministry of New and Renewable Energy (MNRE) has decided to provide custom and excise duty benefits to the solar rooftop sector, which will lower the cost of setting up as well as generate power, thus boosting growth.
- Indian Railways is taking increased efforts through sustained energy efficient measures and maximum use of clean fuel to cut down emission level by 33% by 2030.

Top five solar power plants in India:

- Bhadla Solar Park (2,250MW) is located in Bhadla village, in Rajasthan's Jodhpur district.
- Shakti Sthala solar power project (2,050MW) in Pavagada taluk, Tumakuru district, Karnataka.
- Ultra Mega Solar Park (1,000MW) situated in Orvakal, Kurnool district, Andhra Pradesh.
- Rewa Solar Power Project (750MW) in Madhya Pradesh.
- Kamuthi solar power plant (648M) in Ramanathapuram district of the southern state of Tamil Nadu.
- India is planning to add 30 GW of renewable energy capacity along a desert on its western border such as Gujarat and Rajasthan.

Karnataka have exceeded their target.

- Out of the eight states whose 2022 target exceeded 10 GW, only two—Karnataka and Gujarat— have exceeded 70% of their target, the approximate point where they need to be now to meet the goal.

    In an effort to secure a global consensus around the heavy target, the Policy wonks and discussants are losing sight of the immediate. They are not spending enough time and effort to lay out the stepping stones.

Way Forward

- The pandemic has posed challenges to the ongoing projects which can impact their construction but we need to evolve with innovative ideas and our next plan must be well lay out
- There is a need of identification of areas, integration of grid and distribution of energy to take us forward.
- We need to ensure research and development of cleaner technology.
- India with its all stakeholders, within in India, and likeminded countries should come together to coordinate and collaborate in this sector.
- Focusing on the natural gas can be proved as a game changer. There is need of taking the hindrances, related to national gas pipeline, off the political table and brought within the frame of an integrated decision-making process.

Asiatic Lions

Recently, eight Asiatic lions at Hyderabad's Nehru Zoological Park have tested positive for the deadly coronavirus.

- It is the first known case of the human infecting the felines and making them sick in India.
- Earlier in 2020, Tiger being infected with Covid-19 was reported in New York (Bronx Zoo).

Key Points

About:

- The Asiatic Lion (also known as the Persian Lion or Indian Lion) is

a member of the *Panthera Leo Leo* subspecies that is restricted to India.

- Its previous habitats consisted of West Asia and the Middle East before it became extinct in these regions.

- Asiatic lions are slightly smaller than African lions.

- The most striking morphological character, which is always seen in Asiatic lions, and rarely in African lions, is a longitudinal fold of skin running along its belly.

Distribution:

- Asiatic lions were once distributed to the state of West Bengal in east and Rewa in Madhya Pradesh, in central India.

- At present Gir National Park and Wildlife Sanctuary is the only abode of the Asiatic lion.

  ✻ In 2020, the Gujarat Forest Department announced an increase in the population of Asiatic lions in the Gir forest region.

Threats:

- Its vulnerability to unpredictable events such as a plague or a natural disaster, poaching and locals near the Gir National Park killing the lions in retaliation for attacks on livestock.

Protection Status:

- IUCN Red List: Endangered
- CITES: Appendix I
- Wildlife (Protection) Act 1972: Schedule I

Conservation Efforts:

- The "Asiatic Lion Conservation Project" has been launched by the Union Ministry of Environment, Forests and Climate Change (MoEFCC).

- It has been approved for three financial years from 2018 to 2021.

- It envisages scientific management with the involvement of communities in coordination with multi-sectoral agencies for disease control and veterinary care for overall conservation of Asiatic lions.

Xylophis deepaki

A tiny snake "Xylophis deepaki" has been named in honour of Indian herpetologist Deepak Veerappan for his contribution in erecting a new subfamily Xylophiinae to accommodate wood snakes.

  ✻ The common name suggested for the species is 'Deepak's wood snake'.

Key Points

About Xylophis deepaki:

- It is a tiny snake of just 20 cm length with iridescent scales.

- It was first found on a coconut plantation in Kanyakumari.

- It is now reported to be an endemic species of Tamil Nadu and also been sighted in some parts of the southern Western Ghats.

- It is found in the drier regions and in lower altitudes around Agasthyamalai hills.

About Xylophis:

- It is a small genus of snakes in the family Pareidae.

- It has five species, all of which are endemic to the Western Ghats in southern India.

Five Species:

- Xylophis Captaini, Xylophis deepaki, Xylophis Mosaicus, Xylophis Perroteri and Xylophis Stenorhynchus.

- These five species constitute the monotypic subfamily Xylophiinae.

- They are the only pareidae snakes found in India and the only snakes in the family found outside Southeast Asia.

About Wood Snakes:

- These are harmless (non-venomous), sub-fossorial and often found while digging soil in farms and under the logs in the Western Ghat forests.

- They feed on earthworms and possibly other invertebrates.

- Their close relatives are found in Northeast India and Southeast Asia and are known to be arboreal (living in trees).

Related Information :

- According to the IUCN Red List of Threatened Species, 12% of assessed snake species are listed as threatened and their populations are in decline.

- Each year, 2.7 million people around the world suffer a serious snakebite envenomation. The World Health Organization (WHO) classified snakebite as a neglected tropical disease to reduce snakebite in developing countries.

- Save The Snakes is a dedicated initiative exclusively for snake conservation and hu-man-snake conflict mitigation.

New Findings about Venus

Recently, scientists have obtained new data about Venus by bouncing radio waves off the planet.

- The scientists transmitted radio waves toward Venus 21 times from 2006 to 2020 from NASA's Goldstone Antenna in the Mojave Desert of California and studied the radio echo, which provided information on certain planetary traits.

Key Points

Latest Findings:

- A single Venusian rotation takes 243.0226 Earth days. This means a day lasts longer than a year on Venus, which makes a complete orbit around the sun in 225 Earth days.
- The Venusian planetary core has a diameter of about 7,000 km, comparable to Earth's core which is 6,970 km.
- The Venusian tilt is at about 2.64 degrees. Earth's is about 23.5 degrees.

Previous Findings:

- Presence of phosphine was detected in the atmosphere of Venus.This indicates the possibility of the presence of lifeforms on Venus.
- According to a study published in Nature Geoscience, Venus is still geologically active.
  - ✳ The study identified 37 active volcanoes, in the form of ring-like structures known as coronae, on the surface of Venus.

About Venus :

- Venus, the second planet from the sun, is similar in structure but slightly smaller than Earth (Earth's Twin).
- It has a thick and toxic atmosphere that consists primarily of carbon dioxide, with clouds of sulfuric acid droplets.
- With a runaway greenhouse effect, its surface temperatures reach 471 degrees Celsius, hot enough to melt lead.
  - ✳ The phenomenon, called the 'runaway greenhouse' effect, occurs when a planet absorbs more energy from the sun than it can radiate back to space. Under these circumstances, the hotter the surface temperature gets, the faster it warms up.
- Venus is one of just two planets that rotate from east to west. Only Venus and Uranus have this "backwards" rotation.
- Venus has no moons and no rings.
- On Venus, one day-night cycle takes 117 Earth days because Venus rotates in the direction opposite of its orbital revolution around the Sun.

NITI Aayog's Project for Great Nicobar Island

Recently, the Environment Appraisal Committee which flagged concerns over the project has now 'recommended' it 'for grant of terms of reference' for Environmental Impact Assessment (EIA) studies.

- In August, 2020 the Prime Minister had declared that the Andaman and Nicobar islands will be developed as a "maritime and startup hub".

Key Points

About the Project:

- The proposal includes an international container trans-shipment terminal, a greenfield international airport, a power plant and a township complex spread over 166 sq. km. (mainly pristine coastal systems and tropical forests).
- It is estimated to cost Rs. 75,000 crore.

Issues with Project:

- Lack of details on seismic and tsunami hazards, freshwater requirement details, and details of the impact on the Giant Leatherback turtle.
- No details of the trees to be felled—a number that could run into millions since 130 sq. km. of the project area has some of the finest tropical forests in India.
- A number of additional issues include about Galathea Bay, the site of the port and the centrepiece of the NITI Aayog proposal.
- Galathea Bay is an iconic nesting site in India of the enigmatic Giant Leatherback, the world's largest marine turtle—borne out by surveys done over three decades.
- Ecological surveys in the last few years have reported a number of new species, many restricted to just the Galathea region.
- These include the critically endangered Nicobar shrew, the Great Nicobar crake, the Nicobar frog, the Nicobar cat snake, a new skink (Lipinia sp), a new lizard (Dibamus sp,) and a snake of the Lycodon sp that is yet to be described.
- The site selection for the port had been done mainly on techni-

cal and financial criteria, ignoring the environmental aspects.

Action Points listed out by the Committee:

- There is a need for an independent assessment of terrestrial and marine biodiversity, a study on the impact of dredging, reclamation and port operations, including oil spills.

- The need for studies of alternative sites for the port with a focus on environmental and ecological impact, especially on turtles, analysis of risk-handling capabilities.

- A seismic and tsunami hazard map, a disaster management plan, details of labour, labour camps and their requirements, an assessment of the cumulative impact, and a hydro-geological study to assess impact on round and surface water regimes.

Third Arctic Science Ministerial

Recently, India participated in the 3rd Arctic Science Ministerial (ASM) and shared plans for research and long-term cooperation in the Arctic Region.

- The first two meetings—ASM1 and ASM2—were held in the USA in 2016 and Germany in 2018, respectively.

Arctic Region

- The Arctic region comprises the Arctic Ocean and parts of countries such as Canada, Denmark (Greenland), Norway, Russia, USA (Alaska), Finland, Sweden and Iceland.

- These countries together form the core of the Arctic Council, an intergovernmental forum.

- HQ: Norway

Key Points

Third Arctic Science Ministerial Conference:

- Host Countries: It was jointly organised by Iceland and Japan.

- It was the first Ministerial meeting being held in Asia (Tokyo in Japan).

- Objective: It provides opportunities to various stakeholders, including academia, indigenous communities, governments and policymakers, to enhance collective understanding of the Arctic region, emphasize and engage in constant monitoring, and strengthen obser-vations.

- Theme: 'Knowledge for a Sustainable Arctic'.

India's Stand:

- To contribute observing systems in the Arctic, both in-situ and by rem-ote sensing.

- Would deploy open ocean mooring in the Arctic for long-term monitor-ing of upper ocean variables and marine meteorological parameters.

- The launch of NISAR (NASA-ISRO Synthetic Aperture Radar) satellite mission, in collaboration with the USA, is underway.

- Contributions to the Sustained Arctic Observational Network (SAON) would continue.

NASA-ISRO Synthetic Aperture Radar

- NISAR will scan the globe every 12 days over the course of its three-year mission of imaging the Earth's land, ice sheets and sea ice to give an unprecedented view of the planet.

- It aims to conduct global measurements of the cause and con-sequences of land surface changes using advanced radar imaging.

Sustaining Arctic Observing Network

- It is a joint activity of the International Arctic Science Committee (IASC) and the Arctic Council.

- IASC is a non-governmental, international scientific organization.

- The purpose is to support and strengthen the development of multinational engagement for sustained and coordinated pan-Arctic observing and data sharing systems.

India's Engagement in the Arctic:

- India's engagement with the Arctic dates back to 1920 with the signing of the Svalbard Treaty in Paris.

