

Monthly

prepp

Current Affairs Notes

September 2022



GORBACHEV & INDIA



SEMICONDUCTOR PRODUCTION LINKED
INCENTIVE (PLI) SCHEME



INDO PACIFIC ECONOMIC FRAMEWORK



KARTAVYA PATH

Contents

GENERAL STUDIES 1	4
CAG REPORT ON ABYSMAL STATE OF HERITAGE CONSERVATION.....	4
NAVY'S ENSIGNS PAY TRIBUTE TO SHIVAJI	4
KARTAVYA PATH.....	6
WHY HAS THE SUPREME COURT RELAXED THE BAN ON IRON ORE MINING IN KARNATAKA?	7
PM SHRI SCHOOLS.....	8
RAPID EXIT OF WOMEN WORKERS FROM WORKFORCE	9
THE GENDER PAY GAP, HARD TRUTHS AND ACTIONS NEEDED	10
THE CONSEQUENCES OF DECLINING FERTILITY	12
URBAN FLOODING: DECODING BENGALURU'S URBAN FLOOD WOES.....	13
INDIA'S GROWING WATER CRISIS, THE SEEN AND THE UNSEEN	15
TRIPLE DIP LA NINA	16
GENERAL STUDIES 2	17
OFFICE OF PROFIT	17
LIVE STREAMING OF SC PROCEEDINGS: RATIONALE AND CONCERNS.....	18
ECI SEEKS RESTRICTIONS ON CASH DONATIONS TO POLITICAL PARTIES, WRITES TO GOVERNMENT	19
THE CONCERNS AROUND AADHAAR-VOTER ID LINKAGE ..	21
CHHATTISGARH HC STRIKES DOWN 58% QUOTA IN JOBS, AND EXAMS.....	22
DELAYS MAR MGNREGS SOCIAL AUDITS	24
SPECIAL MATERNITY LEAVES IN CASE OF INFANT DEATH..	25
AUDIT REPORT FINDS GRAFT IN MP TAKE HOME RATION SCHEME.....	26
NEAR-UNIVERSAL SOCIAL SECURITY PENSIONS FOR THE ELDERLY	28
WOMEN IN ENGINEERING, SCIENCE, AND TECHNOLOGY (WEST): LAUNCHING OF A NEW I-STEM INITIATIVE	29
NON-COMMUNICABLE DISEASES LED TO 66% OF DEATHS IN INDIA IN 2019: WHO	30

THE EVOLVING ROLE OF CSR IN FUNDING NGOS.....	31
SEMICONDUCTOR PLI: SUPPORT FOR 50% OF PROJECT COST CLEARED.....	33
ONLINE DISPUTE RESOLUTION IS AN EXAMPLE OF SOCIAL ENGINEERING'	35
PANEL FORMED FOR UGC, AICTE TO WORK TOGETHER ON HIGHER EDUCATION POLICIES.....	36
NAAC'S SYSTEM FOR ASSESSING HIGHER EDUCATION INSTITUTIONS.....	37
384 DRUGS ON ESSENTIAL MEDICINES LIST	38
PREVENTIVE DETENTION ROSE IN 2021	39
INTERNATIONAL RELATIONS	41
STEPPING UP TO THE WORLD	41
GORBACHEV AND INDIA.....	42
INDIA-NEPAL MOU ON BIODIVERSITY CONSERVATION AND PROTECTION OF TRANSBOUNDARY PROTECTED AREAS ...	43
INDIA, BANGLADESH DISCUSS RIVER WATER SHARING ISSUES.....	44
THE RETURN OF NUCLEAR WEAPONS ON THE GLOBAL PLATFORM: STRONG NUCLEAR DIPLOMACY BRINGS OPPORTUNITIES FOR INDIA.....	46
QUAD OFFICIALS DISCUSS CHINA'S CONCERNS IN THE INDO-PACIFIC	47
UKRAINE CONFLICT, COVID HIT GLOBAL SUPPLY CHAIN: PM MODI AT 7TH EASTERN ECONOMIC FORUM	49
GLOBAL PANDEMIC TREATY	50
TOKYO DELHI COMPACT: INDO-JAPAN MINISTERIAL DIALOGUE POINTS TO DEEPENING OF STRATEGIC AND DEFENCE PARTNERSHIP	51
INDO-PACIFIC ECONOMIC FRAMEWORK	53
EASTERN ECONOMIC FORUM	55
INTERNATIONAL TREATY ON PLANT GENETIC RESOURCES FOR FOOD AND AGRICULTURE.....	57
GENERAL STUDIES 3	58
ACHIEVING THE 2070 NET-ZERO TARGET COULD BOOST INDIA'S GDP	58
BREATHING FOR COAL PLANT DRAWS ANGUISH.....	59

THE AGE OF HYPER-LAPSE CONSUMERISM	60
NEED 8-8.5% GROWTH TO BE HIGHER INCOME NATION BY 2047.....	62
CENTRE MULLS ALLOWING 100% WORK FROM HOME FOR EMPLOYEES OF SEZ UNITS: REPORT.....	63
WHY SHOULD INDIA CHOOSE MANUFACTURING OVER SERVICES?.....	64
CENTRAL GOVERNMENT'S INITIATIVE TO BOOST THE CAPITAL EXPENDITURE TO BOOST THE ECONOMY POST PANDEMIC ERA	65
INDIA OVERTAKES THE UK AS WORLD'S FIFTH-LARGEST ECONOMY: 5 CHARTS TO PUT THIS IN PERSPECTIVE.....	66
WHY IS THERE DIVERGENCE IN INFLATION ACROSS STATES?	68
PRODUCTION LINKED INCENTIVE SCHEME: MAKING IN INDIA. BUT HOW?	69
THE ROAD TO ENERGY ATMANIRBHARTA	70
'INDIA MAY NEED UP TO 28 GW IN NEW COAL-FIRED PLANTS BY 2032'	71
SCHEME FOR THE PROMOTION OF BULK DRUG PARKS	73
HOW WILL THE NATIONAL LOGISTICS POLICY SPEED UP THE LUMBERING FREIGHT SECTOR?	74
DRAFT INDIAN PORTS BILL, 2022: ISSUES BETWEEN THE CENTRE AND MARITIME STATES	76
EXERCISE SYNERGY: CERT-IN HOSTED CYBER SECURITY EXERCISE WITH 13 COUNTRIES	77
CENTRE SIGNS PACT WITH EIGHT ARMED TRIBAL GROUPS IN ASSAM	78
SAFE HARBOUR RULES UNDER LENS IN US, INDIA TO KEEP BIG TECH IN CHECK	79
THESIS ON AGRARIAN CONSTRAINT TO ECONOMIC DEVELOPMENT: ABHJIT SEN	81
PRECISION FARMING NEEDS TO BE PROMOTED	81
WHAT GOVT CURBS ON EXPORTING RICE MEAN FOR INDIA AND THE WORLD.....	83
TO CURB USE OF CHEMICAL FERTILISERS, GOVT TO GIVE NOD TO PM PRANAM	85

CONNECTING THE DOTS TO BOOST THE PATENT ECOSYSTEM	86
INFLATABLE AERODYNAMIC DECELERATOR: ISRO TESTS SYSTEM TO RECOVER SPENT ROCKET STAGES.....	87
INDIA'S FIRST INTRA-NASAL COVID-19 VACCINE APPROVED	88
GENERAL STUDIES 4	89
CAN CIVIL SERVANTS EXPRESS THEIR VIEWS ON LAW AND GOVERNANCE.....	89
PRELIMS	91
ISRO TESTS HYBRID PROPULSION SYSTEM.....	91
LUMPI-PROVACIND: INDIGENOUS VACCINE AGAINST LUMPY SKIN DISEASE	92
INDIAN-MADE HPV VACCINE THIS YEAR	93
MOXIE-MARS OXYGEN IN-SITU RESOURCE UTILISATION EXPERIMENT.....	94
SYNTHETIC MOUSE EMBRYOS CREATED USING STEM CELLS	95
CANCER-FIGHTING VIRUSES CAN BOOST BODY'S IMMUNE RESPONSE.....	96
LIGHT ON THE DARK MATTER: JAMES WEBB TELESCOPE, THE MOST POWERFUL SPACE TELESCOPE	97
HUNDREDS OF WHALES STRANDED ON TASMANIA'S WEST COAST	98
DUGONG: FIRST LARGE VERTEBRATE TO GO FUNCTIONALLY EXTINCT IN CHINA	99
WHAT IS 'ZOMBIE ICE', AND HOW HAS IT THREATENED TO RAISE GLOBAL SEA LEVELS BY OVER 10 INCHES.....	100
IARI: NEW VIRUS BEHIND MYSTERY DWARFING OF RICE	101
GLOBAL ALLIANCE FOR INDUSTRY DECARBONISATION...	102
HOW IS THE CHIEF JUSTICE OF INDIA APPOINTED?	102
VAJRA PRAHAR: INDIA-US JOINT EXERCISE.....	104
INDIA RANKS 132 IN HDI AS THE COUNTRY'S SCORE DROPS	105
WHAT IS WINDFALL TAX AND WHY ARE COUNTRIES IMPOSING IT ON THE ENERGY SECTOR RIGHT NOW?	107
SOCIAL STOCK EXCHANGE.....	108

DELAY IN GOVT.'S FLAGSHIP PMAY-G SCHEME TO INVITE PENALTY	109
ONE IN 6 MSME LOAN ACCOUNTS UNDER ECLG SCHEME TURNS NPA.....	110
NI-KSHAY MITRA INITIATIVE.....	111
CABINET APPROVES ADDITION OF FOUR TRIBES TO ST LIST	113
INDIRA GANDHI URBAN EMPLOYMENT GUARANTEE SCHEME.....	114
PAREKH: NEW REGULATOR FOR BRINGING UNIFORMITY IN ALL BOARD EXAMS.....	115
PLACES IN NEWS	115
MOHENJO DARO FACES THREAT FROM PAKISTAN'S MONSTER MONSOON.....	115
US WARSHIP SAILS THROUGH TAIWAN STRAIT	116
FALKLAND ISLANDS	116
KYRGYZSTAN-TAJIKISTAN BORDER CONFLICT ESCALATES WITH USE OF HEAVY WEAPONRY	116
SOLOMON ISLANDS.....	116
EASTERN ECONOMIC FORUM (EEF)	117
UYGHUR RIGHTS ABUSES: UN ACCUSES CHINA OF COMMITTING 'CRIMES AGAINST HUMANITY	117
HUNDREDS OF WHALES STRANDED ON TASMANIA'S WEST COAST.....	117

GENERAL STUDIES 1

Indian Culture - Salient aspects of Art Forms, Literature and Architecture from ancient to modern times.

CAG REPORT ON ABYSMAL STATE OF HERITAGE CONSERVATION



Priority: Medium

Primary Source: Indian Express

Prepp Prelims Booster: Art and culture

Prepp Mains Booster: Indian Culture - Salient aspects of Art Forms, Literature and Architecture from ancient to modern times.

Context:

Recently, Comptroller and Auditor General of India (CAG's) performance audit on Preservation and Conservation of Monuments and Antiquities tabled in Parliament singled out the poor state of heritage conservation across India.



What issues highlighted were in the CAG report?

- **No National Policy:** There is no national policy on archaeological exploration and excavation. The same with respect to antiquities.
- **No database of antiquities:** Archaeological Survey of India (ASI) has estimated some 58 lakh plus antiquities all over India, but there is no database or inventory in its possession.
- **Insufficient funds:** The ASI budget for exploration and excavations is less than 1% even though it intended to raise the allocation to 5% of the total budget.
- This is because of the reduction in the ASI budget in 2021-2022 which has been reduced by more than Rs 200 crore.
- **Lack of coordination:** There is no synergy and coordination between the different agencies involved in heritage conservation.
- The National Culture Fund, established in 1996, to rope in corporate groups and individuals to fund conservation efforts, has utilised only 14% of its funds because of the lack of coordination with the ASI.
- **Violations of various legal provisions by ASI:** ASI is working in violation of the provisions of the Monuments (AMASR) Act.
- For instance, at Humayun's tomb commercial construction is being undertaken in the prohibited area by agencies other than the ASI without due clearance.

- **Slow pace in notifying monuments:** The National Monuments Authority (NMA) has only finalised and notified 31 monuments, while more than 210 are in different stages of finalisation.
- This is a fraction of the total 3,693 monuments listed as Centrally Protected Monuments. This has consequence of drastically reducing the prohibited and regulatory area around monuments
- **Reduction in security around notified monuments:** Minimisation of the security net around monuments endangers them and make the exercise of creating heritage by-laws in their present form redundant.
- **Poor state of conservation at ASI-protected sites:** It is resulting in glaring shortcomings in conservation and protection. This can be seen at the Buddhist stupa site of Kanaganahalli in Karnataka.

What is Ancient Monuments and Archaeological Sites and Remains (AMASR), 1958?

- It is parliamentary law for the preservation of ancient and historical monuments and archaeological sites and remains of national importance, for the regulation of archaeological excavations and for the protection of sculptures, carvings and other like objects.

National Monuments Authority (NMA)

- It is a statutory body for implementing heritage by-laws and site plans for each monument.
- It was set under provisions of the Ancient Monuments and Archaeological Sites and Remains AMASR (Amendment and Validation) Act, 2010.
- **Functions:** Protection and preservation of monuments and sites through management of the prohibited and regulated areas around the centrally protected monuments. Grant permissions to applicants for construction-related activity in the prohibited and regulated area around protected monuments.

Archeological Survey of India (ASI)

- It is the primary institutional guardian of protected monuments.
- It is responsible for archaeological research, excavation of archaeological sites, scientific analysis, conservation and preservation of protected monuments.
- It was founded in 1861 by Alexander Cunningham. It is an attached office under the Union Ministry of Culture

NAVY'S ENSIGNS PAY TRIBUTE TO SHIVAJI

Priority: Medium

Primary Source: The Hindu

Prepp Prelims Booster: Navy's new ensign

Prepp Mains Booster: Indian Heritage and culture

Context:

- On September 2, Prime Minister Narendra Modi unveiled the new Naval Ensign (flag), which carries the seal of Chhatrapati Shivaji Maharaj, the man who built a modern navy.
- Since 1950, the naval ensign has been altered four times.

INS VIKRANT

- The INS Vikrant is India's largest and most intricately designed warship, developed by the **Navy's warship design department and built by Cochin Shipyard Limited (CSL)**.
- The vessel's displacement is 43,000 tonnes, and it can cruise at 18 knots for nearly 7,500 nautical miles (significant for its size and tonnage).
- The ship is a powerful warfighting platform because of its integrated fleet of MiG 29K planes, Kamov 31 early warning, and MH-60R multi-role helicopters, as well as cutting-edge shipboard attack and defense systems, surveillance, and fire-control radars.

About new Naval Ensign



- According to the statement, a new design that drew inspiration from the history of the nation was felt to be necessary as part of the ongoing national effort to move past its colonial past.
- The **navy blue-and-gold octagon** in the center of the fly side (away from the staff) and the national flag in the upper left canton make up the two main components of the white ensign, it was stated.
- The national emblem, the golden Lion Capital of Ashoka, which is perched atop an anchor and inscribed with the words "Satyamev Jayate" in blue Devanagari script, is encircled by twin golden octagonal borders and placed on top of a shield.
- The **Indian Navy's motto, "Sam No Varunah,"** is written in golden Devanagari script below the shield, inside the octagon, on a navy blue ribbon with a golden border.
- According to the Navy, **"the twin octagonal borders draw their inspiration from Shivaji Maharaj's Rajmudra** or the seal of Chhatrapati Shivaji Maharaj, one of the notable Indian kings with a visionary maritime outlook who built a credible naval fleet and earned grudging admiration from European navies operating in the region at the time."
- The national emblem's golden border, which symbolises steadfastness, was inspired by the seal of Indian emperor Chhatrapati Shivaji Maharaj.
- The Indian Navy's multidirectional reach and multidimensional operational capability are symbolised by the octagonal shape of the national emblem, which was created to represent eight directions.