- Since July 2008, India has had a permanent research station in the Arctic called Himadri at NyAlesund, Svalbard Area in Norway.

- India received the 'Observer' country status in the Arctic Council in 2013 and is one among the 13 countries across the world, including China, to have that position which was again renewed in 2018.

- It has also deployed a multi-sensor moored observatory called IndARC in the Kongsfjorden fjord since July 2014.

- The research in the Arctic region from India is coordinated, conducted, and promoted by the National Centre for Polar and Ocean Research (NCPOR), Goa,

under the Ministry of Earth Sciences, Government of India.

- Recently, India drafted a new Arctic policy that aims at expanding scientific research, sustainable tourism and exploration of mineral oil and gas in the Arctic region.

- Significance of Arctic Study for India:

- Though none of India's territory directly falls in the Arctic region, it is a crucial area as the Arctic influences atmospheric, oceanographic and biogeochemical cycles of the earth's ecosystem.

- Arctic warming and its ice melt are global concerns as they play a pivotal role in regulating climate, sea levels, and maintaining biodiversity.

- There is growing evidence of connection between the Arctic and the Indian Ocean (which modulates the Indian monsoon). Hence, improving the understanding of physical processes and quantifying the impact of Arctic ice melt on the Indian summer monsoon is very important.

Red-Eared Slider Turtle

The invasive red-eared slider can become a major threat to the biodiversity of water bodies across the Northeast region of India.

- The Northeast region of India is home to more than 72% of the turtle and tortoise species in the country.

Key Points

About:

- Scientific Name: Trachemys scripta elegans

- Habitat: U.S. and northern Mexico

- Description: The red-eared slider derives its name from red stripes around the part where its ears would be and from its ability to slide quickly off any surface into the water.

- Popular Pet: This turtle is an extremely popular pet due to its small size, easy maintenance, and relatively low cost.

Reason for Concerns:

- Invasive Species: Since it is an invasive species they grow fast and virtually leave nothing for the native species to eat and have a negative impact on the areas and the species living in the areas they invade.

- Catch-22 Situation: People who keep the turtle as pets become sensitive about turtle conservation but endanger the local ecosystem, probably unknowingly, by releasing them in natural water bodies after they outgrow an aquarium, tank or pool at home.

- Impact on Human Health: They can impact human health when these species may accumulate toxins in their tissues which pass on with the food chain upto humans.

Cyclone Tauktae

Recently, Cyclone Tauktae made landfall in Gujarat.

- The cyclone has left a trail of destruction as it swept through the coastal states of Kerala, Karnataka, Goa and Maharashtra.

Key Points

About:

Named by:

- It is a tropical cyclone, named by Myanmar. It means 'gecko', a

highly vocal lizard, in the Burmese language.

- Typically, tropical cyclones in the North Indian Ocean region (Bay of Bengal and Arabian Sea) develop during the pre-monsoon (April to June) and post-monsoon (October to December) periods.

- May-June and October-November are known to produce cyclones of severe intensity that affect the Indian coasts.

Classification:

- It has weakened into a "very severe cyclonic storm" from the "extremely severe cyclonic storm".

- The India Meteorological Department (IMD) classifies cyclones on the basis of the maximum sustained surface wind speed (MSW) they generate.

- The cyclones are classified as severe (MSW of 48-63 knots), very severe (MSW of 64-89 knots), extremely severe (MSW of 90-119 knots) and super cyclonic storm (MSW of 120 knots or more). One knot is equal to 1.8 kmph (kilometers per hour).

Developed in Arabian Sea:

- Tauktae is the fourth cyclone in consecutive years to have developed in the Arabian Sea, that too in the pre-monsoon period (April to June).

- After Cyclone Mekanu in 2018, which struck Oman, Cyclone Vayu in 2019 struck Gujarat, followed by Cyclone Nisarga in 2020 that struck Maharashtra.

- All these cyclones since 2018 have been categorised either 'Severe Cyclone' or above.

Arabian Sea becoming Hotbed of Cyclones:

- Annually, five cyclones on average form in the Bay of Bengal and

the Arabian Sea combined. Of these, four develop in the Bay of Bengal, which is warmer than the Arabian Sea.

- In 2018, while the Bay of Bengal maintained its average of four cyclones a year, the Arabian Sea produced three cyclonic storms. In 2019, the Arabian Sea overtook the Bay of Bengal with five cyclones to three.
- In 2020, the Bay of Bengal produced three cyclonic storms while the Arabian Sea generated two.
- In recent years, meteorologists have observed that the Arabian Sea, too, has been warming. This is a phenomenon associated with global warming.
- It has been observed that the sea surface temperature in the Arabian Sea has been rising for about 40 years. The increase in temperature is in the zone of 1.2-1.4 degree Celsius.

Tropical Cyclone:

- A tropical cyclone is an intense circular storm that originates over warm tropical oceans and is characterized by low atmospheric pressure, high winds, and heavy rain.
- A characteristic feature of tropical cyclones is the eye, a central region of clear skies, warm temperatures, and low atmospheric pressure.
- Storms of this type are called hurricanes in the North Atlantic and eastern Pacific and typhoons in SouthEast Asia and China. They are called tropical cyclones in the southwest Pacific and Indian Ocean region and Willy-willies in north-western Australia.

- Storms rotate counter clock wise in the northern hemisphere and clockwise in the southern hemisphere.
- The conditions favourable for the formation and intensification of tropical storms are:
  * Large sea surface with temperature higher than 27° C.
  * Presence of the Coriolis force.
  * Small variations in the vertical wind speed.
  * A pre-existing weak low- pressure area or low-level-cyclonic circulation.
  * Upper divergence above the sea level system.

Naming of Tropical Cyclones:

- According to WMO (World Meteorological Organization) guidelines, countries in every region are supposed to give names for cyclones.
- The North Indian Ocean Region covers tropical cyclones formed over Bay of Bengal and Arabian Sea.
- The 13 members, which come under the region, are Bangladesh, India, Maldives, Myanmar, Oman, Pakistan, Sri Lanka, Thailand, Iran, Qatar, Saudi Arabia, the UAE and Yemen.
- India Meteorological Department (IMD), one of the six Regional Specialised Meteorological Centres (RSMC) in the world, is mandated to issue advisories and name tropical cyclones in the north Indian Ocean Region.It is an agency of the Ministry of Earth Sciences.

Conference of Parties (COP 28)

Recently, the United Arab Emirates announced an offer to host the 28th session of Con-ference of Parties (COP 28) to the UNFCCC in Abu Dhabi in 2023.

- COP 26 was postponed in 2020 and will take place in Glasgow, UK in November 2021.

Key Points

About UNFCCC:

- The United Nations Framework Convention on Climate Change (UNFCCC), signed in 1992 at the United Nations Conference on Environment and Development also known as the Earth Summit, the Rio Summit or the Rio Conference.
- India is among the select few countries to have hosted the COP of all three Rio conventions on climate change (UNFCCC), biodiversity (Convention on Biological Diversity) and land (United Nations Convention to Combat Desertification).
- The UNFCCC entered into force on 21st March 1994, and has been ratified by 197 countries.
- It is the parent treaty of the 2015 Paris Agreement. It is also the parent treaty of the 1997 Kyoto Protocol.
- The UNFCCC secretariat (UN Climate Change) is the United Nations entity tasked with supporting the global response to the threat of climate change. It is located in Bonn, Germany.

Objective:

- To achieve stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous repercussions within a time frame so as to allow ecosystems to adapt naturally and enable sustainable development.

The Conference of the Parties (COP):

- COP is the apex decision-making authority of UNFCCC.
- The COP meets every year, unless the Parties decide otherwise. The first COP meeting was held in Berlin, Germany in March, 1995.
- The COP meets in Bonn, the seat of the secretariat, unless a Party offers to host the session.
- The office of the COP President normally rotates among the five United Nations regional groups which are - Africa, Asia, Latin America and the Caribbean, Central and Eastern Europe and Western Europe and Others.
- The President is usually the environment minister of his or her home country. S/he is elected by acclamation immediately after the opening of a COP session.

COP's with Significant Outcomes

1995: COP1 (Berlin, Germany)

- 1997: COP 3 (Kyoto Protocol)
  * It legally binds developed countries to emission reduction targets.
- 2002: COP 8 (New Delhi, India) Delhi Declaration.
  * Focuses on the development needs of the poorest countries and the need for technology transfer for mitigating climate change.
- 2007: COP13 (Bali, Indonesia)
  * Parties agreed on the Bali Road Map and Bali action plan, which charted the way towards a post-2012 outcome. The Plan has five main categories: shared vision, mitigation, adaptation, technology and financing.

- 2010: COP 16 (Cancun)
  * Resulted in the Cancun Agreements, a comprehensive package by governments to assist developing nations in dealing with climate change.
  * The Green Climate Fund, the Technology Mechanism and the Cancun Adaptation Framework were established.
- 2011: COP 17 (Durban)
  * Governments commit to a new universal climate change agreement by 2015 for the period beyond 2020 (Resulted in the Paris Agreement of 2015).
- 2015: COP21 (Paris)
  * To keep global temperature well below 2.0C above pre-industrial times and endeavor them to limit them even more to 1.5C.
  * It requires rich nations to maintain USD 100bn a year funding pledge beyond the year 2020.
- 2016: COP22 (Marrakech)
  * To move forward on writing the rule book of the Paris Agreement.
  * Launched the Marrakech Partnership for Climate Action.
- 2017: COP23, Bonn (Germany)
  * Countries continued to negotiate the finer details of how the agreement will work from 2020 onwards.
  * First set of negotiations since the US, under the presidency of Donald Trump, announced its intention earlier this year to withdraw from the Paris deal.

  * It was the first COP to be hosted by a small-island developing state with Fiji taking up the presidency, even though it was being held in Bonn.
- 2018: COP 24, Katowice (Poland)
  * It finalized a "rulebook" to operationalise the 2015 Paris Agreement.
  * The rulebook covers climate financing facilities and the actions to be taken as per Nationally Determined Contributions (NDC).
- 2019: COP25, Madrid (Spain)
  * It was held in Madrid (Spain).
  * There were no concrete plans regarding the growing climatic urgency.

Talkative Dinosaur found in Mexico

The Palaeontologists recently identified a new species of dinosaur called the Talkative Dinosaur in the northern Mexico.

Key Points

- The specimen, which has been named Tlatolophus galorum, is thought to have died around 72 million years ago in what is now Mexico's northern state of Coahuila.
- The name Tlatolophus is derived from tlahtolli—which means word in the indigenous Nahuatl language—and lophus, meaning crest in Greek.
- A new species of dinosaur is believed to have been "very communicative" and used low-frequency sounds like elephants to talk to each other.
- These "peaceful, but talkative" dinosaurs could also have had the ability to emit loud sounds to scare off predators.

- As excavations continued, scientists eventually discovered 80 per cent of its skull, its 1.32-meter crest and bones such as its femur and shoulder, which allowed researchers to finally realize this year that they had a new species of dinosaur on their hands.

Whiteflies: Threat to Agriculture

According to a recent study, exotic invasive whiteflies in India are causing direct and indirect yield losses in agriculture, horticulture and forestry crop plants.

- Whiteflies are tiny, sap-sucking insects that may become abundant in vegetable and ornamental plantings, especially during warm weather. They excrete sticky honeydew and cause yellowing or death of leaves.