Shivaji

- Shivaji was an outstanding administrator. He laid the groundwork for a solid administrative system. Shivaji was a fierce warrior who

defied Mughal rule and conquests with Afzal Khan and Aurangzeb.

- The Maratha Empire of Shivaji extended from Maharashtra to Carnatic and Tamil Nadu. Shivaji's dominion was divided into two sections:
- Mulk-i-qadim (ancient territory) or Swaraj (own kingdom), and an unspecified stretch of land that paid Chauth but was not subject to Shivaji's authority.
- To fortify the administration, Shivaji abolished the Jagir system and began paying his officers in cash.
- He provided land grants for schools and temples despite abolishing the Jagirdari system.

Shivaji and the seas

- In the 17th century, Chhatrapati Shivaji Maharaj laid the groundwork for a modern naval force by placing great emphasis on maritime prowess.
- In recognition of this fact, the Indian Navy named a training facility in Lonavla INS Shivaji and the logistical and administrative center of the Western Naval Command in Mumbai INS Angre in honor of the renowned Maratha naval commander Kanhoji Angre.

The extent of naval prowess

- Shivaji's strategic planning made sure that a potent naval presence was built up along the Konkan coast to **defend the Maratha empire's maritime trade**.
- According to a document from the Indian Navy, Shivaji's navy was so powerful that the Marathas **were able to hold their own against the British, Portuguese, and Dutch**.
- Shivaji understood the value of a **safe coastline** and the need to defend the western Konkan coastline from the **Siddis' fleet's assaults**.
- In cities like Kalyan, Bhivandi, and Goa, Shivaji built ships for trade and to build a fighting navy.
- In addition, **he constructed several sea forts and bases for maintenance, storage, and shelter**. Shivaji engaged in a number of protracted coastal battles with the Siddis of Janjira.
- The fleet reportedly increased to between 160 and 700 merchant, support, and combat vessels.
- After taking control of eight or nine ports in the Deccan, he began conducting independent trade with foreigners.

Angre Kanhoji

- Many historians believe Kanhoji to have been the greatest naval commander in pre-modern Indian history.
- As the head of the Maratha navy, Kanhoji Angre is credited with building a solid naval base that made the Marathas a force to be reckoned with at sea.
- Kanhoji is credited with fending off the naval forces of the English, Portuguese, and Dutch.
- He made sure that the merchants operating on the seas for the Maratha empire were safe.
- He established a base in Colaba and two more bases nearby in Suvarndurg and Vijaydurg.

- The Cholas, who ruled before the Marathas, had a powerful fleet of ships that could lead expeditions all around the Bay of Bengal despite not being strictly warships.

Administration under Shivaji

Central Administration

- It was founded by Shivaji for its sound administrative system, which was heavily influenced by the Deccan administrative style.
- Malik Amber's Ahmednagar reforms inspired the majority of the administrative reforms.
- The King was the supreme head of state, assisted by the 'Ashtapradhan,' a group of eight ministers.
- The Peshwa, also called the mukhya pradhan, was the original head of the raja Shivaji's advisory council.

Revenue Administration

- Shivaji changed the position of the hereditary revenue officials known as Deshmukhs, Deshpande, Patils, and Kulkarni by abolishing the Jagirdari System and replacing it with the Ryotwari System.
- The Mirasdars, who had hereditary land rights, were strictly supervised by Shivaji.
- The revenue system was based on Malik Amber's Kathi system, in which each piece of land was measured by the Rod or Kathi.
- Other sources of income included Chauth and Sardeshmukhi.
- Chauth was 1/4 of the standard paid to Marathas as a safeguard against Shivaji's forces plundering Non-Maratha territories.
- Sardeshmukhi was a ten percent additional charge levied on places outside of the kingdom.

Military Administration

- Shivaji built a well-organized and efficient army.
- The ordinary soldiers received cash, but the chief and military commanders received jagir grants (Saranjam or Mokasa).
- Infantry, or Mavali foot soldiers, Cavalry, or horse riders and equipment holders, and the Navy make up the army.

Modern Indian History from about the middle of the eighteenth century until the present- significant events, personalities, issues.

KARTAVYA PATH

Priority: Medium



Primary Source: Indian Express

Prepp Prelims Booster: Kartavya path

Prepp Mains Booster: Modern Indian History from about the middle of the eighteenth century until the present- significant events, personalities, issues.

Context:

- Recently, the iconic Rajpath, stretching from Rashtrapati Bhavan to India Gate in New Delhi which was renamed as Kartavya Path was inaugurated by the Prime Minister.
- A 28-foot statue Granite statue of Netaji Subhas Chandra Bose installed under the Grand Canopy at India Gate was also unveiled.
- The new name and look of Rajpath as well as the statue of Netaji are meant to represent that spirit of the proud new India.

Historical Background: Kingsway to Rajpath

- During British rule the 3-km stretch was built as a ceremonial boulevard by the architects of New Delhi- Edwin Lutyens and Herbert Baker, more than a hundred years ago. It was at that time called Kingsway.
- In 1911, the capital of the British Raj was shifted to New Delhi from Calcutta and construction continued for several years thereafter.
- Lutyens had conceptualised the modern imperial city of Delhi centred around a ceremonial axis. It was named Kingsway in honour of George V, the then Emperor of India, who visited Delhi during the Durbar of 1911, where he formally proclaimed the decision to move the capital.
- The nomenclature followed that of the Kingsway in London, which is an arterial road built in 1905 and was named in honour of the father of George V- King Edward VII.
- Following Independence, this stretch of the road was given its Hindi name- Rajpath, on which the Republic Day parades took place over the decades that followed.



What is the Kartavya Path?

- The entire stretch and the area from the Netaji statue under the Grand Canopy to the Rashtrapati Bhavan is now known as Kartavya Path.
- It aims to shed the colonial baggage and move towards India@100 with our own legacy. It is a reminder that the spirit of public service is not "right to rule" but "duty to serve".
- It also symbolises a shift from erstwhile Rajpath being an icon of power to Kartavya Path being an example of public ownership and empowerment.

Features

- Key Exhibits:** It includes the erstwhile "Rajpath and Central Vista lawns". It exhibits landscapes, lawns with walkways, added green spaces, refurbished canals, amenity blocks, improved signages and vending kiosks.
- Public Experience:** It enhances the public experience with new pedestrian underpasses, improved parking spaces, new exhibition panels, and upgraded night lighting.

- **Sustainability features:** It also includes a number of sustainability features like solid waste management, recycling of used water, storm-water management, rainwater harvesting, water conservation and energy efficient lighting systems, among others.
- **Republic Day celebrations:** It has foldable seating arrangements that will replace the temporary structures that are installed and removed every year.
- **Central Vista project:** It also hosts revamped and expanded lawns on both sides of the erstwhile Rajpath which are part of the larger Central Vista project, where a new triangular Parliament building, along with the Central Secretariat and several other government offices, are being rebuilt.

About Central Vista Redevelopment Project

- It is a redevelopment project launched by the Union Ministry of Housing and Urban Affairs in 2019.
- It intends to construct a triangular-shaped Parliament building next to the existing one, construction of Common Central Secretariat, revamp of the 3 kms long Rajpath from Rashtrapati Bhavan to India Gate.
- It also includes the conversion of North and South Blocks into museums and the development of Central Vista Avenue.
- **Purpose:** To meet the present and future needs of space for the Parliament, Ministries and Departments.
- To provide better public facilities, amenities, parking facilities, etc.
- To accommodate the offices of various ministries, 87 storied buildings will be built for the common Central Secretariat.

Distribution of Key Natural Resources across the world (including South Asia and the Indian sub-continent)

WHY HAS THE SUPREME COURT RELAXED THE BAN ON IRON ORE MINING IN KARNATAKA?

Priority: Medium



Primary Source: The Hindu

Prepp Prelims Booster: Iron ore mines

Prepp Mains Booster: Distribution of Key Natural Resources across the world (including South Asia and the Indian sub-continent)

Context:

Recently, in August 2022 the Supreme Court allowed the iron ore that can be mined in the Karnataka districts of Bellary, Chitradurga, and Tumkur, noting that "conservation of the ecology and the environment must go hand in hand with the spirit of economic development" and noting that since the state's situation was "vastly changed" in 2011, the ban on mining in these districts had been enacted.



What Supreme Court ordered on mining of Iron ore in Karnataka?

- The Supreme Court increased the cap on iron ore mining in the Karnataka districts of Ballari (from 28 MMT to 35 MMT), Chitradurga, and Tumakuru (from 7 MMT to 15 MMT combined), stating that environmental protection and economic development must coexist.
- On May 20, 2022, the Supreme Court had already loosened the restrictions on the export and sale of already-excavated iron ore from mines from these three districts.
- The Court has loosened its own orders ten years after it strictly regulated the production and sale of iron ore in Karnataka.

What is the background so far of Iron ore mining?

- The Supreme Court prohibited the export of iron ore pellets from Karnataka in 2012 in an effort to stop environmental deterioration.
- The Indian Council of Forestry Research and Education (ICFRE) was instructed by the Supreme Court to create a reclamation and rehabilitation plan in the wake of the ban in order to repair the environmental harm caused by illicit mining.
- In 2022, taking note of the situation that had "turned for the better" as a result of the government's course correction, it relaxed the 2011 directive.

Why did SC relax the ban on iron ore mining?

- The Federation of Indian Mineral Industries (Southern Chapter) had requested the SC in May 2022 to abolish the e-auction requirements for the export or sale of iron ore for mining lessees in the state.
- As per the request of mining companies, their operations were in danger of closing down because steel manufacturers and other connected businesses refused to buy stocks of iron ore at the e-auction or over the prevailing market rate.
- The Union Mines and Steel Ministries also agreed with the mining companies' request.
- The Central Empowered Committee (CEC), a body appointed by the court, likewise agreed, stating that it is appropriate to let

market forces determine the demand, supply, and price of iron ore.

- At present, the Karnataka state government is also now in favour of a complete removal of the ceiling limit on iron ore mining.

What will be the impact of the Iron ore mining in karnataka?

On the Economy:

- Addressing the Domestic Demand:** India's efforts to clean up illegal mining and export of iron ore, left steel producers in the lurch after 2011. With the closure of mines, steel mills faced raw material shortages, forcing them to import, thereby opening up the country to business for iron ore giants from outside India. Relaxation in iron mining may address the import issue.
- May increase ore import:** As per Indian Steel Association, India exports its low-grade ore mainly to China. Hence, resuming exports in Karnataka may lower supplies to the domestic market. This will also widen the trade deficit with China.
- Not Steel production capacity addition:** It is also feared that increasing iron ore mining may only result in export but not in the capacity addition of steel or specialised steel

Environmental Impact:

- Fear of an **increase in the loss of biodiversity and wildlife** due to mining activities, as Karnataka is in the Western Ghat region.
- Water pollution:** In mining regions, contamination of water bodies due to surface runoff water from debris may lead to water pollution. In many cases the water in streams and rivers has turned acidic and is no longer fit for human consumption.
- In areas with a large mining industry, **contaminated air with high particulate matter** is a serious issue.
- Poor mining techniques** can lead to **forest destruction**, debris that can have a long lasting impact for decades.
- It can also lead to **problems of air pollution** due to the emission of dust fly ash and smoke that is full of greenhouse gasses and hazardous chemicals.
- Additionally, in case of coal mines methane, a greenhouse gas that contributes to climate change, is released during mining.
- Health issue:** Residents who live close to iron mines have higher than average rates of heart disease, chronic obstructive pulmonary disease, hypertension, lung illness, and renal disease.

Issues Relating to Development and Management of Social Sector/Services relating to Health, Education, Human Resources

PM SHRI SCHOOLS



Priority: Low

Primary Source: Indian Express

Prepp Prelims Booster: Heritage and culture, Government Schemes

Prepp Mains Booster: Issues Relating to Development and Management of Social Sector/Services relating to Health, Education, Human Resources

Context:

- On the occasion of Teachers Day (5th September), Prime Minister Narendra Modi announced a new centrally sponsored scheme- PM SHRI Schools (PM Schools for Rising India).



What is the PM Schools for Rising India (PM SHRI Schools) Scheme?

- It is a new centrally sponsored scheme for upgradation and development of more than 14500 Schools across the country to showcase the key components of the National Education Policy, 2020 (NEP 2020).
- PM SHRI Schools will be selected from amongst schools managed by Central Government/State/UTs/ local bodies.
- The aim of PM SHRI Schools will not only be on qualitative teaching, learning and cognitive development, but also creating holistic and well-rounded individuals equipped with key 21st century skills.
- They will act as exemplary schools and also offer mentorship to other schools in their vicinity.
- They will be equipped with modern infrastructure including labs, smart classrooms, libraries, sports equipment, art room etc. which is inclusive and accessible.
- They will also be developed as green schools with water conservation, energy-efficient infrastructure, waste recycling and integration of organic lifestyle in curriculum.

What are the issues with the Indian Education System?

- Inadequate government funding:** According to the Economic Survey, India spent 3% of its total GDP on education in 2018-19 which is very less in comparison to the developed and OECD countries.
- Lack of infrastructure:** Most of the schools are not yet compliant with the complete set of Right to Education (RTE) infrastructure.
- They lack a functional common toilet, drinking water facilities and do not have separate toilets for girls.
- Poor global ranking of institutes:** Very few Indian universities and higher education feature in the top rankings of the world primarily due to lack of research capacity and low faculty-student ratio.
- No coherence between education and demand of industry:** Education provided currently is not suitable for direct working in industry. So industries in India are facing problems to find suitable employees and have to spend large amounts on providing training for employees

- **Inadequate teachers and their training:** The student to teacher ratio of India is 24:1, which is way lower than Russia's 10:1, Canada's 9:1, Sweden's 12:1 and Britain's 16:1. Moreover the quality of teachers is hampered due to political interference in appointments and are also not trained adequately.
- **Education is a concurrent subject:** Most states have their own school boards. Therefore, it is creating diversity in the learning.
- **Three language formula:** It is another problem and many of the states especially in South India have always been very sceptical about it. Thus, hampering uniformity in the education system.

Need for Teacher's Autonomy

- The last two academic years during the COVID Pandemic were unlike any other. It took a toll on lives and livelihoods and limited social interaction.
- It forced educational institutions to make do with emergency arrangements that placed difficult demands on teachers and students.
- Now with schools, universities and other institutions of learning beginning to take steps to undo the disruption, one thing is becoming clear — students returning to classrooms are requiring much more attention than in the pre-pandemic years.
- Several studies and reports at the school-level, including the National Achievement Survey (NAS) 2021, have confirmed that— substituting classroom-level interactions with online teaching has affected the ability of a substantial number of students to read, write and do basic math.
- Thus, it is increasingly becoming evident that restoring the confidence of youngsters will require increasing the teacher's agency. So there is need for re-inventing pedagogy as a healing process, teachers must be free of the shackles imposed by educational authorities and the management bodies of institutions, even curricula.

Suggestions made in the New National Education Policy (NEP) 2020

- It aspires to draw "outstanding talent" into the teaching profession.
- It underlines the importance of making the child the centre of classroom processes, use of creative methods of instruction and suggests measures to empower teachers.
- It suggests several measures — housing, scholarships, providing opportunities for the continuous professional development of teachers — that could make teaching a more rewarding profession than it is today. Implementing these proposals will take time.

What are the challenges faced by teachers?

- National Achievement Survey (NAS) 2021 data gives some indication of the challenges ahead. For instance, only 52% of schoolteachers participated in professional development programmes conducted by District Institutes of Education and Training, CBSE and NCERT.

- The disinclination of teachers to participate in training programmes stands in the way of implementing some of the radical objectives of the NEP 2022 especially the ones that envisage moving away from a rigid content-driven rote learning system to innovative experiential learning.
- In any case, a teacher overloaded with work — according to the NAS 65% of them had such a complaint — would be very hard-pressed to be creative in the classroom or give attention to students individually.

Way Forward

- The last two decades have seen an explosion of aspirations and a manifold rise in the demand for education.
- By all accounts, India's education system has not kept pace with this social reality. It has fallen short of nurturing the skill sets required by a growing knowledge economy.
- Educational institutes are increasingly being overwhelmed by centrifugal tendencies and their role as platforms that nurture a diversity of views and encourage inclusivity is seriously embattled.
- Acknowledging these challenges and framing a new policy, accordingly, would be the most befitting recognition of the educator's work this Teacher's Day.

RAPID EXIT OF WOMEN WORKERS FROM WORKFORCE

Priority: Medium



Primary Source: Indian Express

Prepp Mains Booster: Salient features of Indian Society, Role of Women and Women's Organisation.

Context:

- According to the 'India Discrimination Report' compiled by the NGO Oxfam- India Labour Force Participation Rate (LFPR) for women in India declined from 42.7% in 2004-05 to 25.1% in 2021.
- It shows the withdrawal of women from the workforce despite rapid economic growth during the same period.
- LFPR indicates the proportion of the working-age population that engages actively in the labour market, either by working or looking for work.

Methodology of Report

- The findings in the report were based on government data on employment and labour from 2004-05 to 2019-20. The figures in it are based on data from the Union Ministry of Statistics and Programme Implementation.
- The report refers to unit level data from the 61st round of National Sample Survey on employment-unemployment (2004-05), the All-India Debt and Investment Survey by the Centre and the Periodic Labour Force Survey (PLFS) in 2018-19 and 2019-20.

Statistics

- In 2019-20, 60% of all males aged 15 and above had regular salaried or self-employed jobs and this rate for females was 19%.
- For regular, self-employment in urban areas, the average earning for males was Rs 15,996, but it was less than half - Rs 6,626 for women.
- Mean income for people from SC/ST communities with regular employment in urban areas was Rs 15,312 in 2019-20 against Rs 20,346 for those from 'general' category.
- 68.3% Muslims in urban areas faced discrimination in 2019-20 — up from 59.3% in 2004-05.

Key Highlights of Report

- **Discrimination against women:** It is so high that there is hardly any difference across religion or caste-based sub-groups or the rural-urban divide. All women, regardless of their socioeconomic location, are highly discriminated against.
- **Discrimination in wages:** It declined for people from SC/ST and Muslims communities in regular or salaried jobs. But it increased for women in this period — from 67.2% in 2004-05 to 75.7% in 2019-20.
- **Prejudice and discrimination in employment:** Discrimination in employment for the Muslim community dropped from 31.5% in 2004-5 to 21.9% in 2018-19 to 3.7% in 2019-2020.
- For SC/ST employees, discrimination declined from 69.1% in 2004-5 to 34.6% in 2018-19 but increased to 39.3% in 2019-2020.

Discrimination in the labour market

- It is when people with identical capabilities are treated differently because of their identity or social backgrounds.
- The report found that if a man and woman start on an equal footing, the woman will be discriminated against in the economic sphere where she will lag behind in regular/salaried, casual and self-employment.
- It looked discrimination in the labour market from three points of 'endowments' — education, parental education and years of experience.
- If the result shows a high percentage of the gap in outcome between two groups is due to level of education and work experience, then the discrimination is low.
- However, when the level of education and work experience are similar, and if there is a high gap in outcome, then there is discrimination.
- **For the SC/ST community:** There has been a decline in discrimination as endowments — such as education or supportive government policies — have increased.
- **For the Muslim community:** These endowments are very low due to low levels of education and limited access to regular salaried jobs.
- Therefore, Muslims are largely self-employed in family-owned businesses. They are also part of specialised jobs like carpentry or cobbling, where there is no or little competition. So, the discrimination against Muslims is low because the endowments are also low.

- **For women:** They are either discriminated by the employer, or they are not hired or given promotions because of prejudice.
- Social biases against women and social pressure force women to withdraw from the workforce or family pressure does not allow them to work.
- Large numbers of women who are currently not in the workforce have a high level of education and equal endowments as their male counterparts.
- **Gender discrimination in India:** It is structural which results in great disparities between earnings of men and women under 'normal circumstances'. The earning gaps are large, both in rural and urban areas for casual workers ranging between 50% and 70%.
- The range is low for regular workers, with earnings of men exceeding those of women by 20% and 60%. In the case of the self-employed, the disparity is much higher, with women earning 4 to 5 times less than men.
- Besides women, historically oppressed communities such as Adivasis and Dalits, along with religious minorities such as Muslims, also continue to face discrimination in accessing jobs, livelihoods, and agricultural credits.

Female LFPR in India

- According to CMIE data, the female LFPR was as low as 9.4% as compared to male LFPR of 67.4%. In other words, less than one in 10 working-age women in India are even demanding work.
- It can also be indicated from India's lower rank of 135 among a total of 146 countries in the Global Gender Gap Index 2022 released by World Economic Forum (WEF). Even as per World Bank data, India's female LFPR is around 25% when the global average is 47%.

Reasons or low female LFPR:

It is mainly about the working conditions — such as law and order, violence against women, societal norms, inefficient public transportation, etc. — being far from conducive for women to seek work. Further, lots of women in India are exclusively involved within their own homes caring for their family.

THE GENDER PAY GAP, HARD TRUTHS AND ACTIONS NEEDED

Priority: Medium



Primary Source: The Hindu

Prepp Prelims Booster: Gender Gap

Prepp Mains Booster: Issues relating to development and management of Social Sector/Services relating to Health, Education, Human Resources.

Context:

- Recently, International Equal Pay Day took place on September 18. It is a United Nations-recognized event

- The symbolic day intends to draw attention to issues surrounding the gender pay gap and increase global awareness.
- The event's primary goal is to put an end to the history of gender discrimination, which has historically resulted in women being paid less than their male colleagues.

Importance of equal pay

- In India's labor market, there are numerous inequities, and bridging them is **essential to attaining social justice for working women**.
- When it comes to the story of structural change and global economic growth, **India is among the most significant nations**.
- Further economic growth and the advantages it provides will be stimulated by a proportionate improvement in labor market outcomes and a **fair sharing of the riches of economic advancement**.



- It **amplifies productivity and efficiency** by attracting the best employees and also **reduces the risk of staff turnover**.
- In a patriarchal society, it is an important step toward **empowering women**.
- However, it is not unexpected that there are still many asymmetries in the labor market in a nation the size and diversity of India.
- Even while the gender pay gap is gradually closing, doing so at the current rate of improvement will take more than 70 years.

Impact of the pandemic

- The effects have been uneven, with women suffering the most from a lack of income stability.
- This is partial because they are overrepresented in the COVID-19-affected industries and because of the gendered allocation of household duties.
- During the pandemic, many women switched to providing full-time care for children and the elderly, giving up their jobs in the process.

Pay Gap

- According to early estimates from the **Periodic Labour Force Survey (PLFS) 2020-21**, the gap widened by 7% between 2018-19 and 2020-21, reversing decades of gains.

- The statistics also indicate that, in contrast to a quicker surge in male salaries, female incomes declined more quickly throughout the epidemic, which calls for immediate legislative attention.
- This is supported by the "Global Wage Report 2020-21" from the International Labor Organization, which contends that the crisis significantly depressed earnings and adversely affected women's overall wages relative to men.
- The already-existing gender pay gap has grown due to the bigger wage reduction for women.
- India has made significant progress in closing the gender wage gap over time, yet by international standards, the gap still exists.
- From 1993–1994 Indian women made 48% less money on average than their male counterparts.
- Since then, according to data from the National Sample Survey Office's (NSSO) labor force survey, the difference has decreased to 28% in 2018–19.

Gender Discrimination

- While individual factors like education, experience, or skill level contribute to the gender wage gap in some cases, the majority of it may still be linked to sexism or gender discrimination.

Gender-based discriminatory practices include:

- Lower wages paid to women for work of equal value;
- Undervaluation of women's work in highly feminised occupations and enterprises, and
- Motherhood pay gap — lower wages for mothers compared to non-mothers.

Steps were taken by India

Legislations:

- India has taken a number of legal measures, particularly at the low end of the income distribution, to decrease the gender pay gap. It was one of the first nations in this regard to pass the **Minimum Wages Act in 1948, which was followed by the Equal Remuneration Act in 1976**.
- India underwent extensive legislative revisions in 2019 and passed the **Code on Wages**.
- There is evidence that the **Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) of 2005** assisted rural women employees and indirectly decreased the gender pay gap.
- Women participating in agricultural jobs benefited both directly from increased pay levels for programme participants and indirectly from greater earnings as a result of MGNREGA's contribution to the country's general rapid increase in rural and agricultural wages.
- The **"maternity leave with pay protection"** for all women working in enterprises employing 10 or more employees was expanded from 12 weeks to 26 weeks as a result of a 2017 government amendment to the **Maternity Benefit Act of 1961**.
- This is expected to reduce the motherhood pay gap among mothers in the median and high-end wage earners working in the formal economy.

Skilling

- In addition to enacting enabling laws, the **Skill India Mission** works to provide women with marketable skills in an effort to close the gender pay gap and close the learning-to-livelihood gap.

Steps taken by International institutes

- "Achieving full and productive employment and decent work for all women and men, including for young people and individuals with disabilities, and equitable remuneration for work of equal worth" is one of the objectives of the UN **Sustainable Development Goal 8 by 2030**.
- **The Equal Pay International Coalition (EPIC)**, a multi-stakeholder project led by the ILO, UN Women, and the Organization for Economic Co-operation and Development (OECD), was established in 2017 in support to achieve equal pay for women and men everywhere.
- **Accelerated and fearless action** is required to stop the gender wage gap from getting wider and to close the gap that now exists.
- The challenge of eliminating various types of gender inequality has been a central focus of UN initiatives on a global scale.
- The **Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW)** provides an international legal framework for achieving gender equality and addressing the intersecting forms of discrimination and vulnerabilities among women and girls.
- The ILO has enshrined "equal pay for work of equal value" in its Constitution.

Way Forward

- A human-centered recovery from the pandemic is necessary for full and productive economic growth, and this can be achieved through enhancing women's job outcomes and narrowing the gender pay gap.
- The challenge of eliminating various types of gender inequality has been a central focus of UN initiatives on a global scale.
- To eliminate the gender pay gap, there must be equal remuneration for equally valuable work.
- For working women to receive social justice and for the country as a whole to experience economic progress, the gender pay gap must be closed.

Population and associated issues, poverty and developmental issues.

THE CONSEQUENCES OF DECLINING FERTILITY

Priority: Medium



Primary Source: The Hindu

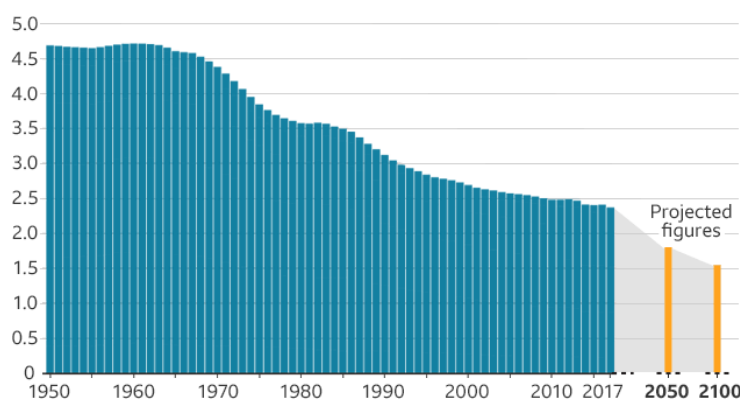
Prepp Mains Booster: Population and associated issues, poverty and developmental issues.

Context:

In the article titled "The Consequences of Declining Fertility are many", the author has highlighted the issue of declining fertility rates all over the world, including India and Sub Saharan Region. The subsequent discussion also talks about the possible consequences of the declining fertility rates.

Women are having fewer children

Global fertility rate (livebirths per woman)



Source: Institute for Health Metrics and Evaluation at the University of Washington

BBC

What are the findings of the World Population Prospects 2022?

World Overview:

- According to the WPP 2022, the global population, in terms of numbers, has been steadily increasing and could grow to around 8.5 billion in 2030.
- However, average global fertility has been consistently declining over the past 70 years.
- The average number of children per woman in the reproductive age group has declined by 50%, from an average of five children per woman in 1951 to 2.4 children in 2020.
- According to the WPP 2022, the world's fertility rate decreased from three in 1990 to 2.3 in 2021.
- The replacement rate for most developed economies is 2.1, with South Korea having the lowest fertility rate at 1.05 children per woman.

Fertility: Where India Stands

- According to the recent **National Family Health Survey-5 (NFHS-5)**, India is no different, with its fertility rate dropping for the first time below the replacement level to 2.0 in 2021.
- Only five States - Bihar (3), Meghalaya (2.9), Uttar Pradesh (2.4), Jharkhand (2.3), and Manipur (2.2) - have fertility rates that are higher than the replacement rate
- At the time of its independence, India had a fertility rate of six children for every woman, and it had taken 25 years to reduce that number to five when the government introduced the first family planning programme in history in 1952.
- Kerala became the first Indian state to have a fertility rate below replacement level in the 1990s, which caused India's fertility to further decrease to four.
- The gradual decline in fertility rate can be attributed, among other things, to increased use of contraception, longer average schooling years, improved health care, and rising mean marriage ages for women.

What is Fertility?

- The characteristic or state of being fertile is known as fertility.

- Fertility is the capacity to bear children through regular sexual contact. Or to put it another way, it is the inherent ability to conceive a biological kid.
- Age affects fertility. In the years following puberty, both males and females become reproductive.

What is Total Fertility Rate (TFR)?

- The average number of children born to a woman during her reproductive years (15-49 years) is known as the total fertility rate (TFR).
- The total fertility rate (TFR) plays a crucial role in determining a nation's population growth and demographic stability.

What is the Fertility Replacement Level?

- Fertility Replacement Level is the level of fertility required to maintain the same population from one generation to the next, or the level of fertility at which a population precisely replaces itself.

Why is it declining?

- This is the outcome of the demographic transition social phenomena moving more quickly.
- Poorer nations appear to be moving up the demographic transition ladder much more quickly than affluent nations.
- Britain saw the reduction in its fertility rate from five per woman in 1800 to two in 1930, it took 130 years.
- Whereas, South Korea took 20 years, from 1965 to 1985, to do the same.

What are the consequences of the Decline of fertility

Positive Consequences:

- **Population Stabilisation:** As World Population Prospect 2022 itself point out that decline in Fertility Rate implies less Population growth at present. Which further declines in future,
- **Women's Empowerment:** Reduced fertility will help women to engage in other activities of livelihood, employment leading to women's economic, social and political empowerment.
- **Reduction in Poverty:** As the high population is one of the cause of poverty, decline in population will result in decline in poverty, particularly in South Asia and Sub Saharan Region.
- **More focus on Human Development:** Better nutrition and more modern medical treatment improve citizens' life expectancies and output.
- Reduced population will push the nations to focus on health, education and skilling of the population to improve the human development standards. This will result in an increase of Living standards of people.
- **Less Burden on the Environment:** Less burden will directly affect land use patterns as less land will be required for food production. This will save the forest and subsequently other environmental problems will be reduced. This will less demand on land, water, and other resources would also help in achieving environmental goals.

- **A Step toward Sustainable development:** Less population would result in less burden on the Earth's resources. This will help in achieving the sustainable development

Negative Consequences:

- **Low Population Growth:** Positive effects of increased education and empowerment of women would result in further decline of women's lower fertility which would result in lower population for a nation.
- **Burden on working age population:** Old Age population would increase in proportion. The proportion of the working population would suffer if the fertility rate fell below the replacement level, which would therefore have an impact on the economy's output.
- After the demographic dividend window closes, a large portion of the working-age population ages and is supported by fewer employees.
- The consequences of declining fertility rates were first felt in Japan. To pay for rising social security costs, the nation is currently confronting financial difficulties.