Key Points

Spread of Whiteflies:

- The first reported invasive spiralling whitefly *(Aleurodicus dispersus)* is now distributed throughout India except Jammu & Kashmir.
- Similarly, the rugose spiralling whitefly *(Aleurodicus rugioperculatus)* which was reported in Pollachi, Tamil Nadu in 2016 has now spread throughout the country including the islands of Andaman Nicobar and Lakshadweep.
- *Aleurodicus dispersus* and *Aleurodicus rugioperculatus* have been reported on over 320 and 40 plant species, respectively.
- Most of the whitefly species are native to the Caribbean islands or Central America.

Reasons for Spread:

- The host range of all of the invasive whiteflies has been increasing due to their polyphagous nature (ability to feed on various kinds of food) and prolific breeding.
- The increasing import of plants and increasing globalization and movement of people has aided the spread of different varieties and their subsequent growth into invasive species.

Concerns:

- Damage to Crops:
  ✳ Whiteflies reduce the production yield and also damage crops. Approxima-tely 1.35 lakh hectares of coconut and oil palm in India are affected by the rugose spiralling whitefly.
  ✳ Other invasive whiteflies were also found to expand their host range on valuable plant species, especially coconut, banana, mango, sapota, guava, cashew, oil palm, and ornamental plants such as bottle palm, false bird of paradise, butterfly palm and important medicinal plants.
- Ineffectiveness of Insecticides:
  ✳ Whiteflies have been difficult to control by using available synthetic insecticides.

Controlling Whiteflies:

- Biological Control Methods:
  ✳ They are currently being controlled by naturally occurring insect predators, parasitoids (natural enemies of pests, provide biological control of pests in greenhouses and crop fields) and entomopathogenic fungi (fungi that can kill insects).
  ✳ Entomopathogenic fungi specific to whiteflies are isolated, purified, grown in the lab or mass-produced and applied into the whitefly infested field in combination with the release of lab-reared potential predators and parasitoids.
  ✳ They are not just environmentally friendly but also economically feasible.

Protected Planet Report 2020

The report, titled Protected Planet Report 2020, underlined the progress the world has made toward the ambitious goals agreed by countries in 2010 at the United Nations Convention on Biological Diversity.

Key Points

About the Protected Planet Reports:

- The reports are released by the United Nations Environment Programme (UNEP) World Conservation Monitoring Centre (UNEP-WCMC) and the International Union for the Conservation of Nature (IUCN) with support from the National Geographic Society, a global non-profit.
- These are biennial landmark publications that assess the state

of protected and conserved areas around the world.

- The report is the first in the series to include data on Other Effective Area-based Conservation Measures (OECM) in addition to protected areas.
  - ✳ OECM are a conservation designation for areas that are achieving the effective in-situ conservation of biodiversity outside of protected areas.
- The 2020 edition provides the final report on the status of Aichi Biodiversity Target 11, and looks to the future as the world prepares to adopt a new post-2020 global biodiversity framework.
  - ✳ Aichi Biodiversity Target 11 aimed to conserve 17% of land and inland water ecosystems and 10% of its coastal waters and oceans by 2020.

Findings of the Report:

- Increase in Protected Area:
  - ✳ As many as 82% of countries and territories have increased their share of protected area and coverage of Other Effective Area-based Conservation Measures (OECM) since 2010.
  - ✳ Protected areas covering almost 21 million km2 have been added to the global network.
- Increase in OECMs:
  - ✳ Since OECMs were first recorded in 2019, these areas have added a further 1.6 million km2 to the global network.
  - ✳ Despite being limited to only five countries and territories, the available data on OECMs show that they make a significant contribution to coverage and connectivity.

- ✳ Of the area now covered by protected areas and OECMs, 42% was added in the past decade.
- Key Biodiversity Areas (KBAs):
  - ✳ KBAs are sites that contribute significantly to the global persistence of biodiversity, in terrestrial, freshwater and marine ecosystems.
  - ✳ On an average, 62.6% of KBA either fully or partially overlap with protected areas and OECMs.
  - ✳ The average percentage of each KBA within protected areas and OECMs is 43.2% for terrestrial; 42.2% for inland water and 44.2% for marine (within national waters).
  - ✳ There was an increase of 5 percentage points or less in each case since 2010, the greatest growth in marine and coastal areas.

Challenges:

- Management effectiveness assessments have been conducted across only 18.29% of the area covered by protected areas, and it is likely that many do not meet the standards for full effectiveness.
- Integrating protected areas and OECMs across landscapes and seascapes, and in development sectors, remains a crucial challenge for ensuring the persistence of biodiversity.
  - ✳ Measurable targets for integrated land-use and marine spatial planning are needed to facilitate progress.
- Governance is a key contributor to effective conservation. Both protected areas and OECMs can have a variety of governance regimes: government, private,

governance by indigenous peoples and local communities, or any combination of these.
  - ✳ Data are still poor on governance diversity and quality for protected areas and OECMs.
  - ✳ New guidance and better reporting can provide new opportunities to better recognise and support the conservation efforts of diverse groups, including indigenous peoples, local communities, and private actors.

Way Forward

- Greater application of the global standard for effectiveness, the IUCN Green List of Protected and Conserved Areas, will help to address weaknesses.
- Increasing recognition of the role that protected and conserved areas can play as nature-based solutions to climate change and other global challenges, and their contribution to realising multiple Sustainable Development Goals, provides a strong justification for investing in more effective national and global networks.
- The further identification and recognition of OECMs is likely to contribute significantly to improved performance on all criteria, including connectivity, ecological representation, governance diversity and coverage (including areas important for biodiversity and ecosystem services).
- A global network of effective and equitable protected and conserved areas will play a vital role in safeguarding the health of people and the planet for generations to come.

SCIENCE AND TECHNOLOGY

India's SUTRA model against COVID-19 pandemic

Some scientists have questioned the government's SUTRA Model – Susceptible, Undetected, Tested (positive) and Removed approach.

- With a sudden surge in COVID - 19 cases, Indian government is in a grave situation of handling the infection across the country.

Scientists from various academic institutions have applied the SUTRA model to predict the COVID graph in India.

- Scientists working on SUTRA Model recently rejected the media reports which stated that Scientists working on SUTRA Model had cautioned about the second wave of COVID-19 in March to which attention was not paid.

- SUTRA model uses a mathematical model to predict the trajectory of the virus spread in India. The SUTRA model uses a 'data based approach'.

SUTRA Model:

The SUTRA Model is based on three parameters –

1. Beta or Contract rate – It measu-res the number of people who get infected by an infected person per day. Beta is connected to R0 value which is the number of people an infected person infects during his time of infection.

2. Reach – Measure of exposure level of the population to the pandemic.

3. Epsilon – Ration of detected and undetected cases.

- The scientists working on SUTRA model said that this mathematical model can only predict with certainty as long as few factors like virus dynamics and trans-missibility remain stable for some time.

- Mathematical models can also provide a mechanism to predict-ing alternate scenarios corre-

sponding to various policy decisions such as non-pharmaceutical interventions.

- However, due to the change in the virus and other factors, the predictions related to COVID-19 cases have to be readjusted rapidly.

- Although the previous predictions were incorrect, The Scientists also said that they continue to put in efforts for better predictions in the coming time.

- The SUTRA model relied on parameters which kept on changing rapidly due to which the predictions were impacted.

Reasons for rise of cases in COVID-19 second wave:

- The sudden surge in the cases in India has been attributed to various factors.

- After the decline of cases in the first wave of COVID-19 in India, people started violating the precautions that were recommended by doctors and experts to reduce the COVID-19 infection.

- People started breaking rules of social distancing, use of masks and sanitizers, maintaining personal hygiene by washing hands regularly. People were seen careless about the virus spread.

- In many places, punishment and penalties were relaxed and rules were not followed properly. These actions led to a more ferocious second wave of COVID-19.

- As the relaxation was allowed in regards to public gathering, mass gatherings were witnessed. Even the government itself did not follow social distancing. These violations were witnessed during big rallies in Assembly elections that were conducted in four states.

- Big religious gatherings, election rallies and reopening of various public places are being blamed for the rise in cases.

- Coordination issues between Centre and State allowed the things to drift so far. Both the Centre and State were unable to foresee the emergence of such a strong second wave.

- The Central government and State government were unable to increase the capacity of Indian medical system. Many states undid the emergency facilities that were built by them during the first wave. This led to widening of gap between demand and supply of the medical supplies

- The government and authorities were less strict in identification and marking of containment zones. In the previous wave, even a small flat with multiple COVID cases was treated as a containment zone.

- The mutation observed in the virus during the second wave has been a major concern. These mutations have led to emergence of Variants of Concern. These variants are more infectious in nature with high transmissibility.

- India lacked in research and tracking of these mutations amongst viruses. Lack of data and statistics has led to disadvantage in creating an action plan for fighting the second wave of virus.

- India has increased testing in the second wave. It has also led to an increase in number of cases recorded per day in India.

- Other illegal activities like black marketing, hoarding of important COVID-19 related medical supplies has led to immense pressure on both manufacturing and distribution industries.

Challenges faced in the second wave:

- Shortages of beds – Various cities like Delhi, Maharashtra has seen an unexpected spike in daily COVID-19 cases. Nearly all beds in the hospital are filled. India on an average has only 5 beds for 10,000 people whereas the global standard is of 10-45 hospital beds per 10,000 people.

- Oxygen crisis – Shortage of oxygen has left many Indians gasping for breath. This shortage has been attributed to various reasons like – gap between demand and supply, lack of cryogenic tankers for transportation, pending on site oxygen production plants which were approved but have not been built.

- COVID Vaccination – Shortage of vaccination remains a hurdle. With mass vaccination being rolled out throughout the country, the production and distribution remains a problem.

- COVID-19 second wave has put the young population at risk. This may affect the demographic dividend of the country which is a potential benefit that India possesses.

- The sudden spike in cases has shown the lack of medical professionals in the medical industry.

- Lack of investment in infrastructure has led to wide shortage in the medical supplies.

- Covid-19 has also led to immense pressure on the economy of the country. People from different sections of the society are facing problems relating to unemployment and other financial crises.

- COVID-19 has hit the production of Industries. Due to the rise in

COVID-19 cases and deaths, many industries are shutting their plants. Strict lockdowns are being demanded by leading industrialists due to the conditions prevailing in the country.

- Crematoriums are witnessing excessive load due to the large number of deaths taking place every day.

- Education industry has been hit due to the same. Various examinations including board exams of class 10 and 12 are cancelled and suspended.

- Lockdowns in several states are taking a toll over the mental and physical health of individuals.

- In India, experts have revealed that nearly 80-85% of Indian population is asymptomatic. These asymptomatic carriers of viruses are not isolating themselves in the home, risking spread of infection among others.

- Due to extreme pressure on medical infrastructure of the country, testing facilities are not able to test individuals.Recently, ICMR issued an advisory where it advises against repetition of RT-PCR tests on people who have been tested positive citing overwhelming pressure on the laboratories.

- The current model of prediction-SUTRA- omits the nature of the virus from its consideration. The model does not take into account the reasons behind the changes leading to surge in cases but only observes the changes in the values of the parameters.

Way Forward –

- The COVID-19 situation in the country has shown the drawbacks existing in the country's infrastructure and government policies.