What are the initiatives taken by various governments to increase the fertility rates?

Globally, various nations are experimenting with different fertility-boosting measures:

- **Germany** has had success increasing birth rates by allowing more parental leave and benefits under more lenient labour regulations.
- **Denmark** is providing free IVF for under-40-year-old women
- Hungary: IVF clinics recently became nationalised to promote population growth.
- **Poland** is providing cash compensation and incentives to parents with more than two children on the monthly basis.
- **Russia:** When a parent has a second kid, they receive a one-time payment. restored the title of "Mother Heroine" from the Soviet era, who had and reared more than 10 kids, nearly equating to a one-time payment of \$13 lakh.

Way forward:

- Liberal labour reforms, increased female involvement in the workforce, and a greater emphasis on nutrition and health are all urgently needed.
- India will have a growing working-age population for many more years, but fertility decreases must be monitored.

Disaster and Disaster Management; Important Geophysical phenomena; Urbanisation, their problems and their remedies.
Important Geophysical phenomena such as earthquakes, Tsunami, Volcanic activity, cyclones etc

URBAN FLOODING: DECODING BENGALURU'S URBAN FLOOD WOES

Priority: Medium

Primary Source: Indian Express



Prepp Mains Booster: Disaster and Disaster Management; Important Geophysical phenomena; Urbanisation, their problems and their remedies

Context:

- Recent heavy rains from the past few days have led to incidents of urban flooding. This has also contributed to the collapse of Bengaluru's urban infrastructure.

What are the Reasons for the flooding in Bengaluru in 2022?

- Topography:** Bengaluru's topography is characterised by a series of valleys which radiate from a ridge and fall gradually in all directions.
- The four major valleys are Vrishabhavathi valley, Koramangala valley, Challaghatta valley and Hebbal valley. The lakes were built across these valleys and floodwater used to flow through these valleys.
- Encroachment:** But in recent times with these valleys encroached, the flow of rainwater has been impeded. The urban infrastructure-every road and plot acting as dams/blocks, severely affecting surface water flow, causing flooding and stagnation in these areas.
- Other reasons behind the flooding:** Poor drainage system, drains clogged with solid waste and building demolition waste, encroachment of drains, unscientific remodelling which includes narrowing and concretisation of drains, loss of interconnectivity among lakes and encroachment of buffer zones (lakes, drains).

What is Urban Flooding?

- It is inundation of property in a built environment, particularly in densely populated urban areas, caused by intense rainfall (on impermeable surfaces) which overwhelms capacity of drainage systems.
- It stems from a combination of various hydrological and meteorological extremes, such as extreme precipitation and flows in short spans of time.



Features of Urban Floods

- Faster Flow times:** It causes flooding very quickly due to faster flow times as flood peaks increase from 1.8 to 8 times and flood volumes by 6 times.
- Catchment destruction:** Urban flooding is different from rural flooding. This is mainly because urbanisation leads to development of catchment areas which are the most vulnerable areas.

Various causes

Natural

- Meteorological Factors:** Heavy rainfall, thunderstorms and cyclonic storms (in case of coastal cities) causes water to flow quickly through paved urban areas and impound in low lying areas.
- Hydrological Factors:** Overbank flow channel networks especially in heavily urbanised cities, occurrence of high tides impeding the drainage in coastal cities.
- Climate Change:** Climate change due to global temperature rise is causing extreme weather events.

Anthropological

- Population Growth:** Population density and proximity to urban centres near to catchment areas significantly alter the dynamics when it comes to urban flooding.
- Unplanned Urbanisation:** A major concern is blocking of natural drainage pathways mainly because of construction activity and encroachment of catchment areas, riverbeds and lake beds.
- Terrain Alteration has caused lasting irreversible damage to the city by altering natural drainage routes. This is the main cause of urban flooding.
- Encroachment:** In urban areas due to pressure on land demand there have been large scale encroachments of catchment and natural drainage areas meant for accommodating the higher flows of stormwater.
- Inadequate Drainage Infrastructure:** Indian Cities in the last 20 years have grown manifold with its original built-up area. But many of them rely on a century-old drainage system, covering only a small part of the core city. There is not much done to address the absence of adequate drainage systems.
- Destruction and Encroachment of lakes:** Lakes act as natural reservoirs for storing the excess water and regulate the flow of water. However, natural urban water bodies are being encroached for development purposes increasing the risk of floods.
- Unauthorised colonies and excess construction:** This is resulting in reduced infiltration due paving of surfaces which decreases water absorption in the ground and increases the speed and amount of surface flow.

Impact of Urban floods

- Loss of life:** Urban areas are densely populated and key centres of economic activities. Thus, people living in vulnerable areas suffer due to flooding, sometimes resulting in loss of life.

- **Loss of property:** Major cities in India have witnessed damage to vital urban infrastructure disrupting transport and power and also loss of property.
- **Damage to vital urban infrastructure:** In most of the cities which are hub for economic activities, damage to vital infrastructure can have negative bearing not only for the state and the country but also global implications.
- **Risk of epidemics:** Due to temporary relocation of people and damage to civic amenities, deterioration of water quality there is a risk of epidemics.

Way forward

- **Climate variability assessment:** As the incidence of climate variability and extreme weather events are increasing due to climate change, there is a need to look at urban flooding issues from a broad-based perspective. Moreover, vulnerability analyses and risk assessments must be made mandatory for city master plans.
- **Resilience building:** Focus of the government and local bodies should be on increasing the resilience of urban communities and adaptive capacity of our infrastructure.
- **Innovation:** Water sensitive urban design and planning techniques should be adopted especially in the context of implementation. These methods take into consideration the topography, natural drainage types of surfaces and leave very less impact on the environment.
- **Convergent approach for Urban Infrastructure:** These can all be delivered effectively through an urban mission along the lines of the Smart Cities Mission and Atal Mission for Rejuvenation and Urban Transformation (AMRUT).
- **Wetland and Lake Policy:** There is a need to start paying attention to the management of wetlands and lakes in urban areas by involving local communities. Under it, terrain alteration should be strictly regulated.
- **New porous materials and technologies:** They must be encouraged or mandated to improve the city's capacity to absorb water. Some examples of these technologies are bioswales and retention systems which allow storm water to trickle into the ground, green roofs and harvesting systems in buildings.
- **Holistic Engagement:** Urban floods cannot be contained by the urban authorities alone. The Metropolitan Development Authorities, National Disaster Management Authority (NDMA)/SDMA, State revenue and irrigation departments along with municipal corporations should work together with active participation of civil society organisations.

INDIA'S GROWING WATER CRISIS, THE SEEN AND THE UNSEEN



Priority: Medium

Primary Source: The Hindu

Prepp Prelims Booster: Water crisis

Prepp Mains Booster: Urbanisation, their problems and their remedies, Natural Resources

Context:

- In the article "India's growing water crisis, the seen and the unseen", published in The Hindu on 15 September 2022 the author has highlighted the concerns of water crisis.
- The similar concern was highlighted by the United Nations World Water Development Report 2022 (UNWDR 2022) released in March 2022.

Growing Water Stress

- **Water Report:** Published by the Food and Agriculture Organisation of the United Nations (FAO) has sounded a note of caution about this silent crisis of a global dimension, with millions of people being deprived of water to live and to sustain their livelihood.
- **Water Scarcity Clock:** This interactive web tool also shows that over 2 billion people live in countries now experiencing high water stress and this number will continue to increase.
- **Global Drought Risk and Water Stress map (2019):** It also shows that major parts of India, particularly west, central and parts of peninsular India are highly water-stressed and experience water scarcity.
- **Composite Water Management Index (2018):** Published as part of NITI Aayog report also has sounded a note of caution about the worst water crisis in the country, with more than 600 million people facing acute water stress.

Other issues associated with water scarcity

- **Sectoral and regional competition:** The typical response of water shortage or scarcity areas includes transfer of water from the hinterlands or upper catchments.
- These areas may also draw it from stored surface water bodies or aquifers. This triggers sectoral and regional competition and rural-urban transfer of water is one such issue of global concern.
- **Increasing trans-boundary transfer of water:** Since the early 20th century it has been seen in many countries mainly between rural and urban areas.
- According to a review paper published in 2019, globally, urban water infrastructure imports an estimated 500 billion litres of water per day across a combined distance of 27,000km. At least 12% of large cities in the world rely on inter-basin transfers.
- **Risks associated with water transfers:** As per UN report on 'Transboundary Waters Systems – Status and Trend' (2016), the issue of water transfer is linked with various Sustainable Development Goals (SDGs) proposed to be achieved during 2015 to 2030.
- The report identified risks associated with water transfer in three categories of biophysical, governance and socio-economic. South Asia, including India, falls in the category of the highest socio-economic and high biophysical risks.

Urban water use

- **Urban population:** According to Census 2011, India's urban population accounts for 34% of the total population of the

country. It is estimated it will cross the 40% mark by 2030 and the 50% mark by 2050 as per the World Urbanisation Prospects, 2018.

- **Increasing water usage trend:** Although the pace of India's urbanisation is relatively slow, it is now urbanising at a rapid pace and its size of the urban population is substantial.
- With this trend, water use in the urban sector also has increased as more and more people are shifting to urban areas and per capita use of water is rising and will continue to grow with improved standards of living.
- **Shift in urban water management trajectory:** In the initial stages, when cities were small, they were concerned only with water supply sourced locally, with groundwater meeting the bulk of the supply.
- As the cities grew and water management infrastructures developed, their dependence shifted to surface water. The demand for water is met through water sources in the hinterlands or at the expense of irrigation water.
- Almost all cities in India depend on surface water. The city water supply is now a subject of inter-basin and inter-State transfers of water.
- **Dependence on groundwater:** It is particularly in the peri-urban areas in almost all large cities that have switched to surface water sources. The surface water transfer from rural to urban areas is a visible trend and the recharge areas of groundwater aquifers are spread over well beyond the city boundary or its periphery.
- **Rural-urban transfer of water:** Whatever may be the source of water, surface or groundwater, cities largely depend on rural areas for raw water supply. This has the potential to ignite the rural-urban dispute and is a lose-lose situation as water is transported at the expense of rural areas and the agricultural sector. In cities, most of this water is in the form of grey water with little recovery or reuse, eventually contributing to water pollution.

Way Forward

- Therefore, it is important to strive for a win-win situation which is possible through a host of activities in the rural and urban areas, which is primarily a governance challenge.
- It is necessary to have a system perspective and catchment scale-based approach to link reallocation of water with wider discussions on infrastructure investment, development, fostering a rural-urban partnership and adopting an integrated approach in water management.
- There is also a need for institutional strengthening as it can provide opportunities to build flexibility into water resource allocation at a regional level and enable adjustments in rapidly urbanising regions. It is time to examine the state of its water resources and ensure that the development process is not in jeopardy.

TRIPLE DIP LA NINA

Priority: Medium



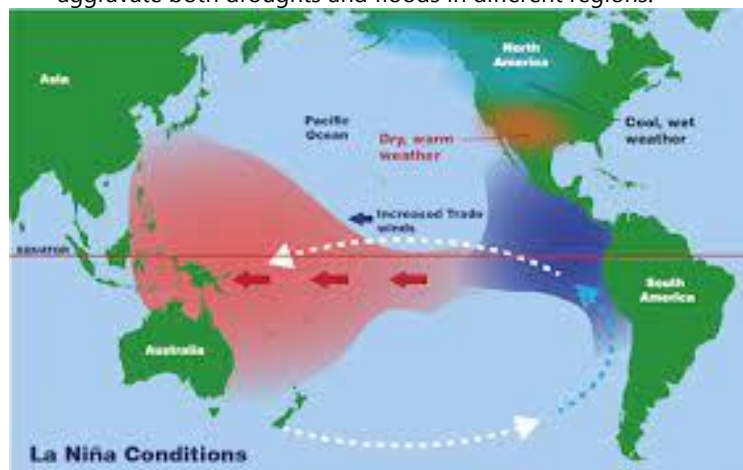
Primary Source: Indian Express

Prepp Prelims Booster: La Nina

Prepp Mains Booster: Important Geophysical phenomena such as earthquakes, Tsunami, Volcanic activity, cyclones etc.,

Context:

- Recently meteorologists have found that the ongoing La Niña phase of the equatorial Pacific Ocean is going to persist for at least another 6 months, making it one of the longest ever La Niña episodes in recorded history. This is also only the third recorded episode since 1950 to stretch into a third year in row.
- This is likely to have wide-ranging implications for weather events across the world in the coming months, and can potentially aggravate both droughts and floods in different regions.



What is La Niña?

- It refers to the ENSO (El Niño Southern Oscillations) phase in which sea-surface temperatures (SSTs) are cooler than normal. Like El Niño, La Niña is also a weather pattern that can occur in the Pacific Ocean every few years.
- In a normal year, winds along the equator push warm water westward. As the warm water moves west, cold water from the deep rises to the surface. This cold water ends up on the east coast of South America.
- During La Niña events, trade winds are stronger than usual which pushes more warm water toward Asia. Off the west coast of South America, upwelling increases, bringing cold, nutrient-rich water to the surface.

About El Niño Southern Oscillations (ENSO)

- The periodic warming and cooling of surface waters in the equatorial Pacific Ocean — a phenomenon described as El Niño Southern Oscillations (ENSO).
- It is known for triggering widespread changes in atmospheric conditions, and has a major influence on global weather patterns, including the Indian monsoon.

Current Triple dip' La Niña

- **El Niño and La Niña episodes:** They typically last for about nine months to a year. Usually develop in the March-June period and are the strongest during winter months (November-January in the northern hemisphere), before weakening or dissipating by March or April of next year. However, occasionally, they continue for much longer periods.
- **Godzilla El Niño episode:** In recent years, the El Niño of 2015-16, lasted for over 19 months, making it one of the longest on

record. It was dubbed 'Godzilla' due to its sustained high intensity.

- **Triple dip' La Niña:** This year's La Niña has already surpassed that in length. It started in September 2020 and has prevailed for the last 24 months. It will continue for another six months, and thus has been classified as a 'triple dip' La Niña.

How are El Niño and La Niña events different?

- La Niña and El Niño events are not mirror images of each other. They differ in length and strength.
- El Niño events occur more frequently and are usually associated with more impactful weather events. On the other hand, La Niña has a longer run. So multi-year La Niña events that continue for more than 12 months are quite common. But, El Niño is more likely to be a single-year event.
- According to a recent paper, almost half i.e. 6 out of 13 of all La Niña events since 1950 have stretched for two years, while 3, including the current one, have continued for three years.
- In contrast, over 75% of El Niño events (15 out of 20) ended within a year. Till date, no El Niño has ever stretched into a third year.

What are the reasons for prolonged La Niña episodes?

- Prolonged La Niña episodes are not uncommon, but the current one differs from the previous two triple-year events in an important aspect.
- These events can be explained by the fact that the amount of accumulated heat in the oceans was higher, and therefore they take longer time to dissipate.
- In the absence of a strong El Niño preceding it, the reason for the current Triple dip' La Niña episode is not very clear at the moment.

What are the impacts of prolonged La Niña?

- In the Indian context, La Niña is associated with good rainfall during the monsoon season. Opposite of this is seen during El Niño which is known to suppress monsoon rainfall.
- Thus, a continued La Niña event could lead to expectation of good or normal rainfall during the monsoon. Until now, this year's monsoon season has produced 7% more rain compared to normal. Last year, it was almost 100%.
- The continuance of La Niña further into 2023 will not be bad news for India. But it is not the same case for many other regions where La Niña has very different impacts.