- With the experiences in the previous wave and from other countries, we have learnt very little. For instance, the importance of oxygen therapy in treatment of COVID-19 was not given much attention. The oxygen production capacity should have been increased by now.

- It is never too late to work on limitations that act as a hurdle in the development of the country. It is high time that we should prioritise and revisit our development plan.

- India needs to focus on a multi-dimensional approach towards development wherein we are able to develop in a sustainable way. There is a requirement to strike a balance between human development, environment.

- Afterall, the rise in the zoonotic diseases across the world has raised the question on an approach which has been adopted by the countries for development.

- The Indian administration is now facing a four fold challenge where it has to work on reducing the number of cases of infection, break the chain, build hospital infrastructure like oxygen beds, COVID-19 medicines like Remedisivir , hospitals, doctors and increase the vaccination production and distribution.

- A more focussed and well coordinated plan will help us to achieve the objectives of Indian constitution and assure every citizen their right to life and good health. The responsibility does not only lie with the administration but also the citizens who need to take this pandemic more seriously

- People need to take precautions related to social distancing, wear masks, use sanitizers and wash their hands regularly in order to break the chain of infection.

- Like the global community is coming together and providing aid for the developing countries which are under massive pressure, countries should work together and help each other in meeting demands for fighting COVID-19 successfully.

- This global pandemic requires a united effort wherein the government across the world, international institutions and people come together. We must not let our guard down and be prepared for the upcoming days.

Waiving Intellectual Property Protection for Covid-19 Vaccines

The United States has announced the support for waiving Intellectual Property (IP) protection for Covid-19 vaccines.

- The decision is a breakthrough in India and South Africa's attempts to get World Trade Organisation (WTO) member countries to agree to such a waiver to fight the pandemic equitably.

Key Points

About:

- The 1995 agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) requires ratifying countries to adopt a minimum standard of intellectual property rights to protect creators and promote innovation.

- India and South Africa have proposed a waiver from the imple-

mentation and application of certain provisions of the TRIPS Agreement (waiving IP rights like patents, copyright, and trademarks) for prevention, containment or treatment of Covid-19.

- If the waiver is granted, WTO member countries will not be under an obligation, for a temporary period, to either grant or enforce patents and other IP-related rights to Covid-19 drugs, vaccines, and other treatments.

  ✻ This will immunise the measures adopted by countries to vaccinate their populations from claims of illegality under WTO law.

Need to Waive Patents on Covid Vaccines:

- Monopoly of Drug Companies: At present, only drug companies which own patents are authorised to manufacture Covid vaccines.

  ✻ A lifting of patents will allow the formula to be shared with other companies.

- Vaccine Cost: Once the formula is shared, any company which possesses the required technology and infrastructure can produce vaccines.

  ✻ This will lead to cheaper and more generic versions of Covid vaccines and will be a big step in overcoming vaccine shortage.

- Inequitable Distribution of Vaccines: This has opened up a glaring gap between developing and wealthier countries now.

  ✻ The countries having surplus doses of vaccines have already vaccinated a considerable percentage of their population and are returning to normalcy.

  ✻ Whereas, the poorer nations continue to face shortages, have overburdened healthcare systems and hundreds dying daily.

Against the Interests of the World: The longer Covid circulates in developing nations, there is a greater chance of more vaccine-resistant, deadly mutations of the virus emerging.

Significance for India:

Help in Increasing Production: The bulk of the vaccine doses produced in India are taken up by foreign countries which could pay more for the doses.

- This move can help scale up production to meet demand besides making the vaccines more affordable for everyone.

Preparation for the Third Wave: Indian authorities have stated that the third wave of the pandemic is inevitable.

- Once the number of cases and deaths plateau, addressing shortages and making more affordable vaccines readily accessible could be the best way to prepare for the surge once again.

Counter Arguments:

Vaccine Quality and Safety may get Compromised: Lifting of patents would be a compromise on control of safety and quality standards for vaccine manufacturing.

Disincentive Pharmaceutical Companies: Lifting of patents would be a huge deterrent to investing heavily on vaccine development during pandemics in the future.

Can Lead to Confusion: Eliminating those protections would undermine the global response to the pandemic, including ongoing effort to tackle new variants.

- It will create confusion that could potentially undermine public confidence in vaccine safety, and create a barrier to information sharing.

Way Forward

- Waiving IP protections alone isn't enough to make vaccines available around the world. The countries must work with each other to expand manufacturing capabilities and support international vaccines.

- It's important for both Indian manufacturers and the government to address concerns of patent holders to make sure that India's vaccination drive is not compromised in any way.

P-8I Patrol Aircraft

The US State Department has approved the sale of six P-8I patrol aircraft and related equipment to India.

- The six aircraft will come fitted with encrypted systems, as India has signed the Communications Compatibility and Security Agreement (COMCASA) with the US.

- The Defence Acquisition Council approved the procurement of the aircraft in 2019.

Key Points

About the P-8I Aircraft:

- It is a long-range maritime reconnaissance and Anti-Submarine Warfare Aircraft.

- It is a variant of the P-8A Poseidon aircraft that Boeing company developed as a replacement for the US Navy's ageing P-3 fleet.

- With a maximum speed of 907 kmph and an operating range of over 1,200 nautical miles, the P-8Is detect threats and neutralize them if required, far before they come anywhere near Indian shores.

- Indian Navy became the first international customer for the P-8 aircraft in 2009.

Indo-US Defence Ties:

- This proposed sale will help to strengthen the US-Indian strategic relationship.
  - ✳ For the US, India continues to be an important force for political stability, peace, and economic progress in the Indo-Pacific and South Asia region.

- Defense purchases from the United States have been increasingly an integral part of growing ties between the two countries.
  - ✳ From near zero in 2008, India-US defence trade touched USD 20 billion in 2020, helped along by major policy upgrades.

- The US designating India a Major Defence Partner (in 2016) and then granting it the same access to defence technology as NATO allies and Australia, Japan and South Korea under Strategic Trade Authorization-1 (STA) in 2018.

COMCASA Agreement:

- COMCASA (Communications Compatibility and Security Agreement) is meant to provide a legal framework for the transfer of communication security equipme-nt from the US to India that would facilitate "interoper-ability" between their forces — and potentially with other mili-taries that use US-origin systems for secured data links.

- It is one of the four foundational agreements that the US signs with allies and close partners to facilitate interoperability between militaries and sale of high end technology.

- It is an India-specific version of the Communication and Information on Security Memorandum of Agreement (CIS-MOA).
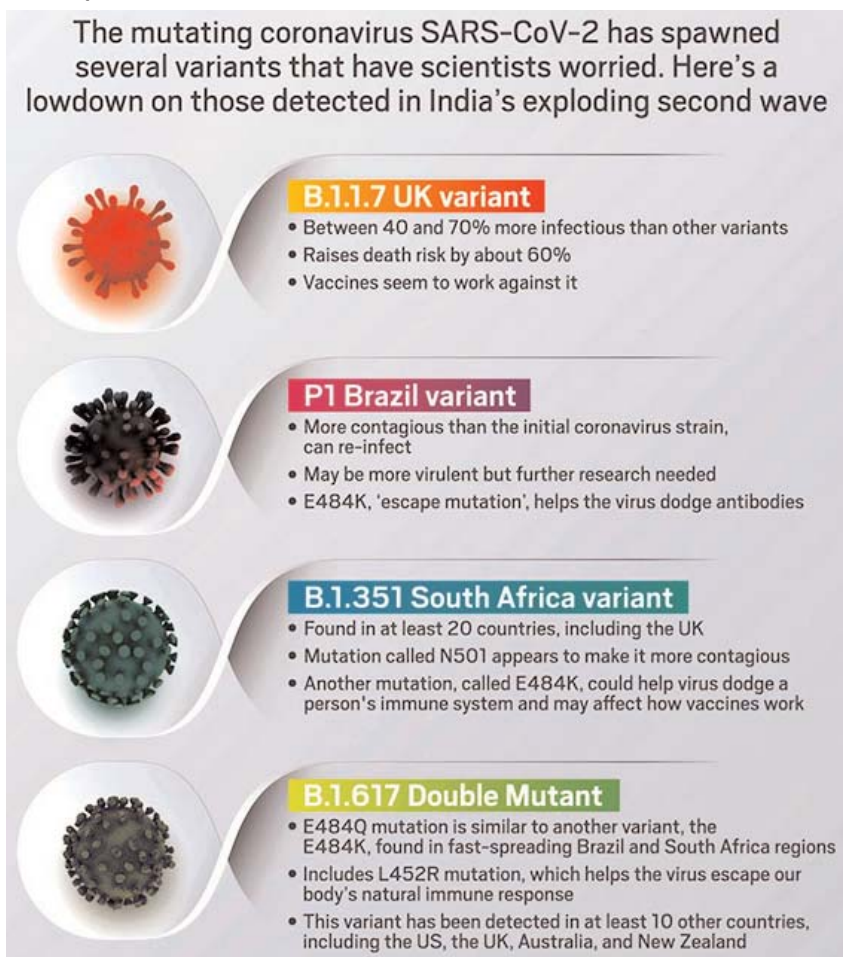
Classification of Corona Variants

Recently, India's Health Ministry said that a new double mutant variant of the coronavirus had been detected in addition to many other strains or Variants of Concern (VOCs) found in 18 states in the country.

Key Points

Virus Variant:

- Variants of a virus have one or more mutations that differentiate it from the other variants that are in circulation. While most mutations are deleterious for the virus, some make it easier for the virus to survive.

- The SARS-CoV-2 (Corona) virus is evolving fast because of the scale at which it has infected people around the world. High levels of circulation mean it is easier for the virus to change as it is able to replicate faster.

- The original pandemic virus (founder variant) was Wu.Hu.1 (Wuhan virus). In a few months, variant D614G emerged and became globally dominant.

The mutating coronavirus SARS-CoV-2 has spawned several variants that have scientists worried. Here's a lowdown on those detected in India's exploding second wave

B.1.1.7 UK variant
- Between 40 and 70% more infectious than other variants
- Raises death risk by about 60%
- Vaccines seem to work against it

P1 Brazil variant
- More contagious than the initial coronavirus strain, can re-infect
- May be more virulent but further research needed
- E484K, 'escape mutation', helps the virus dodge antibodies

B.1.351 South Africa variant
- Found in at least 20 countries, including the UK
- Mutation called N501 appears to make it more contagious
- Another mutation, called E484K, could help virus dodge a person's immune system and may affect how vaccines work

B.1.617 Double Mutant
- E484Q mutation is similar to another variant, the E484K, found in fast-spreading Brazil and South Africa regions
- Includes L452R mutation, which helps the virus escape our body's natural immune response
- This variant has been detected in at least 10 other countries, including the US, the UK, Australia, and New Zealand

Classification:

- The US Centers for Disease Control and Prevention (CDC) classifies variants into three categories:

- **Variant of Interest (VOI):**
  - ✳ A variant with specific genetic markers that have been associated with changes to receptor binding, reduced neutralization by antibodies generated against previous infection or vaccination, reduced efficacy of treatments, potential diagnostic impact, or predicted increase in transmissibility or disease severity.
  - ✳ An example of VOI is the B.1.617 variant of the virus which has two mutations, referred to as E484Q and L452R.

- **This variant is classified as a VOI by the World Health Organization (WHO) as well.**
  - ✳ Both are separately found in many other coronavirus variants, but they have been reported together for the first time in India.

- **Variant of Concern (VOC):**
  - ✳ A variant for which there is evidence of an increase in transmissibility, more severe disease (e.g., increased hospitalizations or deaths), significant reduction in neutralization by antibodies generated during previous infection or vaccination, reduced effectiveness of treatments or vaccines, or diagnostic detection failures.
  - ✳ The B.1.1.7 (UK variant), B.1.351 (South Africa Variant), P.1 (Brazil Variant), B.1.427, and B.1.429 variants circulating in the US are classified as VOCs.

- **Variant of High Consequence:**
  - ✳ A variant of high consequence has clear evidence that prevention measures or medical countermeasures have significantly reduced effectiveness relative to previously circulating variants.
  - ✳ So far, the CDC has not found variants of high consequence in circulation in the US.

- **Variants Under Investigation (VUI):**
- Public Health England (PHE) says that if the variants of SARS-CoV-2 are considered to have epidemiological, immunological or pathogenic properties, they are raised for formal investigation.
- At this point, the variants emerging from the B.1.617 lineage are designated as VUI.

Nomenclature:

- **Phylogenetic Assignment of Global Outbreak Lineages (PANGOLIN):**
- It was developed to implement the dynamic nomenclature of SARS-CoV-2 lineages, known as the Pango nomenclature.
- It uses a hierarchical system based on genetic relatedness – an invaluable tool for genomic surveillance.
- It uses alphabets (A, B, C, P) and numerals starting with 1. Variant lineages are at the emerging edge of the pandemic in different geographies. Lineage B is the most prolific.

Concerns Related to Different Variants:

Increased Transmission:

- In many countries, including India, variants, by virtue of increased transmissi-bility, have kicked off new wave(s) of epidemic transmission.

Increased Severity:

- Regarding virulence (propensity to cause severe/life-threatening disease), the UK variant is worse. The South Africa and Brazil variants do not seem to have higher virulence.

Lowered Immunity:

- The third concern is regarding the immunity cover offered by vaccination using antigens made from D614G variant — which applies to most vaccines in current use.
- Lowered efficacy of vaccines was found more with the South African and less with the Brazil variant. Hence, reinfection can occur in spite of immunity by earlier D614G infection or vaccination.
- Vaccine efficacy may be lower now than what was determined in phase-3 trials as VOC were not then widely prevalent.
  - ✳ Fortunately, mRNA vaccines have broader immunity for different reasons, and they protect better against these two variants.

Possible Solution:

- Karolinska Institute in Sweden has created an antigen using new variant RBD (Receptor Binding Domain) peptide with adjuvant, and inoculated monkeys already primed with an older vaccine.
- A RBD is a short immunogenic fragment from a virus that binds to a specific endogenous receptor sequence to gain entry into host cells.
- An adjuvant is a substance that enhances the immune system's

response to the presence of an antigen.

- The resultant booster response was not only high but also broad, covering new variants. This approach, called 'hetero boosting' by a different vaccine, offers a way to manage the 'vaccine-escape' variants until newer vaccines become available.

Intellectual Property Rights on Covid vaccine

The United States supported the waiver of Intellectual property rights on COVID-19 vaccine.

- The United States has said that it will pursue 'text based negotiations' at the World Trade Organisation.
- All the 164 members of WTO must agree on the draft produced and one member can veto it.
- The World Health Organisation and World Trade Organisation applauded the US' move to support temporary waiver of intellectual property rights on COVID-19 vaccines.
- India and South Africa had pushed World Trade Organisation members for agreeing on waiver of TRIPS agreement for COVID-19 vaccine temporarily.
- It was done in order to ensure increase in vaccine production and vaccine accessibility to all.
- They argued that the vaccination formula should be shared with other countries in order to produce them in bulk locally.
- Till now, the step was criticised by developed countries majorly including the United States.
- The Least Developed Countries grouping consisting of 46 members has shown support for India and South Africa's proposal.

- The step of US' support for the waiver is seen as a crucial decision with respect to India and South Africa's attempts.
- After this step of the US Administration, countries like Canada, New Zealand and European Union have agreed for discussion on the waiver issue.
- However, countries like Germany, Switzerland, the United Kingdom, Brazil and Japan have opposed this move.

What are Patents?

- Patents are exclusive monopoly granted to an inventor with respect to manufacturing, usage and selling of their patented product for a limited period of time.
- It provided for enforceable legal rights that prevented others from copying inventions.
- The patents are given protection under WTO's TRIPS agreement. TRIPS stands for Trade related aspects of Intellectual Rights.
- Under TRIPS, protection of Patents must be issued by the member countries for a minimum time period of 20 years.
- After expiration of Patent, the invention enters the public domain and any company can commercially use the invention without patent violation.
- In India, Patents are provided by Indian Patent Office.

Types of Patents - Process patent and Product patent

A. Product Patent - Under this, a patent is issued for a particular finished product. Example - Medicines. If a company holds patents for a medicine, it will exclusively manufacture that particular medicine.

B. Process Patent - Under this, particular process used to manufac-

ture a product is patented. Example- process for manufacturing drugs, the patent holder will enjoy monopoly over the process of the drug.

- In the 1970s, India shifted to process patenting from product patenting. This enabled India to become a significant producer of generic drugs.
- However, in 2005, India shifted to product patents in biotech, pharma and chemical sectors.

What is the US supporting for?

- The US, till now, was not in support of patent waivers arguing that the patents were crucial for all the global economies including that of the US as well in recovery of the pandemic hit economy.
- Saying that 'extraordinary circumstances call for extraordinary measures', the US expressed support for India and South Africa's proposal on temporary waiver of vaccines.
- The US administration also conveyed that the raw material supply which is required for vaccine production will also be increased.
- Experts have said that the US is supporting 'limited waiver'. It covers only vaccines and not therapeutics and related technologies.
- India and South Africa proposed vaccines, therapeutics and related technologies to COVID-19.

India and South Africa's proposal

- A report titled 'Waiver from certain provisions of TRIPS agreement for prevention, containment and treatment of COVID-19' was submitted to WTO by India and South Africa.

- They argued that the patent on COVID-19 related technology vaccines would lead to questions related to equity and distribution of vaccines mainly in developing and underdeveloped countries.

- The primary reason for requesting such a waiver is increasing accessibility and affordability of life saving vaccines and COVID-19 treatment.

- Nearly 130 least developed and developing countries have not received even a single dosage of vaccine. Thus, raising multiple questions regarding access to vaccines- the best shot against COVID-19.

- Temporary waiver of patents will allow any manufacturer to manufacture, distribute and sell the product without the permission of the patent holder of the product.

- In the report, the countries argue that the patent will lead to an increase in production of vaccines which will further lead to control of COVID-19 infection.

- The current process of Patenting includes compulsory licensing agreement which is a time taking process. Thus, delaying the process of immunization.

Arguments by countries against the Waiver

- Pharmaceutical companies of countries like Germany, United Kingdom opposed the waiver request by developing countries like India and South Africa.

- They argue that such waiver could lead to stalling of innovation related to COVID-19 treatment and vaccines in the future. Thus, hindering any development in the medical field.

- Although the Patent waiver is temporary, it would lead to loss of revenues as major input cost during vaccine development is incurred in research and development.

- The high prices of vaccines and other technology is not solely controlled by Patents. Other factors like availability of raw materials, technology availability etc. also plays a crucial role in setting up prices.

- With lower margins available to pharmaceutical companies after patent waiver, other pharmaceutical companies may show hesitancy in producing and manufacturing.

- The patent covers only the blueprint related to the formula. The countries argue that due absence of precise details of vaccine production and relatively new mRNA type vaccines, patent waiver will not alone solve the problem related to vaccinations.

- Availability of raw material will also be an issue that will have to be addressed.

- Setting up of production units and developing the manufacturing process is itself a time consuming process.

- With absence of know-how of technology, it may raise questions related to product safety, efficiency and efficacy.

Alternative solution offered by opposing countries

- The countries are arguing that rather than waiving patents, focus should be on improvement of supply chain.

- The developed countries must be asked to export substantial quantities of vaccines to the developing and underdeveloped countries.

Significance of Waiver on COVID-19 Vaccines

- Currently, the concentration of vaccine production is majorly in developed countries. Whereas, productions in developing countries are done through licencing and technology transfer agreements.

- Experts have cited that patent waiver will lead to equitable distribution as presently, only companies with patents are authorised to manufacture COVID vaccines.

- Patent waiver will help in making COVID-19 vaccines affordable. As formula for vaccines will be shared, it will lead to cheaper COVID-19 vaccines.

- The waiver will reduce the gap between rich and poor countries with regards to vaccine coverage.

- Developing countries are facing overwhelming pressure on their health infrastructure and shortage of vaccines. On the other hand, wealthier countries have a surplus of vaccines and have already immunized a large part of their population.

- Many countries like Canada, Bangladesh have shown interest in vaccine production if the patents are waived off.

- With warning for the third wave, vaccinating the population will be the best possible solution to tackle the upcoming wave of infection.

- As the virus is mutating rapidly, there are chances of emergence of vaccine resistant virus. Vaccination affordability and accessibility becomes priority in this aspect.

Trade Related aspects to Intellectual Property (TRIPS) Agreement

1. TRIPS agreement has been in force since 1995.
2. The agreement lays down legal standards for protection of intellectual property through various means like patents, copyrights, geographical indications etc.
3. All the WTO members are committed to the TRIPS agreement. India is a WTO member.

World Trade Organisation

- World Trade Organisation is an international organisation that deals with rules and regulations relating to trade between countries.
- In 1995, WTO replaced the then existing General agreement on Tariffs and trade.
- GATT only covered trade in goods. WTO covers a wider aspect by including trade in services and intellectual property.
- The Marrakesh Agreement in 1994 led to the establishment of the World Trade Organisation.
- In 2001, WTO adopted the Doha Declaration .Doha declaration introduced major reforms in the international trading system.
- The Marrakesh Agreement also provides for waiver under WTO treaties like TRIPS.

Way Forward

- Waiving off of patents is not the only solution to solve the problems related to shortage of vaccines.
- The shortage of vaccines needs to be addressed by having a multi-dimensional approach.
- Countries should focus on enhancing infrastructure and production technology.

- The global pandemic has not only hit the health infrastructure but also the economy.
- Governments of wealthy countries and lower and middle income countries must come together to assure equitable distribution of vaccination across the globe.
- However, depending on existing vaccines should not be the only solution. Countries must heavily invest on Research and development for innovation to tackle the COVID-19 situation.

Black Fungus

A number of Covid-19 patients are developing a serious fungal infection known as Mucormycosis also called black fungus.

Key Points

Mucormycosis:

- It is a serious but rare fungal infection caused by a group of molds called mucormycetes, which is abundant in the environment.
- It mainly affects people who have health problems or take medicines that lower the body's ability to fight germs and sickness.
- The types of Mucormycosis are: Rhinocerebral (Sinus and Brain), Pulmonary (Lung), Gastrointestinal, Cutaneous (Skin), and disseminated Mucormycosis.

Transmission:

- It occurs through inhalation, inoculation, or ingestion of spores from the environment.
- Mucormycosis does not spread between people or between people and animals.

Symptoms:

- These include pain and redness around eyes and/or nose, fever, headache, coughing, shortness of breath, bloody vomits, and altered mental status.
- Warning signs can include toothache, loosening of teeth, blurred or double vision with pain.