Negative consequences due to La Niña

- In most parts of the United States, La Niña years are associated with very dry winters. In Indonesia and Australia, and generally in the tropical region, La Niña is expected to bring more rainfall.
- The recent widespread drought in the US and flooding in eastern Australia may have been a result of the prolonged La Niña. Even the Horn of Africa is witnessing worsening drought.
- The excessive rainfall in Pakistan, which is experiencing its worst flooding disaster in its history, can also be linked to strong La Niña.

La Niña and Climate Change link

- Every unusual weather event these days is attributed to climate change, but yet there is no conclusive linkage of ENSO events with global warming.
- The occurrences of La Niña or El Niño are not very regular. Sometimes they emerge every two years, at other times there has been a gap of even seven years.
- Historical records do not go very far in the past. As a result, the natural variability of ENSO is not yet understood very clearly. Thus, when the natural variability is not yet clear, the influence of global warming on these events is difficult to quantify.
- But there have been suggestions that climate change is increasing the frequency and intensity of La Niña and El Niño episodes.

Reasons

- The trade winds play a very important role in triggering ENSO events. But the changes in the strength of trade winds are not easily explained by global warming.
- During La Niña years, the colder surfaces allow the oceans to absorb more heat from the atmosphere. Consequently, the air temperatures tend to go down, producing a cooling effect. However, this is not enough to reverse or neutralise the impacts of global warming.
- La Niña's cooling influence is temporarily slowing the rise in global temperatures but it will not halt or reverse the long term warming trend.

GENERAL STUDIES 2

Parliament and State legislatures—structure, functioning, conduct of business, powers & privileges and issues arising out of these

OFFICE OF PROFIT

Priority: High



Primary Source: The Hindu

Prepp Prelims Booster: Office of Profit

Prepp Mains Booster: Parliament and State legislatures—structure, functioning, conduct of business, powers & privileges and issues arising out of these

Context:

- Recently, the Election Commission of India (ECI) is said to have informed Governor Ramesh Bais of its decision about the office-of-profit allegation against Hemant Soren, chief minister of Jharkhand.
- After the opposition complained to the Governor about Mr. Soren giving himself a mining lease in 2021 while serving as Mines Minister, the subject was sent to the ECI.

What is the Office of profit?

- The term "**office of profit**" isn't specified in any law. Its current definition is based on several court rulings' interpretations.
- An office of profit has been defined as a position that provides financial gain, advantage, or benefit to the officeholder.
- The Supreme Court established the test of appointment (Gurugobinda Basu vs Sankari Prasad Ghosal case) in 1964 to

evaluate whether an office of profit exists; it takes into account the following factors:

- whether the government is the appointing authority,
- whether the government has the power to terminate the appointment,
- whether the government determines the remuneration,
- what is the source of remuneration, and
- the power that comes with the position.

Office of Profit - Constitutional Provisions

- **Article 102(1)**, among other things, states that a member of either House of Parliament is disqualified if he holds any profit-making office under the Government of India or any State government unless the office is proclaimed by Parliament by law not to disqualify its holder.
- **Article 191(1)**, among other things, states that a member of the Legislative Assembly or Legislative Council of a State is disqualified if he holds any profit-making office under the Government of India or the Government of any State listed in the First Schedule unless the office is declared by the State Legislature not to disqualify its holder by law.
- "A person shall not be construed to occupy an office of profit under the government of India or the government of any state only because he is a minister," the articles state.
- **The Parliament (Prevention of Disqualification) Act, 1959**, was passed by Parliament to exclude officers from disqualification. Several states have also passed similar legislation.
- A member who holds a profit-making office is **disqualified by the President**, who consults with the Election Commission.

Issues with the Office of Profit

- The term "office of profit" **isn't defined in the constitution or any other law**.
- A number of **state legislatures** have recently passed laws **exempting particular offices from the definition of an office of profit**.
- The Parliament (Prevention of Disqualification) Act, 1959, which was also passed by Parliament, has **undergone numerous amendments to broaden the exempted list**.
- There is **no limit to the number of offices** that can be **exempted** from the statute.
- If several legislators are appointed to these positions, **their ability to oversee government operations may be compromised**.
- Consequently, this might be against the **letter and spirit of Articles 102 and 191 of the Constitution**.

Parliament (Prevention of Disqualification) Act, 1959

- Ministers of State and Deputy Ministers, Parliamentary Secretaries and Parliamentary Under Secretaries, Deputy Chief Whips in Parliament, Vice-Chancellors of Universities, Officers in the National Cadet Corps and the Territorial Army, and Chairman and members of Advisory Committees established by the Government are among the positions that are exempt from disqualification under the Parliament (Prevention of Disqualification) Act of 1959.

What the law says

Article 102 (1)(a) says a person shall be disqualified from being a member of either House of Parliament if he holds any office of profit, among other grounds

Article 103 says if a question arises whether a member has incurred such disqualification, it will be referred to the President's decision. The President shall obtain the Election Commission's opinion and act accordingly

Article 191(1) contains a similar provision for MLAs and MLCs in the States. Legislators in Delhi are covered by corresponding provisions in the Government of National Capital Territory Act, 1991



- The National Commission for the Scheduled Castes and the National Commission for the Scheduled Tribes Chairpersons are not subject to any disqualification from serving as MPs under the 2013 amendment.
- Since its creation, the Act has been amended five times: in 1960, 1992, 1993, 2006, and 2013.

LIVE STREAMING OF SC PROCEEDINGS: RATIONALE AND CONCERNS

Priority: Medium



Primary Source: Indian Express

Prepp Prelims Booster: Judiciary

Prepp Mains Booster: Structure, Organization and Functioning of the Executive and the Judiciary, e-governance. Transparency and Accountability.

Why in the news?

Recently, The Supreme Court in a full court has decided to live stream its proceedings in the matters of crucial Constitution Bench cases that will be heard from September 27 2022. The decision comes nearly four years after a plea was made in the interest of transparency.



Live Streaming of Court Cases: History So far

- The first steps towards the decision were taken in **2018 in Swapnil Tripathi Case** Judgement: The Supreme Court issued the following ruling in this historic case:
- Live streaming of court sessions is permitted in all subjects, with the exception of rape cases and matrimonial disputes.

- The Supreme Court would start the live streaming, and the High Courts and Lower Courts would follow. Cases of major national importance would initially be live-streamed.

Live streaming in HCs

- The Gujarat High Court started live streaming its proceedings in July 2021 as a result of the court's decision.
- The high courts in Jharkhand, Karnataka, Madhya Pradesh, Orissa, and Patna currently broadcast their proceedings live.

What is the rationale behind live streaming of the Supreme Court cases?

- **Right of access to Justice:** Live Streamings are in accordance with the right to access justice guaranteed by article 21. People who live in remote locations would benefit from being able to see court hearings, which they would not be able to do otherwise owing to logistical and infrastructure limitations.
- **Ensure Accountability:** According to the SC, live streaming is an extension of the idea of an open court and will increase transparency in the legal system.
- **Increasing public confidence in the judiciary:** Parties in legal disputes rely on the information provided by their lawyers about the court's proceedings and the public's perception of various news reports. If the description and information are false, it not only undermines public trust in the justice system but also violates their right to know. Transparency and accountability bolster the public's confidence in the legal system.
- **International comparison:** Despite having the necessary infrastructure in place, India is the only large, well-established democracy that does not offer video or audio transcripts of court sessions.
- **Balance between security and accessibility:** SC has tightened security in the courtroom over time, admitting only those with the pass. Live streaming is necessary to uphold this level of security and to make the events visible to those outside.
- **Ensure the Public Record of Proceedings:** Despite being one of the most powerful and prominent courts in the world and frequently debating on cases that impacted the course of public life, the Supreme Court of India has not kept a public record of its own proceedings.
- **Article 129:** According to Article 129, the Supreme Court is a court of record and one of its aspects is the publication of court proceedings.

What are the concerns regarding the Live streaming of the Supreme Court Cases?

- **Misuse of Live streaming:** According to CJI Bobde's comments, live broadcasting of court hearings should be permitted in theory, but in fact it is easy to abuse because of the large number of complaints regarding virtual court proceedings.
- People may start filing petitions as a result of live streaming in an effort to "be heard all across the country."
- **Not Suitable to some cases:** There are many topics and arguments discussed throughout the hearings that might not be appropriate for live streaming. for ex. Matrimonial issues, rape cases.

- **Issue of Internet Accessibility:** Due to the country's existing digital divide, live streaming may not yet result in equal access to justice for all regions.
- **Impact on the behaviours of Justices:** As a 2018 research paper from Brazil concluded that justices behave like politicians when given free television time, they act to maximize their individual exposure.
- **Fear of negligent use of the content:** There are already courtroom proceedings from Indian courts in the form of sensationalised video clips on YouTube and other social media websites.
- There are concerns that irresponsible use of proceeding could lead to the public being misinformed.

What are the initiatives taken by the Supreme Court to improve the Access to Court?

- **Virtual Court:** A idea known as "virtual courts" aims to have cases decided online without the need for litigants or lawyers to appear in person.
- It needs an online system and an infrastructure with access to information and communication technology (ICT).
- Following the 2020 coronavirus pandemic, the Supreme Court (SC), under Article 142, issued directives ordering all courts in the nation to make significant use of video-conferencing for judicial hearings.
- **E-Court Project :** The "National Policy and Action Plan for Implementation of Information and Communication Technology (ICT) in the Indian Judiciary" served as the conceptual framework for the E-court initiative (2005).
- The Supreme Court of India's E-Committee filed it with the goal of modernising the Indian judicial system by enabling courts to use ICT.

International Experiment regarding Live streaming:

- Court proceedings are available for live streaming and recording in New Zealand, South Africa, and Brazil.
- The Apex Court of Canada offers live webcasts of its hearings.
- The US Supreme Court does not allow video recording or photography of the sessions, but it does distribute audio transcripts of the oral arguments the same day.
- The proceedings may be streamed live by the SC of the UK.
- In Australia, sessions are recorded and made available online by the high court.
- Even totalitarian governments, such as China, broadcast live court hearings from lower courts all the way up to the Supreme People's Court of China.

ECI SEEKS RESTRICTIONS ON CASH DONATIONS TO POLITICAL PARTIES, WRITES TO GOVERNMENT

Priority: Medium



Primary Source: The Hindu

Prepp Prelims Booster: Representation of the People (RP) Act

Prepp Mains Booster: Indian Constitution - Historical Underpinnings, Evolution, Features, Amendments, Significant Provisions and Basic Structure.

Context:

Recently, the Chief Election Commissioner (CEC) has written a letter to the Union Law Minister recommending reducing the donation to the political parties to Rs 2000 and other set amendments to the Representation of the People (RP) Act to reform political funding.

What is the issue?

- The Recommendation of CEC is a response taken after the EC recently delisted 284 Registered Unrecognised Political Parties (RUPPs) for defaulting and non-compliance, declaring more than 253 of them inactive.
- Following the EC's sharing of its report with its administrative authority, the Central Board of Direct Taxation (CBDT), the Income-tax Department recently conducted several similar entity raids across the nation on suspicion of tax evasion.



What are the recommendations by CEC on political funding?

- **Limit on Donation to political parties:** The Election Commission has proposed reducing anonymous political donations to ₹2,000 from ₹20,000.
- According to the rules currently in effect, political parties must inform the EC of all contributions over 20,000 in their contribution report. All donations over 2,000 must be declared, increasing financial transparency, if the Law Ministry approves the EC's demand, sources added.
- **Cap on Cash Donation:** To rid election finance of black money, the Election Commission has proposed capping cash donations at 20% or a maximum of 20 crore.
- The proposals seek to bring about improvements and transparency in the funding that political parties get as well as the costs that candidates bear when they run for office.

What is Political Funding?

- Political funding refers to the techniques political parties employ to raise money to support their campaigns and daily operations.
- A political party needs money to market itself, its goals, and the measures it plans to take to win over supporters.

What are the Statutory Provisions for political funding?

- **Section 29B:** Parties are permitted to receive voluntary contributions from any individual or business under Section 29B of the Representation of the People Act (RPA), with the exception of Government Companies.
- **Section 29C:** Political parties are required to disclose donations that are greater than 20,000 rupees under Section 29C of the RPA. One makes such a declaration by preparing a report and submitting it to the EC. According to the Income Tax Act of 1961, a party loses their right to tax relief if they don't do it on time.

What are the Methods used by political parties to raise the funds?

- **Individuals Donation:** Political parties are permitted to accept contributions from individuals under Section 29B of the RPA.
- **State or public funding:** In this scenario, the government contributes money to political parties for electoral goals. There are two sorts of state funding:
 - **Direct Funding:** The political parties receive money from the government directly. In India, direct tax funding is not allowed.
 - **Indirect Funding:** This refers to strategies other than direct funding, such as free media access, free access to public spaces for rallies, and free or heavily discounted transportation options. In India, it is permitted in a controlled way.
- **Corporate Funding:** The Companies Act of 2013 governs corporate donations made in India to political parties. According to Section 182 of the Act, a business must be at least three years old in order to make a political donation.
 - Companies may give up to 7.5% of the average net income generated during the three consecutive prior fiscal years.
 - The company's profit and loss account must include information about their contributions.
 - The contribution needs to get the Board of Directors' approval.
 - A firm that violates these clauses could be forced to pay a fine up to five times the amount of the contribution, and any officers who are in default would face up to six months in jail.
- **Electoral Trusts:** A non-profit organisation established in India for the orderly collection of donations from anyone, including individuals and domestic businesses.
 - All electoral trusts established after January 2013 are expected to disclose specifics of the funds received and disbursed, per the Election Commission Guidelines.
 - These businesses are required by Central Government regulations to donate 95% of their annual gross income to legally recognised political parties.

Other ways of Political Funding:

- **Electoral Bond Scheme:** The Electoral Bond scheme was launched on January 29, 2018, and it was introduced with the Finance Bill, 2017.
- A person who is an Indian citizen, or who is incorporated or founded in India, may purchase an electoral bond, which is similar to a promissory note.
- An individual may purchase Electoral Bonds alone or in a group with other individuals.
- The bonds are similar to banknotes in that they are interest-free and payable to the bearer on demand.

- To be eligible to receive Electoral Bonds, a political party must be registered under Section 29A of the Representation of the People Act (RPA), 1951 (43 of 1951), and it must have received at least one percent of the votes cast in the most recent general election for the House of the People or the State's Legislative Assembly.

What are the issues with Political Funding?

- Increases the use of Black money :** The creation of money corporations to channel illicit money is one of the main drawbacks of corporate fundraising.
- Corruption increases:** influence of individuals and organisations over the political parties they finance.
- Hidden funding sources increase the amount of money spent on political campaigns, which has an effect on the nation's economy.
- Unauthorized Donations:** In cases where electoral bond contributions are not reported, it is impossible to tell from a review of a political party's contribution report whether the party has accepted any contributions in violation of Section 29B of the RPA, 1951, which forbids political parties from accepting contributions from government organisations and foreign sources.
- Crony capitalism** may result from firms using this as an easy way to transfer money they have stashed away in tax havens to political parties in exchange for a favour or advantage. The use of anonymous fundraising could bring in more illicit funds.
- Loopholes:** Electoral bonds abolish the 7.5% limit on corporation donations, meaning even loss-making companies can make unlimited donations; Corporate Entities may not benefit from transparency since they may be required to report the amount donated to the Registrar of Companies; etc.

What recent steps have been taken regarding political funding?

- The **Foreign Contribution Regulation Act, 2010**, was amended by the government in March 2018 to allow foreign businesses to support Indian political parties.
- Introduction of Electoral Bonds:** On January 2, 2018, the government announced the Electoral Bond Scheme in order to develop and reform the nation's political fundraising structure.