Prevention:

- Avoiding areas with a lot of dust like construction or excavation sites, avoiding direct contact with water-damaged buildings and flood water after hurricanes and natural disasters and avoiding activities that involve close contact to soil.

Treatment:

- Mucormycosis needs to be treated with prescription antifungal medicine.
- In some cases, it can require surgery.
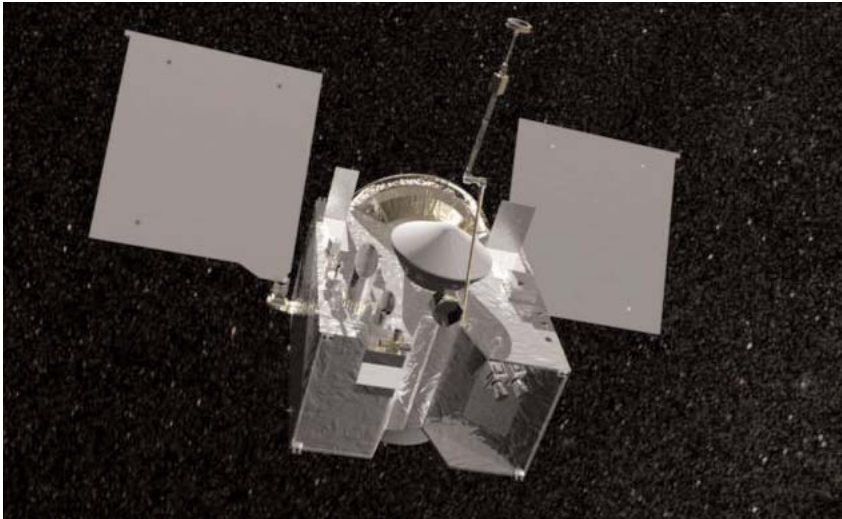
NASA's OSIRIS-REx Mission

Recently, NASA's OSIRIS-REx spacecraft departed from asteroid Bennu, and started its two-year long journey back to Earth.

- OSIRIS-REx is NASA's first mission to visit a near-Earth asteroid, survey its surface and collect a sample from it.

Key Points

About OSIRIS-REx Mission:

- It is the United States' first asteroid sample return mission, aiming to collect and carry a pristine, unaltered sample from an asteroid back to earth for scientific study.
- The OSIRIS-REx (Origins, Spectral Interpretation, Resource Identification, Security, Regolith Ex-

plorer) spacecraft was launched in 2016 for the journey to Bennu.

- The mission is essentially a seven-year-long voyage and will conclude when at least 60 grams of samples are delivered back to the Earth (in 2023).
- As per the National Aeronautics and Space Administration (NASA), the mission promises to bring the largest amount of extraterrestrial material back to the Earth since the Apollo era.
  - ✳ Apollo was the NASA program that resulted in American astronauts' making a total of 11 space flights and walking on the moon (1968-72).
- The spacecraft contains five instruments meant to explore Bennu including cameras, a spectrometer and a laser altimeter.
- Recently, the spacecraft's robotic arm called the Touch-And-Go Sample Acquisition Mechanism (TAGSAM), made an attempt to "TAG" the asteroid at a sample site and collected a sample.

Significance:

- Scientists will use the asteroid samples to study the formation of the solar system and of habitable planets such as Earth.

- NASA will also distribute a part of the samples to laboratories worldwide and will reserve about 75% of the samples for future generations who can study it with technologies not yet created.

Asteroid Bennu:

- Bennu is an ancient asteroid, currently more than 200 million miles from Earth.
- It is about as tall as the Empire State Building (US) and is named after an Egyptian deity.
- The asteroid was discovered by a team from the NASA-funded Lincoln Near-Earth Asteroid Research team in 1999.
- It is known that this asteroid is a B-type asteroid, implying that it contains significant amounts of carbon and various other minerals.
  - ✳ Because of its high carbon content, it reflects about 4% of the light that hits it, which is very low when compared with a planet like Venus, which reflects about 65% of the light that hits it. Earth reflects about 30%.
- Around 20-40% of Bennu's interior is empty space and scientists believe that it was formed in the

first 10 million years of the solar system's formation, implying that it is roughly 4.5 billion years old.

- There is a slight possibility that Bennu, which is classified as a Near Earth Object (NEO), might strike the Earth in the next century, between the years 2175 and 2199.
  - ✳ NEOs are comets and asteroids nudged by the gravitational attraction of nearby planets into orbits which allows them to enter the Earth's neighbourhood.
- Bennu is believed to have been born in the Main Asteroid belt between Mars and Jupiter and because of gravitational tugs from other celestial objects and the slight push asteroids get when they release absorbed sunlight, the asteroid is coming closer to Earth.
- Bennu offers scientists a window into the early solar system as it was first taking shape billions of years ago and tossing ingredients that could have helped seed life on Earth.
  - ✳ Significantly, Bennu hasn't undergone drastic changes since its formation over billions of years ago and therefore it contains chemicals and rocks dating back to the birth of the solar system. It is also relatively close to the Earth.

TRIPS waiver for COVID 19 vaccines

After the pandemic hit the world, India and South Africa piloted the proposal to waive key provisions of the TRIPS agreement on COVID-19 vaccines, drugs, therapeutics, and related technologies.

- The core idea behind the proposal is that intellectual property rights (IPRs) such as patents should not become barriers in scaling up production of medical products essential to combat COVID-19.

- The TRIPS waiver proposal, proposed by India and South Africa is now also backed by the US as well as China.

- It is essential because it would give immunity to member countries from a legal challenge at the WTO if their domestic IPR laws suspend or do not enforce IP protection on COVID-19 medical products.

- If the waiver is granted, WTO member countries will not be under an obligation to either grant or enforce patents and other IP-related rights to Covid-19 drugs, vaccines, and other treatments, for a temporary period.

- This will help in immunising the measures adopted by countries to vaccinate their populations from claims of illegality under laws of World Trade Organisation (WTO) if their domestic Intellectual Property Regulation (IPR) laws suspend or do not enforce IP protection.

Need for the TRIPS waiver

- Currently, only those drug companies which own patents are authorised to manufacture vaccines for COVID 19. Lifting of the patents will allow the formula to be shared with other companies.

- Once the formula is shared, any company that possesses that required technology and infrastructure can produce vaccines. This will help in reducing the cost of vaccines and in production of more generic versions of

these vaccines and will be a big step in overcoming the vaccine shortages in different countries.

- At present, the countries having surplus doses of vaccines have already vaccinated a significant percentage of their population and have started returning to normalcy, while on the other hand the poorer nations continue to face shortages of vaccines and other health essentials. A TRIPS waiver will help in curbing inequitable distribution of vaccines.

- The longer Covid circulates in developing nations, there is a greater chance of more vaccine-resistant, deadly mutations of the virus emerging, thus becoming a potent threat for all the countries.

Why does India want the waiver?

- Help in Increasing Production- The bulk of the vaccine doses produced in India have been taken up by the foreign countries which could pay more for the doses.

- This move can help in scaling up the production to meet demand besides making the vaccines more affordable for everyone.

  Preparation for the Third Wave- Indian authorities have stated that the third wave of the pandemic is inevitable.

- Once the number of cases and deaths plateau, addressing shortages and making more affordable vaccines readily accessible could be the best way to prepare for the surge once again.

Trade Related Aspects of Intellectual Property Rights (TRIPS) agreement and laws in India

- The TRIPS Agreement was negotiated in 1995 at the World Trade

Organization (WTO).

- It establishes minimum standards for the availability, scope and use of 7 forms of intellectual property (IP) viz. Trademarks, copyrights, geographical indications, patents, industrial designs, layout designs for integrated circuits and undisclosed information on trade secrets.

- It requires all the signatory countries to enact domestic laws.

- It lays down the most comprehensive international agreement on intellectual property and has a major role in enabling trade in creativity and knowledge, resolving trade disputes over intellectual property and assuring the WTO members the latitude to achieve their domestic policy objectives.

- It lays down permissible exceptions and limitations for balancing the interests of intellectual property with the interests of public health and economic development.

- It frames the IP system in terms of innovation, technology transfer and public welfare.

- The TRIPS Council is responsible for administering and monitoring the operation of the TRIPS Agreement.

- It is also known as the "Berne and Paris-plus" Agreement.

- India adopted the colonial patent protection regime- Indian Patents and Design Act, 1911.

- Later, in 1959, a committee chaired by N. Rajagopala Ayyangar objected to this regime on ethical grounds and India adopted a new patent regime- the Patents Act, 1970. This led to the rise of production of generic medicines in India and today India is the largest generic medi-

cine producer in the world.

Why are certain countries opposing the proposal for waiver?

- Vaccine Quality and Safety may get Compromised- Lifting of patents can lead to a compromise on control of safety and quality standards for vaccine manufacturing, thus affecting the public.
- Disincentive Pharmaceutical Companies- Lifting of patents would be a huge deterrent to investing heavily on vaccine development during pandemics in the future.
- Can Lead to Confusion- Eliminating those protections would undermine the global response to the pandemic, including ongoing effort to tackle new variants. It will create confusion that could potentially undermine public confidence in vaccine safety, and create a barrier to information sharing.

Way Forward

- Addressing the problem of Shortage of Vaccines- The richest countries have cornered about 80 percent of vaccine supplies so far. India currently needs to supplement its output to ensure that a population of over 900 mn which is above 18 years of age gets about 1.8 bn doses at the earliest.
    - ✴ In such situations compulsory licensing can be used to augment the supply of drugs and other therapeutics.
- Nudging Voluntary Licensing- An assertive posture on compulsory licences would also have the advantage of forcing several pharmaceutical companies to offer licences voluntarily.

- India can set an example by licensing Covaxin. This will enable India to live up to its reputation of being the 'pharmacy of the world' and also put pressure on the developed countries to transfer their vaccine technology to the developing countries.
    - ✴ Thus, the government should not only transfer Covaxin's technology to domestic pharmaceutical companies, to boost national supplies, but also offer it to foreign corporations.
    - ✴ By unlocking its vaccine technical know-how to the world, India can demonstrate its resolve to walk the talk on the TRIPS waiver.
- Favourable Regulatory Environment- A commitment to supply vaccines to India requires trust in the country's regulatory and institutional environment. The government must strive to instil this trust through dependable commitments. Such confidence, combined with the expedited process for vaccine approval, can help India in quickly overcoming its supply shortage of vaccines.
- Though a TRIPS waiver will help in overcoming the WTO obligations, it will not change the nature of countries' domestic IP regulations. Thus, countries must work towards making suitable changes in their domestic legal framework to operationalise and enforce the TRIPS waiver.

Conclusion

India has had a history of playing a leading role in mainstreaming TRIPS flexibilities such as the compulsory licensing at the World Trade Organisation. The current pandemic also requires all the

countries including India to take a consistent stand on IPRs on COVID-19 medical products internationally and domestically. The TRIPS waiver cannot act as a magic pill that would address the shortcomings in vaccine supply. Rather it will work well only if countries simultaneously address the non-IP bottlenecks.

Tianwen-1

Recently, China's spacecraft Tianwen-1 landed on Mars carrying its first Mars rover named Zhurong.

- ✴ It became the third country to land on Mars after the US and Soviet Union.
- ✴ China's previous 'Yinghuo-1' Mars mission, which was supported by a Russian spacecraft, had failed after it did not leave the earth's orbit and disintegrated over the Pacific Ocean in 2012.