Important aspects of governance, transparency, and accountability, e-governance- applications, models, successes, limitations, and potential;

THE CONCERNS AROUND AADHAAR-VOTER ID LINKAGE

Priority: Medium



Primary Source: The Hindu

Prepp Prelims Booster: AADHAAR-VOTER ID LINKAGE

Prepp Mains Booster: Important aspects of governance, transparency, and accountability, e-governance- applications, models, successes, limitations, and potential;

Context:

Online reports include situations where block-level officers demanded that voters link their Aadhaar to their voter IDs or failing to which their Voter IDs could be canceled. This follows the Election Commission's

(EC) August 1 effort to encourage the linking of voter identification and Aadhaar.



Background:

- In December 2021, Parliament passed the Election Laws (Amendment) Act, 2021 to amend the Representation of the People Act, 1950.
- According to **the amendment**, the electoral registration officer **may ask** citizens who have already registered to provide their **Aadhaar numbers** "for the **purpose of establishing the identity of any person**" or "for the purpose of **authenticating entries in electoral rolls** of more than one constituency or more than once in the same constituency."
- In June 2022, to pave way for this amendment, the government notified changes to the Registration of Electors Rules, 1960.
- Furnishing the aadhaar number was discretionary according to the amendment. However, this does not seem to be reflected in Form 6B issued under the new Rule 26B, under the Registration of Electors Rules, 1960.

What is the need to link Voter ID with Aadhaar?

- Accurate registry of the voters:** The EC carries out routine tests to keep a current and accurate registry of the voter base.
- Removing duplicate voters:** This process includes removing duplicate voters, such as migrant workers who may have registered on the electoral rolls more than once in one constituency or for individuals who have registered on the electoral rolls more than once in the same constituency.
- Single voter identification card:** According to the government, linking Aadhaar to voter identification cards will help ensure that each Indian resident receives a single voter identification card.

The state and private sectors both prefer to utilise Aadhaar for authentication and verification for the reasons listed below:

- Coverage:** 99.7% of Indian adults will have an Aadhaar card by the end of 2021. This coverage is greater than that of any other officially recognized document like ration cards, PAN cards, and driver's licenses.
- Reliability:** Compared to other IDs, Aadhaar-based identification and verification are thought to be more trustworthy, quicker, and cost-effective due to the availability of biometric authentication.

What are the concerns?

- **Against Neutral elections:** Many people have expressed worry that the linkages could aid in the creation of voter profiles that could be used to sway elections.
- **Against the right to privacy:** The right to privacy may be violated and the government may use surveillance methods if the electoral rolls and Aadhaar databases are linked.
- **Surveillance state:** The **Puttaswamy verdict** determined that the use of biometric-based identification and verification did not result in the development of a "surveillance state" after studying the Aadhaar architecture.
- **Aadhaar is not proof of citizenship:** Aadhaar is merely a proof of residence and not a proof of citizenship. The removal of voters who are not Indian nationals from the electoral rolls will not be accomplished by checking voter identity against this; rather, it will merely aid in reducing voter duplication.
- **Disenfranchisement:** The earlier instances of using Aadhaar to clean electoral rolls illustrates that a similar effort conducted in 2015 in Andhra and Telangana resulted in the disenfranchisement of almost 30 lakh voters. which was ultimately halted by the Supreme Court.
- **Authentication error:** The estimates of authentication error rates using biometrics vary greatly. Aadhaar-based biometric authentication had a **12% error rate in 2018, according to the Unique Identification Authority of India**. Due to this, the Supreme Court ruled in Puttaswamy that if Aadhaar-based authentication was unable to materialize, a person would not be denied benefits.

Way Forward

- **Enactment of data privacy legislation:** It is critical that the government swiftly enacts data privacy legislation to calm worries about unauthorized processing of personal data stored by the government while also making clear through a revision in Form 6B that linkage is not required.
- **Necessary and proportionate:** It must be taken into account whether the mandatory linking of Aadhaar with voter identification will meet the standard of being "necessary and proportionate" to the desired de-duplication outcome. Consideration must be given to whether requiring an Aadhaar holder to provide their Aadhaar for authentication or verification compels **would not be viewed as a violation of their informational autonomy (right to privacy)**, which would permit them to choose which official document they want to use for authentication and verification.
- **Lal Babu Hussein case:** Additionally, the Supreme Court ruled in Lal Babu Hussein (1995) that the right to vote cannot be restricted by requiring only four forms of identification; voters may rely on any form of identification to exercise their right to vote.

Welfare schemes for vulnerable sections of the population by the Centre and States and the performance of these schemes; Government policies and interventions for development in various sectors and issues arising out of their design and implementation.

CHHATTISGARH HC STRIKES DOWN 58% QUOTA IN JOBS, AND EXAMS

Priority: Medium



Primary Source: The Hindu

Prepp Prelims Booster: Reservation

Prepp Mains Booster: Welfare schemes for vulnerable sections of the population by the Centre and States and the performance of these schemes;

Context:

- The Chhattisgarh High Court ruled that the State Government's decision to reserve 58% of the seats in recruitment and admission exams for members of the Scheduled Castes, Scheduled Tribes, and Other Backward Classes is "unconstitutional" since it goes over the 50% cap.
- The Division Bench comprising Chief Justice A.K. Goswami and Justice P.P. Sahu canceled the reservation implemented by the State in 2012.

Background

- The decision to amend the reservation policy was taken in 2012,
- The reservation for Scheduled Tribes was increased from 20% to 32% while the quota for Scheduled Castes was reduced by 4% to 12%.
- The OBC reservation remained constant at 14%.
- Following the modification, the state's total reservation increased to 58 percent, exceeding the upper limit of 50 percent.
- Guru Ghasidas Sahitya Samiti and other petitioners contested it in front of the high court that same year.

Highlights of Judgement

- The court said that a **reserve category candidate's failure** to land a job or a spot in a school after competing against general category candidates **cannot be viewed as an exceptional occurrence**.
- The **Chhattisgarh Public Service (Reservation for Scheduled Castes, Scheduled Tribes & Other Backward Classes) Amendment Act, 2011**, was challenged by the petitioners.
- This was an amendment to the 1994 reservation Act of erstwhile Madhya Pradesh, which had kept the ceiling of SC, ST, OBC quota at 50%.
- In 2000, the state of Madhya Pradesh was divided to create Chhattisgarh.
- In terms of votes, the SC (13%) and OBC (47%) populations account for 60% of the total, with the Scheduled Tribes making up the remaining 30%.
- The creation of separate advisory committees for the state's OBC and SC populations was announced by the Chhattisgarh government earlier this month.
- In Chhattisgarh, there is already a special advisory council for STs.

Is Reservation in public employment a Fundamental Right?

- The Supreme Court has repeatedly stated that there is **no fundamental right** to reservation or advancement under Article 16(4) or Article 16(4 A) of the Constitution.
- Rather, **they are enabling measures** that allow for reservation if the situation warrants it (**Mukesh Kumar and Another vs State of Uttarakhand & Ors. 2020**).
- These declarations do not diminish the fundamental imperative contained in Article 46.
- The state is required by Article 46 to support the educational and economic interests of the weaker parts of the population, particularly SCs and STs.
- However, such provisions have resulted in a constantly changing affirmative action jurisprudence in government employment.

Reservation

- Reservation is the **process of assisting people who have been subjected to historical injustice** in areas such as education, scholarship, and employment.
- It is a type of affirmative action based on quotas. Constitutional laws, statutory laws, and local rules and regulations control it.
- In India, the reservation system encompasses a range of efforts such as reserving seats in legislatures, government posts, and enrolling in higher educational institutions.

Reason for Reservation

- **Lack of Jobs** and security and prestige in government employment.
- In India, the **educational system fails to adequately prepare graduates to engage in the economy**. In addition, there is a scarcity of an entrepreneurial climate that favors employment creation rather than job hunting.
- Reservations, according to the different communities, are a solution to their rural hardship, particularly the **agricultural crises**.
- **Many of the agitations are the result of a few people mobilising a large number of people for political gain.**

Constitutional Provisions Related to Reservation in India

- The Preamble advocates for "**social, economic, and political fairness**." The goal is to create a society that is free of discrimination. It entails giving priority to the weaker members of society.
- **Part XVI of the Constitution** deals with the reservation of SC and ST in Central and State legislatures.
- **Articles 15(4) and 16(4)** allowed state and central governments to set reservation seats in government services for members of the SC and ST communities.
- **Articles 330 and 332** provide for particular representation in the Parliament and State Legislative Assemblies, respectively, by reserving seats for SCs and STs.
- Every Panchayat is required by **Article 243D** to reserve seats for SCs and STs.
- Every municipality is required by **Article 233T** to reserve seats for SCs and STs.
- According to **Article 335 of the constitution**, the claims of STs and SCs must be taken into account in conjunction with the administration's efficacy.

Reservation in Promotion

- Article 16 (4) confers the power on the state to **provide reservation for the backward classes only at the entry-level**

i.e., at the time of recruitment into public employment and not subsequent to requirement.

- The parliament enacted the **77th Constitutional Amendment Act, 1995** when the Supreme Court struck down the reservation in promotion. Parliament has introduced **Article 16 (4A) that confers the power on the state to provide reservation in promotion in favor of SCs and STs communities** in the opinion of the state these two communities are not adequately represented in public employment.
- The **81st Amendment Act, 2000 included Article 16 (4B)**, which allows the state to replace unfilled SC/ST seats in the next year, effectively nullifying the 50% reservation ceiling on total vacancies for that year.

Reservation in Education

- **Article 15 (4)** was introduced by the **1st Amendment Act, 1951**. It confers the power on the state to make special provisions in favor of socially and educationally backward classes of citizens.
- This provision has a wider scope than the benefits that can be extended to the backward classes in the form of reservation of seats in higher education institutions, scholarship, hostel facilities, fee concession, etc.
- **Article 15 (5)** was introduced by the **93rd Amendment Act, 2005**. It confers the power on the state to **provide by law reserving seats in favour of backward classes of citizens in educational institutions** including private educational institutions whether aided or unaided by the state by excluding minority educational institutions.
- This provision had been made use by central and state governments to extend reservation to backward classes including not more than 27% seat reserved in favour of OBC in educational institutions such as IIT, NIT, IIM but **not in research oriented institution** such as Indian Institute of Science, Bhabha Atomic Research Center etc.

Reservation for Economic Weaker Section

- **Article 15 (4) and Article 16 (4)** was introduced into the constitution by the 103rd Constitutional Amendment Act, 2019.
- It confers the power on the state to provide by law **10% reservation in jobs and admissions in education institutes in favour of Economically Weaker Sections (EWS)** to promote the welfare of the poor not covered by the 50% reservation policy for SCs, STs and Socially and Educationally Backward Classes (SEBC).

Qualification Criteria

- Whose entire family's annual income is less than Rs. 8 lakhs.
- Don't have more than 5 acres of farmland.
- Do not own a residential apartment with a square footage of 1000 square feet or more.
- Do not own a residential plot with a size of 100 yards or more in notified municipalities, or 200 yards or more in non-notified municipalities.

Judgment of Indra Sawhney Case

- The Supreme Court's nine-judge panel decided the Indra Sawhney Case with a 6:3 majority on November 16, 1992:
- The **caste system, not merely the economy, can be linked to the Backward class** of citizens described in Article 16(4).
- **Division of Backward Classes:** Backward classes can be divided into backward and most backward classes, according to Article 16(4).

- The **promotion does not include any reservations**.
- Article 16(4) does not provide an exception to the general rule (1). Article 16 (4) allows reservations to be made. Article 16(4) defined socially and educationally backward classes differently than Article 15(4) defined socially and educationally backward classes.
- **Reservation's Maximum Limit:** 50%.
- The **backward classes must not include the creamy layer**.
- Permanent statutory body charged with investigating allegations of over-inclusion and under-inclusion.
- **Only the Supreme Court can resolve disagreements** about new criteria.

DELAYS MAR MGNREGS SOCIAL AUDITS

Priority: Medium



Primary Source: The Hindu

Prepp Prelims Booster: MGNREGA

Prepp Mains Booster: Welfare schemes for vulnerable sections of the population by the Centre and States and the performance of these schemes; Government policies and interventions for development in various sectors and issues arising out of their design and implementation.

Context:

- Recently, a report titled "**Social audit calendar vs audits performed**" released on September 13 by the Ministry of Rural Development said that only 14.29% of the planned audits of MGNREGS have been completed in this fiscal year.
- The Union ministry said that the state's failure to conduct a social audit of the Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) would result in action, including withholding money.

What is the issue?

- The **administrative costs of these Social Audit Units are covered by the Center**, and **excessive delays in the funding transfer** have rendered many of these cash-strapped units paralyzed.
- As a result, in Kerala, Himachal Pradesh, and Chhattisgarh, the payment of auditors' salaries has been delayed by three to twelve months.
- For instance, the first payment of this fiscal year, 1.30 crore, was just made to Himachal Pradesh last week.
- This is against a ₹4 crore liability this year and an additional ₹4.5 crore liability of the previous year.
- After repeated requests from the Audit Department, which had been unable to pay its auditor for more than a year, this sum was credited.
- The lack of timely money transfers causes a state of near paralysis. There is a **significant attrition rate** because states cannot afford to pay the wages of auditors.

What is a Social Audit?

- A social audit is a process of reviewing official records and determining whether state-reported expenditures reflect the actual amount spent on the ground.
- Social auditing was **covered by the original MGNREG Act**, but the auditing criteria weren't released until December 19, 2016.

- Each Social Audit Unit **is entitled to funding equal to 0.5% of the State's MGNREGS expenses** from the previous year.



Significance

- It creates **accountability of performance**, especially towards immediate stakeholders.
- The audit comprises examining the MGNREGS-created infrastructure for quality, looking for wage misappropriation, and **identifying any irregularities** in the Procedure.
- They were established to **prevent corruption in the administration** of the MGNREGA.
- They were to get **funding from the Center** rather than the **State to ensure their independence**.

What are the concerns?

- Eight State Social Audit Units in 2020–21 and nine in 2021–22 have received less than half of the budget to which they are entitled, according to the findings of a periodic report on social audits by the **nonprofit People's Action For Employment Guarantee**, which was published last month.
- In 2021, the MoRD distributed cash to at least six States: Maharashtra, Jharkhand, Uttarakhand, Bihar, Chhattisgarh, and Karnataka.
- Bihar is an odd instance because the Bihar Social Audit Unit hasn't gotten any money since April 27, 2020, which is more than two years ago.
- **Furthermore, none of these states have received their entire allotment of funding.**
- Despite spending a collective expenditure of more than Rs 6000 Crore on MGNREGA in FY 2020–21, three states—Maharashtra, Bihar, and Chhattisgarh—received no funding in 2021–22 to carry out social audits.
- In order to continue operating, the social audit units in Jharkhand, Nagaland, Tamil Nadu, Telangana, and Karnataka were **compelled to obtain loans** from their respective state governments. This could hamper the autonomy of social audits.
- Delay in postponing the wages may lead to corruption.
- **Reason:** The delay in disbursing of funds is due to the recent **overhauling of the Public Finance Management System** as stated by Ministry of rural development.

MGNREGA

- The Mahatma Gandhi National Rural Employment Guarantee Act, which is previously known as the National Rural Employment Guarantee Act was introduced on 7th September 2005.
- The act is for generating employees and social security in India. The act aims to cover all districts of India except the district which have a 100% urban population.
- The mandate of the MGNREGA is to provide at least 100 days of guaranteed wage employment in a financial year to every rural household whose adult members volunteer to do unskilled manual work.

The core objectives of the MGNREGS:

- Providing **not less than one hundred days of unskilled manual work** as a guaranteed employment in a financial year to every household in rural areas as per demand, resulting in creation of productive assets of prescribed quality and durability;
- **Strengthening the livelihood resource** base of the poor;
- Proactively ensuring **social inclusion** and
- Strengthening Panchayati Raj Institutions.