Key Points

About the Tianwen-1 Mission:

Launch:

- The Tianwen-1 Spacecraft was lifted off on a Long March 5 rocket, from the Wenchang launch center in July 2020.

Three Parts:

- The Spacecraft consists of three parts - the orbiter, the lander and the rover - which separated in Mars orbit.
- The orbiter will remain in the orbit for scientific operations and to relay signals while the lander-rover combination has made an autonomous descent and landing.
- The lander from Tianwen-1 has touched down on Utopia Planitia,

a large plain in the northern hemisphere of Mars.

Objectives:

- To conduct scientific investigations into the planet's soil, geological structure, environment, atmosphere and water.
- The mission will be the first to place a ground-penetrating radar on the Martian surface, which will be able to study local geology, as well as rock, ice, and dirt distribution.

Telangana's Medicine from the Sky Project

Recently, the Telangana government has selected 16 Primary Healthcare Centres (PHCs) for pilot testing the ambitious 'Medicine from the sky', the first-of- its-kind project.

Key Points

About:

- The project involves delivery of medicines through multiple drones.
- The project is being launched following the approval granted by the Civil Aviation Ministry.
  - ✳ The Ministry has granted conditional exemption to the Telangana Governm-ent from the Unmanned Aircraft System Rules 2021 for conducting experimental Beyond Visual Line of Sight (BVLOS) drone flights for delivery of vaccines.
- The project would be launched in three waves starting with a pilot followed by mapping the route network for operation of drones for delivering vaccine/medicine in the desired community health centres and PHCs.

Collaborators:

- Telangana government, World Economic Forum and HealthNet Global.
  - ✳ HealthNet Global is a private limited company which provides quality affordable health plans for individuals, families, Medicare and businesses.

Aim:

- To assess alternative logistics routes in providing safe, accurate and reliable pick up and delivery of health care items like medicines, Covid-19 vaccines, units of blood and other lifesaving equipment from the distribution centre to specific locations and back.
- To ensure healthcare equity for rural areas.

Significance:

- The model, once successful, would enable deliveries from district medical stores and blood banks to PHCs, Community Healthcare Centres (CHCs) and further from PHCs/CHCs to central diagnostic laboratories.
- It has the potential to disrupt the healthcare industry and save many lives during emergencies and in less accessible geographies.

Other Projects involving Use of Drones:

- Similar permission was granted to the Indian Council of Medical Research (ICMR) for conducting feasibility study of Covid-19 vaccine delivery using drones, in collaboration with IIT-Kanpur.
- The International Crops Research Institute (ICRISAT) was permitted to deploy drones for agricultural research activities, apart from some agriculture universities and educational institutions.

Drones

- Drone is a layman terminology for Unmanned Aircraft (UA). There are three subsets of Unmanned Aircraft- Remotely Piloted Aircraft, Autonomous Aircraft and Model Aircraft.
- Remotely piloted aircraft have been divided into five categories based on their weight-
  - ✳ Nano : Less than or equal to 250 grams.
  - ✳ Micro : From 250 grams to 2kg.
  - ✳ Small : From 2 kg to 25kg.
  - ✳ Medium : From 25kg to 150kg.
  - ✳ Large : Greater than 150kg.
- Under the Drone Regulation in 2018, the Ministry of Civil Aviation partitioned the Air space into Red Zone (flying not permitted), Yellow Zone (controlled airspace), and Green Zone (automatic permission).

Zebrafish - its Importance in Human Spaceflights

A new research in zebra fish has demonstrated how induced hibernation (torpor) may protect humans from the elements of space, especially radiation, during space flight.

Key Points

About the Study:

- The researchers exposed zebrafish to radiation like what would be experienced on a six-month journey to Mars.
  - ✳ They observed signs of oxidative stress (imbalance between antioxidants and free radicals), DNA damage, stress hormone signaling and changes to the cell-division cycle.
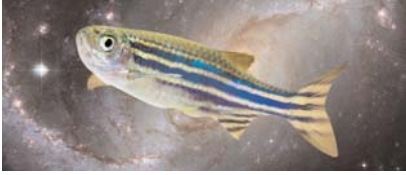
- The researchers then induced torpor in a second group of zebrafish which were then exposed to the same dose of radiation.
  - ✺ The results showed that torpor lowered the metabolic rate within the zebrafish and created a radioprotective effect, protecting against the harmful effects of radiation.
  - ✺ Torpor, a form of hibernation, is a brief spell of suspended animation. It usually lasts less than a day. When in torpor, an animal's metabolism, heartbeat, breathing, and body temperature are greatly reduced.

About Zebrafish

- **Scientific Name:** *Danio rerio*
- **Habitat:**
- It is a small (2-3 cm long) freshwater fish found in the tropical and subtropical regions. The fish is native to South Asia's Indo-Gangetic plains, where they are mostly found in the paddy fields and even in stagnant water and streams.
- They are classified as a species of least concern on the IUCN's Red List of Threatened Species.

Organism for Biomedical Research:

- They have been used to study vertebrate development, evolution, genetics, and disease due to its adequate regeneration capacity of almost all its organs, including the brain, heart, eye, spinal cord.

- Zebrafish have a similar genetic structure (around 70%) to humans.
- As a vertebrate, the zebrafish has the same major organs and tissues as humans. Their muscle, blood, kidney and eyes share many features with human systems.

Need of the Study:

- Recent technological advancements might have made space travel more accessible. However, long-term space travel is incredibly detrimental to human health.

Significance:

- The study could help in understanding how a form of hibernation, known as induced torpor (a state of reduced metabolic activity) may provide radio-protective effects.
  - ✺ Hibernation is a physiological condition found in many species.
  - ✺ It protects them against harsh conditions, such as food scarcity and low environmental temperatures.
- Replicating hibernation may therefore protect astronauts against the harsh conditions of space flight, which include challenges such as radiation exposure, bone and muscle wastage, advanced ageing and vascular problems.
- The European Space Agency (ESA) is also conducting research into the impacts of hibernating astronauts not just for health reasons, but because it could reduce the amount of consumables required for a space journey and allow the mass of a spacecraft to be reduced by a third.

Sun Halo/Kaleidoscope Effect

Recently, the people of Bangalore witnessed a bright rainbow ring around the sun for a few moments - a rare optical and atmospheric phenomenon called "22 degree circular Halo".

Key Point

- The phenomenon popularly known as the 22 degree circular halo of the sun or occasionally the Moon (also called a moon ring or winter halo), occurs when the sun's or moon's rays get deflected/refracted through the hexagonal ice crystals present in cirrus clouds.
  - ✺ This is also called the Kaleidoscopic Effect.
- These halos are called 22-degree halos, as the halo or ring has an apparent radius of 22 degrees around the sun/moon.
- Circular halos specifically are produced by cirrus clouds, which are thin, detached, hair-like clouds. These clouds are formed very high up in the atmosphere, at a height of over 20,000 feet.
- Just like a rainbow, a halo is visible when viewed from the right angle — sometimes appearing just white but often with colours of the spectrum also clearly present.
  - ✺ The halo is the brightest at the inner edge of the circular disk, with no light inside the disk as no light is refracted at smaller angles.
  - ✺ Red light is refracted less than other colours of light, so the halo's inner edge is reddish. Other shades typically tend to overlap and wash out.

Miscellaneous

World Press Freedom Day 2021

The World Press Freedom Day (WPFD) is an annual celebration of press freedom, observed on 3rd May every year.

- The main celebration is organized by the UN Educational, Scientific and Cultural Organization (UNESCO).
- The theme for WPFD 2021 is "Information as a Public Good".

Key Points

Background:

- The day was proclaimed by the UN General Assembly in 1993, following the recommendation of UNESCO's General Conference in 1991.
- The day also marks the 1991 Windhoek Declaration (adopted by UNESCO).
  - ✳ It aimed towards the 'development of a free, independent and pluralistic press'.

Three Key Highlights of WPFD 2021:

- Steps to ensure the economic viability of news media.
- Mechanisms for ensuring transparency of Internet companies.
- Enhanced Media and Information Literacy (MIL) capacities that enable people to recognize and value, as well as defend and demand, journalism as a vital part of information as a public good.

World Press Conference 2021:

- The 2021 Global Conference was hosted by UNESCO and the Government of Namibia.

- It called for urgent attention to the threat of extinction faced by local news media around the world, a crisis worsened by the Covid-19 pandemic.
- It put forward ideas to tackle the challenges of our online media environment, push for more transparency of internet companies, strengthen safety of journalists, and improve their working conditions.

Freedom of Press in India

- Freedom of press is not expressly protected by Indian legal system but it is impliedly protected under article 19(1) (a) of the constitution, which states - "All citizens shall have the right to freedom of speech and expression".
- In 1950, the Supreme Court in *Romesh Thappar v. State of Madras* observed that freedom of the press lay at the foundation of all democratic organisations.
- However, Freedom of press is also not absolute. It faces certain restrictions under Article 19(2), which are as follows-
  - ✳ Matters related to interests of the sovereignty and integrity of India, the security of the State, friendly relations with foreign States, public order, decency or morality or in relation to contempt of court, defamation or incitement to an offence.

Related Rankings/Findings:

- India has been ranked 142nd out of 180 nations in the World Press Freedom Index, 2021, published by Reporters Sans Frontieres (RSF) or Reporters Without Borders.

- Reports such as 'Freedom in the World 2021 (Freedom House, US)', '2020 Human Rights Report (US State Department)', 'Autocratisation Goes Viral (V-Dem Institute, Sweden)' have all highlighted intimidation of journalists in India.

Maharana Pratap

The Prime Minister of India paid tributes to Maharana Pratap on his Jayanti.

Key Points

Description:

- Rana Pratap Singh also known as Maharana Pratap was born on 9th May 1540 in Kumbhalgarh, Rajasthan.
- He was the 13th King of Mewar and was the eldest son of Udai Singh II
  - ✳ Maharana Udai Singh II ruled the kingdom of Mewar, with his capital at Chittor.
  - ✳ Udai Singh II was also a founder of the city of Udaipur (Rajasthan).

Battle of Haldighati:

- The Battle of Haldighati was fought in 1576 between Rana Pratap Singh of Mewar and Raja Man Singh of Amber who was the general of the Mughal emperor Akbar.
- Maharana Pratap fought a brave war, but was defeated by Mughal forces.
- It is said that Maharana Pratap's loyal horse named Chetak, gave up his life as the Maharana was leaving the battlefield.

Reconquest:

- After 1579, the Mughal pressure relaxed over Mewar and Pratap recovered Western Mewar including Kumbhalgarh, Udaipur and Gogunda.
- During this period, he also built a new capital, Chavand, near modern Dungarpur.

Death:

- He died on 19th January, 1597. He was succeeded by his son Amar Singh, who submitted in 1614 to Emperor Jahângîr, son of Akbar.

Gopal Krishna Gokhale

The Prime Minister of India paid tribute to Gopal Krishna Gokhale on his Jayanti.

- Gopal Krishna Gokhale was a great social reformer and educationist who provided exemplary leadership to India's freedom movement.

Key Points

- **Birth**: 9th May, 1866 in Kotluk village in present-day Maharashtra (then part of the Bombay Presidency).

Ideology:

- Gokhale worked towards social empowerment, expansion of education , struggle for freedom in India for three decades and rejected the use of reactionary or revolutionary ways.