Goals

- **Social protection:** Social protection for India's most vulnerable people in rural India through guaranteeing opportunities for wage employment.
- Enhance livelihood security of the rural poor through generation of wage employment opportunities in works leading to creation of durable assets.
- **Rejuvenation of natural resources:** Rejuvenate the rural areas' natural resource base.
- **Resilient Infrastructure:** Develop a resilient and productive rural asset base.
- **Empowerment of the vulnerable:** Through the use of rights-based legislation, the socially excluded, particularly women, Scheduled Castes (SCs), and Scheduled Tribes (STs), are empowered.
- **Participatory planning:** By bringing together multiple anti-poverty and livelihoods projects, decentralised, participatory planning is strengthened.
- **Strengthening democracy at grassroots level:** Deepen democracy at the grassroots by strengthening Panchayati Raj Institutions.

Challenges:

- **Low wages:** Currently, **at least 17 of the 21 major states** MNREGA salary rates are lower than the state minimum wage for agriculture. The gap is between 2-33% of the minimum wage.
- According to data from the **National Sample Survey Office (NSSO)**, the average daily wage for general agricultural labourers in 2017 was Rs. 264.05 for males and Rs. 205.32 for women.
- Workers have **lost interest in working for MGNREGA projects** as a result of the extremely low wage rates, allowing contractors and middlemen to seize control locally.
- **Insufficient Funding :** State governments are unable to meet the demand for MGNREGA employment due to a lack of money.

- **Payment delays:** The majority of states have failed to pay wages within 15 days, as required by MGNREGA. Furthermore, workers are not rewarded if their salaries are not paid on time.
- As a result, the system has become a supply-driven programme, and workers have begun to lose interest in working under it.
- The Supreme Court called pending MGNREGA wage payments as "a clear constitutional breach committed by the State" and "a modern form of begar" in a 2016 judgment.
- **Panchayat Raj Institution's Ineffective role:** Gram panchayats are unable to implement this act effectively and efficiently due to their lack of autonomy.
- **large number of unfinished works:** The completion of MGNREGA projects have been delayed, and project inspections have been irregular. Under MGNREGA, there is also a problem with work quality and asset development.
- **Fraud in job cards:** The existence of fraudulent job cards, the inclusion of bogus names, missing entries, and delays in generating job card entries are all difficulties.
- **Misappropriation of funds:** Through fake entries in the muster roll. Payments are made unlawfully to the accounts of people who haven't worked, those who aren't in the country, and even to the accounts of public employees at civic organisations.

Way forward

Ensure that work is completed

- Regardless of demand, the government must ensure that work is available.
- The government should expand the program, focusing on value addition and increasing the number of community asset projects.

Increasing the scheme's effectiveness

- **Better coordination between various government departments, as well as the process for allocating and measuring work, are required.**
- This is one of the most successful charity programs in recent years, and it has aided the impoverished in rural areas. Government officials, on the other hand, must take the initiative to implement the strategy and must not obstruct it.

Wage disparity between men and women

- There are also some anomalies in the payouts that need to be resolved. On average, women in the sector earn 22.24 percent less than their male counterparts.

SPECIAL MATERNITY LEAVES IN CASE OF INFANT DEATH

Priority: Low

Primary Source: The Hindu

Prepp Prelims Booster: Special maternity leave

Prepp Mains Booster: Welfare schemes for vulnerable sections of the population by the Centre and States and the performance of these schemes; Government policies and interventions for development in various sectors and issues arising out of their design and implementation.

Context:

- According to a directive from the Department of Personnel and Training (DoPT), all female central government employees will be

entitled to 60 days of special maternity leave in the event that a child dies soon after birth.



- The order said that if an employee has already availed maternity leave till the child's death, it may be converted into any other kind of leave available in her leave account without insisting on a medical certificate and a special maternity leave of 60 days may be granted.
- **Reason:** It has been decided to give a female Central government employee a special maternity leave of 60 days in light of the potential emotional trauma caused by stillbirth or the death of a child soon after birth, which has a profound impact on the mother's life.

Eligibility:

- **Only women Central government** employees with **less than two surviving children and**
- children born **only in authorized hospitals**—defined as public hospitals or private hospitals accredited by the **Central Government Health Scheme**—are eligible for the benefit of special maternity leave (CGHS).
- The order stated that the **production of an emergency certificate** was required **in cases of emergency deliveries** in non-paneled private hospitals.
- With effect from the date of issuance of this order, these orders shall apply to government employees appointed to civil services and posts related to the affairs of the Union of India in accordance with Rule 2 of the Central Civil Services (Leave) Rules 1972.

Maternity Benefit (Amendment) Act 2017

- The Amendment increased the length of paid maternity leaves now available to female employees from 12 weeks to 26 weeks.
- The length of the leave, however, remains unchanged at 12 weeks for women who are expecting after having two children.
- 8 weeks prior to the anticipated due date, the employee may take advantage of the paid maternity leave.
- This law also extends the benefits that apply to commissioning and adoptive mothers.
- A woman who adopts a child will be granted 12 weeks of maternity leave starting on the date of adoption.

- An enabling provision for "work from home" has been added to the Act and may be used following the completion of the 26-week leave period. A woman can take advantage of this provision depending on the type of work she does under conditions that are mutually agreed upon with the employer.
- Every establishment with 50 or more employees is required by the amended Act to have a creche facility. The facility should be open to female employees four times a day.
- Employers to inform women about the maternity benefits that are available to them at the time of their appointment according to the amended act.
- All women working in factories, mines, shops, or other commercial establishments with ten or more employees are subject to the act.

Neonatal death: A baby dying within the first 28 days of life is known as neonatal death.

Stillbirth: Stillbirth is an infant who has died in the womb having survived at least the first 28 weeks of pregnancy.

Article 42 of the Indian Constitution, mandates the State to provide for "securing just and humane conditions of work and for maternity relief".

AUDIT REPORT FINDS GRAFT IN MP TAKE HOME RATION SCHEME

Priority: Medium



Primary Source: The Hindu

Prepp Prelims Booster: Ration scheme

Prepp Mains Booster: Welfare Schemes for Vulnerable Sections of the population by the Centre and States and the Performance of these Schemes.

Context:

- Recently released report of Madhya Pradesh Accountant-General unearthed an alleged fraud to the tune of several crores in the Nutrition Programme for schoolchildren under the Integrated Child Development Scheme (ICDS).
- It also highlighted that in the 2017-19 period, Madhya Pradesh reported the maximum number of infant deaths and stood third in terms of maternal mortality in the country.



What were observations made in the audit report?

- **Large scale fraud/misappropriation:** It was seen in the identification of beneficiaries, production, transportation, distribution and quality control of THR (Take Home Ration). THR was given to 24% of the beneficiaries (nearly 12 lakh).
- **Fake beneficiaries:** It was found that there were irregularities in estimating the number of beneficiaries, ration mills producing beyond capacity and falsified distribution, among others.
- **No baseline survey of beneficiaries:** The Women and Child Development Department without conducting any baseline survey, had estimated the number of out-of-school adolescent girls at 36.08 lakh, way higher than the School Education Department estimate of 9,000 in 2018-19 and the ration was drawn in their names.
- **Fake Transportation:** The registration number of trucks that six manufacturing plants claimed to have been used to transport 1,125.64 tonnes of rations costing were found to be those of motorcycles, cars, autos and tankers. The report says that more than 10,000 tonnes of rations was not transported nor available in the warehouse.
- **Recommendations:** Madhya Pradesh Government should investigate these issues through an independent agency and fix the responsibility of officials at all levels.
- The Women and Child Development Department should revamp its entire system and evolve an IT system for better monitoring and control to avoid the recurrence of such frauds.

What is the Integrated Child Development Scheme (ICDS)?

- It is the world's largest umbrella scheme for providing an integrated package of services for the holistic development of the child.
- It was launched in 1975. It is implemented by the Union Ministry of Women and Child Development.

Objectives of ICDS

- Improve the health and nutritional status of children in the age-group 0-6 years.
- Reduce the incidence of malnutrition, mortality, morbidity and school dropout.
- Lay foundation for proper physical, psychological and social development of the child.
- Provide effective coordination of policy and implementation amongst the various departments to promote child development.
- Enhance the capability of the mother to look after the nutritional needs and normal health of the child.
- Facilitate, empower and educate Adolescent Girls (AGs) so as to enable them to become self-reliant and aware citizens.

Sub-schemes under ICDS

- **Anganwadi Services Scheme:** It is a unique programme for early childhood care and development.
- Its beneficiaries are children in the age group of 0-6 years, pregnant women and lactating mothers.
- It provides a package of six services namely pre-school non-formal education, supplementary nutrition, nutrition and health education, immunisation, health check-up and referral services.
- Supplementary Nutrition includes Take Home Ration (THR), morning snacks and Hot Cooked Meal.
- **Pradhan Mantri Matru Vandana Yojana:** It provides cash incentive amounting to Rs.5,000 in three instalments directly to the Bank or Post Office Account of pregnant women and lactating mother (PW&LM) in Direct Benefit Transfer (DBT) mode during pregnancy and lactation in response to individual fulfilling specific conditions.
- **National Creche Scheme:** It provides day care facilities to children of age group of 0.5 to 6 years of working women. The facilities are provided for seven and half hours a day for 26 days in a month.
- In these day care facilities, children are provided with supplementary nutrition, early childcare education, and health and sleeping facilities.
- **Scheme for Adolescent Girls:** It aims to empower and improve social status through nutrition, life skills and home skills of out of school girls in the age group 11-14.
- It has nutritional and non nutritional components which include nutrition, health check up and referral service, iron and folic acid supplementation, nutrition and health education, mainstreaming out of school girls to join formal schooling bridge course or skill training, home management life skill education etc, counselling and guidance on accessing public services.
- **Child Protection Scheme:** It aims to contribute to the well-being and improvement of children in difficult circumstances, as well as, reduction of vulnerabilities to situations and actions that lead to abuse, exploitation, neglect, abandonment and separation of children from parents.
- **POSHAN Abhiyaan:** It targets to reduce the level of stunting, anaemia, under-nutrition and low birth weight babies by reducing mal-nutrition and undernutrition, anaemia among young children as also, focus on adolescent girls, pregnant women and lactating mothers.

NEAR-UNIVERSAL SOCIAL SECURITY PENSIONS FOR THE ELDERLY

Priority: Medium



Primary Source: The Hindu

Prepp Prelims Booster: Social Security

Prepp Mains Booster: Population and Associated Issues; Welfare Schemes for Vulnerable Sections of the population by the Centre and States and the Performance of these Schemes

Context:

- This article is based on the editorial titled- "The future of old times in India", published in The Hindu on 15 September 2022.
- Since Independence, life expectancy in India has more than doubled— from around 32 years in the late 1940s to 70 years or so today. This is still a historical achievement, even if many countries have done even better than India.
- Over the same period, the fertility rate has decreased from about 6 children per woman to just 2, liberating them from repeated child-bearing and child care.
- This is good news, but it also creates a new challenge — the ageing of the population. The share of the elderly persons aged 60 years and above in the population of the country was around 9% in 2011. It is growing fast and may reach 18% by 2036 according to the National Commission on Population.
- So there is an urgent need to ensure a decent quality of life for the elderly in the near future.



Mental health issues due to old age and loneliness

- Recent survey of the Abdul Latif Jameel Poverty Action Lab (J-PAL) and the Tamil Nadu Government reported that among persons aged 60 and above, 30% to 50% had symptoms that make them depressed.

- The proportion of old age persons with depression symptoms is much higher for women than men, and rises sharply with age. In most cases, depression remains untreated and undiagnosed.
- As one might expect, depression is strongly correlated with poor health and poverty, but it is also associated with loneliness.
- In the Tamil Nadu sample, among the elderly living alone, 74% had symptoms that classify them as likely to be mildly depressed or worse on the short-form Geriatric Depression Scale. Large majority of elderly persons living alone were women, mainly widows.

Old Age Pension

- The hardships of old age are not related to poverty alone, but some cash support often helps to mitigate these hardships. Cash can help to avoid loneliness and cope with many health issues as well.
- The first step for dignified life for the elderly is to protect them from destitution and all the deprivations that come with it. Therefore, old-age pensions form a vital part of social security systems around the world.
- India has important schemes under the National Social Assistance Programme (NSAP) for non-contributory pensions for the elderly, widowed women and disabled persons administered by the Ministry of Rural Development.

About National Social Assistance Programme (NSAP)

- It is a Centrally Sponsored Scheme of the Central Government that provides financial assistance to the elderly, widows and persons with disabilities in the form of social pensions. Only Below Poverty Line (BPL) persons are eligible for it.

Components of NSAP

Presently NSAP comprises of five schemes, namely –

- Indira Gandhi National Old Age Pension Scheme (IGNOAPS)
- Indira Gandhi National Widow Pension Scheme (IGNWPS)
- Indira Gandhi National Disability Pension Scheme (IGNDPS)
- National Family Benefit Scheme (NFBS)
- Annapurna Scheme

Issues with NSAP

- **Eligibility:** It is restricted to BPL families. It is based on outdated and unreliable BPL lists, some of them are 20 years old.
- **Targeting issues:** It is always difficult and restricting them to BPL families has not worked well as there are huge exclusion errors in the BPL lists. Targeting is not a good idea in any case when it comes to old-age pensions.
- **Complicated formalities:** Targeting tends to involve complicated formalities such as the submission of BPL certificates and other documents. The formalities forbid elderly persons with little education or low incomes who are in greatest need of a pension.

- **Resilient barriers:** Even when lists of left-out, likely-eligible persons submitted to the local administration, very few were approved for a pension. This confirms that they face resilient barriers in the operation of the current scheme.
- **Stagnant Central contribution:** It has stagnated at a tiny Rs. 200 per month since 2006, with a slightly higher but still paltry amount of Rs. 300 per month for widows.

Way forward for old age social security schemes

- **Better targeting social benefits:** The problem in targeting issues is not a lack of effort or goodwill on the part of the government officials. But the idea is to save the government money by making sure to follow tedious formalities so that no ineligible person qualifies by mistake.
- So in their quest to avoid inclusion errors, many government officials are less concerned about exclusion errors. A better approach for this is to consider all widows and elderly or disabled persons as eligible, subject to simple and transparent "exclusion criteria".
- **Self declared eligibility:** This should be allowed with the burden of time-bound verification being placed on the local administration or gram panchayat.
- This will automatically remove privileged households from the beneficiary list. This will accommodate some inclusion errors rather than perpetuating the massive exclusion errors we are seeing today in targeted pension schemes.
- **Contribution of States:** Many States have enhanced their coverage and also amount of social-security pensions beyond NSAP norms using their own funds and schemes. Some states have even achieved near-universal coverage (around 75%-80%) of widows and elderly persons.

Increasing budgetary allocation for social security schemes

- India's social assistance schemes have low budgets and make a big difference to large numbers of people about 40 million under NSAP. They are well worth expanding.
- The southern States are relatively well-off, but even some of India's poorer States such as Rajasthan and Odisha also have near-universal social security pensions.
- Thus, it will be much easier for all States to do the same if the central government were to revamp the NSAP.
- The NSAP budget this year is just Rs. 9,652 crore — more or less the same as 10 years ago in money terms, and much lower in real terms as it is not even 0.05% of India's GDP. This shows the need to raise the budgetary allocation for social security schemes.

Conclusion

- Social security pensions are just the first step towards a dignified life for the elderly. They also need other support and facilities such as health care, assistance with daily tasks, disability aids, recreation opportunities and a good social life. This is a critical area of research, policy action for the near future.

WOMEN IN ENGINEERING, SCIENCE, AND TECHNOLOGY (WEST): LAUNCHING OF A NEW I-STEM INITIATIVE

Priority: Medium



Primary Source: PIB

Prepp Prelims Booster: Women in Engineering, Science, and Technology (WEST)

Prepp Mains Booster: Welfare Schemes for Vulnerable Sections of the population by the center and States.

Why in the news?