Role in Colonial Legislatures:

- Between 1899 and 1902, he was a member of the Bombay Legislative Council followed by work at the Imperial Legislative Council from 1902 till his death (1915).
- At the Imperial legislature, Gokhale played a key role in framing the Morley-Minto reforms of 1909.

Role in INC:

- He was associated with the Moderate Group of Indian National Congress (joined in 1889).
- He became president of INC in 1905 in Banaras session.
  - ✳ This was the time when bitter differences had arisen between his group of 'Moderates' and the 'Extremists' led by Lala Lajpat Rai and Bal Gangadhar Tilak among others. The two factions split at the Surat session of 1907.
  - ✳ Despite the ideological difference, in 1907, he intensely campaigned for the release of Lala Lajpat Rai, who was imprisoned that year by the British at Mandalay in present-day Myanmar.

Related Societies and Other Works:

- He established the Servants of India Society in 1905 for the expansion of Indian education.
- He was also associated with the Sarvajanik sabha journal started by Govind Ranade.
- In 1908, Gokhale founded the Ranade Institute of Economics.
- He started english weekly newspaper, The Hitavada (The people's paper).

National Technology Day

India observes its National Technology Day on 11th May every year.

Key Points

About:

- The day, which was first observed on 11th May, 1999, aims to commemorate the scientific and technological achievements of Indian scientists, engineers.
  - ✳ The day was named by the former Prime Minister Atal Bihari Vajpayee.
- Every year, the Technology Development Board of India celebrates the day by awarding individuals with the National Award for their contribution to science and technology in India.
  - ✳ Technology Development Board is a statutory body of Government of India functioning under the Department of Science of Technology.
  - ✳ It provides financial assistance to Indian industrial concerns and other agencies, for commercialization of indigenized technologies or adaptation of imported technologies for wider domestic applications.

2021 Theme:

- Science and Technology for a Sustainable Future.

Significance:

- It is the day India successfully tested nuclear bombs in Pokhran on 11th May, 1998.
  - ✳ India successfully test-fired its Shakti-1 nuclear missile in an operation called Pokhran-II, also codenamed as Operation Shakti which was led by late president Dr APJ Abdul Kalam.
  - ✳ The nuclear missile was tested at the Indian Army's Pokhran Test Range in Rajasthan. This was the second test which was conducted after Pokhran-I codenamed Operation Smiling Buddha, in May 1974.

- On the same day, India performed a successful test firing of the Trishul Missile (surface to air short range missile) and had test flown the first indigenous aircraft – 'Hansa – 3'.

Basava Jayanti

The Prime Minister of India paid tribute to Jagadguru Basaveshwara on the occasion of Basava Jayanthi.

- In November 2015, the Prime Minister of India inaugurated the statue of Basaveshwara along the bank of the river Thames at Lambeth in London.

Key Points

Birth

- He was born in Karnataka in 1131 CE.

About:

- He was an Indian 12th-century Philosopher, Statesman and a social reformer.
- He was Lingayat saint in the Shiva-focussed Bhakti movement, and Hindu Shaivite social reformer during the reign of the Kalyani Chalukya/Kalachuri dynasty.
  * The Lingayats are a Hindu sect with a wide following in southern India that worships Shiva as the only deity.
- He is also known as Bhakti Bhandari (literally, the treasurer of devotion), or Basaveswara (Lord Basava).

Contribution:

- Basavanna spread social awareness through his poetry known as Vachanaas.
- Several important Lingayat works are credited to Basavanna, including Vachana such as the Shat-sthala-vachana, Kala-jnana-vachana, Mantra-gopya, Ghatna Chakra-vachana and Raja-yoga-vachana.
- Basavanna, like Gautama Buddha, taught people how to live happily in a rational social order which later came to be known as the Sharana movement.
  * The Sharana movement attracted people from all castes, and like most strands of the Bhakti movement, produced a corpus of literature, the vachanas, that unveiled the spiritual universe of the Veerashaiva saints.
- Basava fought against the inhuman practice of the caste system, which discriminated against people based on their birth.
- The Anubhava Mantapa established by Basava laid down the foundation of social democracy.
- Basava believed that man becomes great not by his birth but by his conduct in the society.
- He taught the dignity of manual labour by insisting on work as worship.

National Award for Recycling Carbon Technology

A Bangalore based startup has received the National Award 2021 from Technology Development Board (TDB) for developing a commercial solution for conversion of carbon dioxide (CO2) to chemicals and fuels.

- The startup has received funding under the Nano Mission.

Key Points

About:

- The startup developed efficient catalysts and methodologies for the conversion of carbon dioxide (CO_2) to methanol and other chemicals.
- It has led to improvisation of process engineering to enhance the production of chemicals and fuels from anthropogenic CO_2 generated from various sources including coal and natural gas power generation sectors, steel industry, cement industry, and chemical industries.
- It has integrated multiple components involved in the CCUS (Carbon Capture, Utilization, and Sequestration) to develop a complete solution for the environmental issues due to global warming.
- The Recycling Carbon Technology will be transferred to Jawaharlal Nehru Centre for Advanced Scientific Research (JNCASR), an autonomous institute of the Depart-ment of Science and Technology.

Carbon Capture, Utilization and Sequestration (CCUS):

- It is a process that captures carbon dioxide emissions from sources like coal-fired power plants and either reuses or stores it so it will not enter the atmosphere.
- Carbon dioxide storage in geologic formations includes oil and gas reservoirs, unmineable coal seams and deep saline reservoirs - structures that have stored crude oil, natural gas, brine and carbon dioxide over millions of years.

Rise of AI threat of jobless future or better job opportunities through re-skilling and up-skilling

"A family went on a vacation to a national park. The heartbeat of a member was lowered and it was identified through a hand held device. Immediate first aid was given by contacting the medical persons through video call and the life of the person could be saved before shifting to a hospital. This was possible through a simple device that could record heart beat, a function of Artificial Intelligence".

So what is Artificial Intelligence (AI)? Can the use of AI will Impact the jobs of individuals or groups? If not what are measures that needs to be taken? These details will be addressed in the following discussion.

AI in layman's terms is the prediction using algorithms and data. AI is a group of technologies that enable the machines to act with greater intelligence and perform the human capabilities of sensing. Understanding and acting on an event. Though the concept of AI was used 70 years back, by computer scientists like Alan Turing, the increase in computational speed, reduction of cost in the storage space and advancements in the neural networks AI applications are being used in wide range of professions. The union government in its budget has published a policy paper on "National Strategy for Artificial Intelligence". This shows the importance on using AI applications.

Need for AI:

AI is growing as new factors of production along with the traditional factors like labor, capital. It has the potential to overcome physical limitations of labor and capital, and opening of New sources of values and growth it has the potential to

a. Augment labor & capital by enhancing humans to focus on areas that adds more value complementary then with human capabilities & capital efficiency

b. Innovations that could bring in new opportunities in the economy

c. Ability to automate complex physical tasks.

"Accenture" in its AI reports projected that Indians annual growth can be raised by 1.3 percentage points by 2035 with the use of AI on the social front, the quality of life can be improved with the advancements of AI in medicine, education, agriculture, environment, building of smart cities, disaster manage-

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ment etc..,

Health Care:

Applications of AI in healthcare can help to address the issues of access to health care facilities. With the concentration of hospitals and doctors in tier 1 and tier 2 cities, rural areas are being neglected. With the help of AI through AI driven diagnostics, early identification of issues & imaging technologies health care can be reached out to rural areas.

Agriculture:

Indian agriculture is heavily dependent on natural events like

monsoons, weather conditions, and issues like lack of irrigation, misuse or over use of fertilizers. All these events and activities can be addressed through better prediction of rains, demand and improvement in crop yield through the advanced detection of pest attacks.

Education:

Though the right to education is guaranteed by the constitution, there are huge dropouts of children from schools even if the enrollments are high the reasons can be identified through AI & the quality access issues can be solved through AI. The learning experiences can be enhanced through personalized learning. Teachers can also be provided with virtual learning enhancing the quality of education.

Environment and disaster management:

The quality of land is degrading through intensive farming methods and monotonous cropping patterns. This is leading to the environmental issues like soil erosion, clearing of forests which intern is leading to high carbon foot print. These issues can be addressed through the intervention of AI by suggesting the nutritional values of different cropping methods and checking the use of fertilizers. With the climate change, the occurrences of natural calamities like floods, intense drought, earthquakes can be addressed through better prediction with the help of AI techniques and timely disaster management intervention is taken.

In other areas like building resilient smart cities, issues like traffic congestion, manufacturing & retail sectors can make use of the AI technologies. Banking sectors has revolutionary implications on the inclusion of rural sectors.

Due to the wide range of capabilities that AI can offer, it can disrupt the nature of jobs & skills that are required to perform. This gives rise to an apprehension that there will be a threat to jobs in the future as the rise of AI application is increasing in every aspect. This jobber issues can be changed to an opportunity by the re-skilling and up-skilling measures.

"NASCCOM" predicts that around 50% of Indian workforce will be engaged in completely new jobs that do not exist today by 2022. The traditional software developer roles will be replaced by or transitioned by new technologies that include machines learning, so modeling. By new technologies that include machine learning, 3D modeling. Apart from IT other sectors like education, health, agriculture, and finance will also be transformed required new skill sets or upgrading the existing skill sets this opportunity can be utilized by re-skilling & up-skilling.

Re-skilling:

Re-skilling of the current force required the integration of existing skills with new skill sets that can enhance improved learning through the following initiatives.

To address the challenge of shift in the service sector industry, traditional IT sectors like BPO's should be enhanced with providing skills on low level expertise that could be required in AI technologies. These include data annotation, image classification, they can be provided through policy interventions and providing training opportunities

Recognizing & standardizing informal training institutes:

As there are number of training in different technologies, there is a need to standardize these institutions. This can be done through the guidelines provided by National skill qualification framework (NSQF). The instructions have to be designed with coordination from market that provides job opportunities so they can be consumed immediately without further training in the job.

Creation of open platforms for learning:

Online and self learning platforms need to be promoted by standardizing their content. Care needs to be taken in the quality of content and it has to be revised based on the changes in the technology that comes with advancements

Creating financial incentives:

As re-skilling of employees in financial burden on the private companies, incentives need to be provided by the government like tax deductions, providing subsidies to training measures need to be taken that there incentives are not misused.

Up-skilling:

Education sector needs to the aligned with industry standards. There needs to be collaboration with the higher educational institutions with the industry by creating a channel of communication between faculty and industry so that ideas can be exchanged.

In primary & secondary education transition to skill based education is required as there is over emphasis on theoretical training. To promote early adoption of technologies, schemes like Atal Tinkering labs needs to be established.
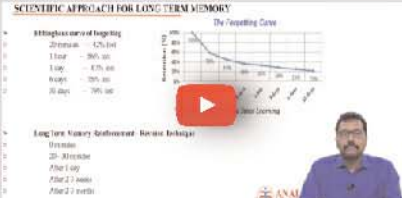
Lack of qualified teachers also hinders the quality of education they needs to be trained adequately and use of program like "SWAYAM" will help in enhancing the knowledge.

Way forward:

AI provides an opportunity of growth in multiple sectors. This has to be utilized through research and addressing issues like privacy and data protection. The demographic dividend needs to be utilized through proper up-skilling and re-skilling. AI should be leveraged for inclusive growth that is in line with the government policy of Sabka Saath Sabka Vikas.