Women in Engineering, Science, and Technology (WEST), a new Indian Science Technology and Engineering facilities Map (I-STEM) programme, was recently launched on the occasion of Teachers Day of 2022.



What is the Women in Engineering, Science, and Technology (WEST) Initiative?

- It is a new initiative under the Indian Science, Technology, and Engineering Facilities Map(I-STEM) programme.
- The Office of the Principal Scientific Adviser (PSA) to the Government of India launched the initiative.

Objective:

- To support women with STEM backgrounds and give them the tools they need to participate in the ecosystem of science, technology, and innovation.

Promoting Research:

- The WEST initiative will support women with STEM backgrounds and give them the tools they need to contribute to the ecosystem of science, technology, and innovation.
- I-STEM will give scientifically minded female researchers, scientists, and technologists a different platform through the WEST project to pursue research in fundamental or applied sciences in cutting-edge fields of science and engineering.
- Women who participate in the WEST programme can explore options to become active participants in numerous industries and to pursue jobs in R&D at various levels, including those of technicians, technologists, scientists, and entrepreneurs.
- Opportunities include designing and manufacturing scientific apparatus as well as operating and maintaining it.

Skill Development:

- The WEST initiative's skill development programmes will offer training to women with S&T backgrounds so they may brush up on their skills and start working "in the field" as lab technicians and maintenance engineers.

Support to women S&T Startups:

- The I-STEM site will provide access to R&D facilities and R&D software platforms (COMSOL, MATLAB, LABVIEW, AUTOCAD).

Connect Quickly:

- Additionally, through the I-STEM WhatsApp and Telegram platforms, a digital consortium called "Connect Quickly" for online conversation and immediate help has also been developed.
- The WEST initiative will be successfully implemented thanks to a committed group of women.

What is the Indian Science Technology and Engineering facilities Map (I-STEM)?

I-STEM
Leading Research and Innovation
Launched by the Honourable Prime Minister of India

Indian Science, Technology and Engineering facilities Map (I-STEM)
I-STEM: Strengthen the Indigenous Development of Scientific Instruments

After establishing a National web portal through which R&D equipment in institutions across the country can be located and accessed in a transparent way, I-STEM is entering a New Phase with the following objectives –

- Working towards a more comprehensive listing of R&D facilities. Availability, and their active use
- Providing partial assistance to Tier 2 and Tier 3 institutions for the maintenance of facilities shared through I-STEM through Comprehensive AMC program
- Partial assistance to Users from Tier 2 and Tier 3 institutions who use facilities through I-STEM
- Promoting the indigenous development – especially by startups – of scientific equipment and value-added technical supplies, including software, used for R&D; enabling such development via the (national) Digital Catalogue of indigenously developed technologies and products maintained by the I-STEM portal
- Establishing regional centres for providing technical training and skill development, in part by restoring/stripping R&D equipment written off by I-STEM institutions; thus developing a stream of talent and gainful employment through maintaining and upgrading R&D facilities
- Providing access through the web to R&D software platforms to Academic Users to promote R&D and more effective instruction/learning, especially in smaller institutions.

The infographic also shows a circular flow diagram with the following components: Indigenous Equipment Development, Skill Development Program, User friendly R&D facilities access across the country, Partial funding to Institution, Researchers and Start-ups, and Software Services through I-STEM.

- For exchanging R&D (Research and Development) facilities, there is a national web platform called I-STEM.
- The portal enables researchers to share the specifics of the results, such as patents, publications, and technologies, as well as to obtain slots for the use of equipment.
- It was launched in January 2020. It is a project of the Prime Minister Science, Technology, and Innovation Advisory Council (PM-STIAC) mission, which is overseen by the Office of the Principal Scientific Adviser to the Government of India.
- The PM-STIAC is a broad council that enables the Principal Scientific Adviser's Office to evaluate the situation in particular scientific and technology domains, understand current difficulties, design targeted solutions, create a vision for the future, and advise the Prime Minister appropriately.

What is the relevance of WEST?

- This programme will assist women who have taken a professional break in S&T fields to return.
- The program will fill the significant deficiencies in the nation's R&D infrastructure.
- There will be a robust network established to support female entrepreneurs in S&T.
- I-STEM will give female researchers a place to discuss their findings, problems, and strategies for moving the nation forward through innovation, science, and technology.
- Through the I-STEM platform, women can start their own businesses and work as consultants for the upkeep and operation of expensive equipment and devices.
- This would help close a "skills gap" and make proper use of equipment that was purchased with public money.

Way Forward

- I-STEM must collect feedback in order to track the effects of the effort.
- To boost the number of women participating in WEST and I-STEM, measures must be taken.

Development processes and the development industry —the role of NGOs, SHGs, various groups and associations, donors, charities, institutional and other stakeholders.

NON-COMMUNICABLE DISEASES LED TO 66% OF DEATHS IN INDIA IN 2019: WHO

Priority: Medium



Primary Source: Indian Express

Prepp Prelims Booster: NCD

Prepp Mains Booster: Issues Relating to Development and Management of Social Sector/Services relating to Health, Education, Human Resources

Why in the News?

- According to a recently released World Health Organisation (WHO) report: 'Invisible numbers – the true scale of non-communicable diseases' – non-communicable diseases (NCDs) caused around 66% of deaths in India in 2019.
- India related data:** Over 60.46 lakh people died due to NCDs in India in 2019. There was 22% probability of death between the age of 30 and 70 due to any type of NCDs, including cardiovascular diseases, diabetes, cancer or chronic obstructive pulmonary disease.
- Over 25.66 lakh deaths in 2019 in India were due to cardiovascular diseases while 11.46 lakh deaths were due to chronic respiratory diseases. Cancer caused around 9.20 lakh deaths, while diabetes caused around 3.49 lakh deaths.
- Global Data:** Globally, one in three deaths i.e. around 17.9 million a year was due to cardiovascular diseases (CVDs). 86% of those deaths occurred in low- and middle-income countries. These deaths could have been prevented or delayed through prevention and treatment.
- Major shift in public health:** NCDs as a public health emergency in slow motion and this shift has occurred over the last decade and has gone largely unnoticed. The NCDs affect all countries, all genders, all social classes and all stages of life.
- NCDs and COVID-19:** Even during the Covid-19 pandemic, severe morbidity and high mortality were seen in persons associated with prior affliction with NCDs.



What are Noncommunicable diseases (NCDs)?

- NCDs also known as chronic diseases, tend to be of long duration and are the result of a combination of genetic, physiological, environmental and behaviours factors.
- The main types of NCDs are cardiovascular diseases (like heart attacks and stroke), cancers, chronic respiratory diseases (such as chronic obstructive pulmonary disease and asthma) and diabetes.

Burden of NCDs and their risk factors in India

- **Four Dominant types of NCDs:** cardiovascular diseases, cancer, chronic respiratory diseases and diabetes make the largest contribution to morbidity and mortality due to NCDs.
- **Behavioural risk factors:** They are responsible for significant proportions of these NCDs— tobacco use, physical inactivity, unhealthy diet and harmful use of alcohol.
- **Major metabolic risk factors:** They are obesity, raised blood glucose, raised blood pressure and raised blood total cholesterol levels.
- **Economic loss:** According to the World Economic Forum (WEF) estimate, by 2030 India stands to lose \$4.58 trillion due to NCDs and mental health conditions.

What is the Socio-economic impact of NCDs?

- **Poverty:** It is closely linked with NCDs and the rapid rise in NCDs is predicted to impede poverty reduction initiatives in low-income countries, particularly by increasing household costs associated with health care.
- **Increases vulnerability:** The vulnerable and socially disadvantaged people get sicker and die sooner than people of higher social positions, especially because they are at greater risk of being exposed to harmful products, such as tobacco, or unhealthy dietary practices, and have limited access to health services.
- **Drain on household resources:** In low-resource settings, health-care costs for NCDs quickly drain household resources. The exorbitant costs associated with NCDs, including treatment, are often lengthy and expensive. These result in loss of income, forcing millions of people into poverty annually and stifle development.

Steps taken by Government

- India is the first country globally to adopt the WHO's NCD Global Monitoring Framework and Action Plan.
- WHO has developed this comprehensive framework and action plan for prevention and control of NCDs. It includes a set of nine voluntary targets and 25 indicators which can be applied across regional and country settings.

The Central Government is implementing various NCD programmes through the State Governments. Some of them are:

- National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases & Stroke (NPCDCS).
- National Programme of Health Care of Elderly (NPHCE).
- National Iodine Deficiency Disorders Control Programme (NIDDCP).
- National Programme for Control of Blindness (NPCB).
- National Mental Health Programme (NMHP).
- National Programme for Prevention and Control of Deafness (NPPCD).
- Pradhan Mantri Swasthya Suraksha Yojana (PMSSY).
- Affordable Medicines and Reliable Implants for Treatment (AMRIT) Deendayal outlets
- Jan Aushadhi stores to provide generic medicines at affordable prices.

Way Forward

- The main focus for addressing NCDs should be behavioural change at the family and community levels, promoting healthy dietary practices, physical activity, prevention of smoking, alcohol and pollution. This requires the holistic engagement of sectors beyond health.
- The multi-sectoral action to deal with NCDs requires tactical partnership between the public and private sectors that can help the government to ameliorate this growing silent health problem.
- This may be achieved by a change in dietary pattern having more fibre and protein and less sugar and starch. Increasing sugary tax on soft drinks and junk food for prevention of diseases such as diabetes.
- There is also a need for robust health system programmes that promote health, detect and control risk factors early and effectively, treat diseases in a cost-effective manner and prevent untimely deaths.
- Government also needs to accord high priority to NCDs in financial allocation and health system strengthening initiatives, with strong emphasis on primary care.

THE EVOLVING ROLE OF CSR IN FUNDING NGOS

Priority: Medium



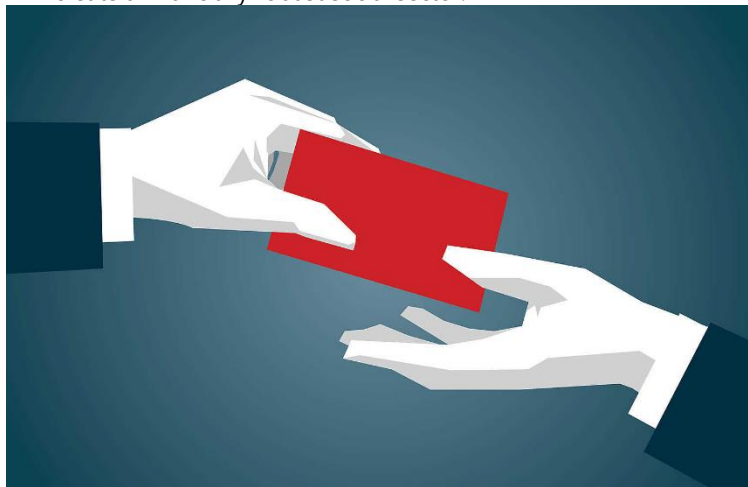
Primary Source: The Hindu

Prepp Prelims Booster: CSR Funding

Prepp Mains Booster: Development processes and the development industry —the role of NGOs, SHGs, various groups and associations, donors, charities, institutional and other stakeholders.

Why in the news?

- The article is based on "The evolving role of CSR in funding NGOs" published in The Hindu on 8th September 2022.
- Pritha Venkatachalam, Partner and Co-Head, Asia and Africa, and Kanika Gupta Senior Associate Consultant, Bridgespan Group surveyed and spoke with over 500 NGOs, funders, and intermediate organisations across India as part of their multi-year **Pay-What-It-Takes-India project** to learn how funders and NGOs perceive an NGO's true expenses and what it takes to create a financially robust social sector.



NGOs played an important role during COVID-19 lockdown working towards combating pandemic-induced challenges such as loss of livelihood for vulnerable communities, food banks, and health and medical support.

What are the funding challenges faced by NGOs in India?

- An NGO focused on improving educational outcomes, for instance, might get financing for books, other online resources, teacher preparation, curriculum development, etc.
- **Under funding:** Indirect and organisational development costs like administrative and support expenditure like rent, power, technology and human resources related costs are not covered.
- The effectiveness and impact of the very programmes that funding sources support are diminished when an NGO's genuine costs are underfunded.
- The pandemic also demonstrated how financially fragile NGOs are. In September 2020, 54% of NGOs lacked reserve finances that were insufficient for more than three months, according to our analysis.
- This percentage was 38% prior to the epidemic. When faced with an unexpected financial shortfall, NGOs are unable to pay employees or expenses without enough reserves.

Other challenges

- Absence of strategic planning
- Poor Governance
- Lack of transparency
- Capacity constraints
- Lack of skilled manpower

- NGOs lack the internal capacity to do a true-cost analysis and don't have defined financial reporting criteria.

The funder archetypes

Three distinct fundraiser archetypes based on a recent survey

- **Programme proponents:** Program supporters place the highest weight on programme results. Program proponents are mostly CSR funders, who currently account for a fifth of all private donations in India.
- **Adaptive funders :** If the NGO demonstrates a case, adaptive funders will support indirect costs and organisational development.
- **Organisation builders :** Investments in stronger organisations are valued by organisation builders in addition to programmes.

What does the research reveal?

- Most of the time, CSR funders make little to no financial contributions to organisational development and set a fixed rate for indirect expenditures that is often around 5%.
- The research revealed that, similar to how a corporation's sales and administration costs vary greatly by industry and product, NGOs' indirect costs range from 5% to 55%, depending on their objective and operating strategy.

Reason behind such stance by CSR donor:

- **Regulatory compliance:** These methods are partially a result of CSR donors' emphasis on regulatory compliance, as the CSR statute will be amended in 2021 to include significant financial penalties for non-compliance.
- A CSR committee is not necessary by legislation for businesses that spend less than 50 lakh yearly on CSR.
- **CSR funders dominated by tiny firms:** Roughly 90% of CSR funders are tiny, unlisted companies. They typically defer to corporation boards, who can have little to no experience working with NGOs or considering social effect, for decision-making and action plans.
- **Priorities:** As a result, their top priorities usually revolve around **cost reduction, compliance, and risk avoidance**.
- **Not managed by Professionals:** Instead of appointing professional leads with experience in the social sector, some larger corporations have incorporated CSR to the duties of their HR, administration, or communications head.
- **Lack of Awareness:** Not every business is aware of every aspect of the CSR regulations they are following.
- For instance, contrary to popular belief, the 5% administrative overhead cost cap only applies to a company's internal CSR operation costs.
- It does not, in fact, apply to the grantee's administrative costs.
- Many CSRs make safety-related mistakes that have the unintended effect of leaving an NGO with unpaid bills or, worse yet, forcing the NGO to use its limited core funding from other donors to cover these necessary expenses.

What needs to be done?

- Companies can **pool resources** with those of other mission-aligned CSR or social sector stakeholders, thereby enhancing the potential impact of their combined efforts.
- They can also **hire or access people with NGOs' experience**.
- The number of charitable collaboratives has more than doubled since 2020.
- Examples include the **Migrants Resilience Collaborative**, which aids migrant workers, and **Revive Alliance**, which provides funding for semi- and unskilled employees.
- Learn from peer organisations:** CSR funders would get knowledge from peers who have various perspectives on organisational development and indirect expenses.
- Example:** For instance, the ASK Group's CSR division, ASK Foundation, works to improve the livelihoods of rural populations.
- Up until four years ago, the ASK provided NGOs with annual programme funds but only covered 5% to 10% of indirect costs and did not cover costs for organisational growth. When that happened, it changed to a multi-year grant-making strategy and began offering up to 20% help for indirect expenditures.
- After the CSR team showed benchmarks showing the higher rates paid by peer CSR organisations and the advantageous effects of a stronger NGO partner on its programme outcomes, the practise changed.
- These peer examples and impact accounts played a big part in helping ASK get the support of the board for modifying its NGO funding policy.

How corporates can help NGOs?

- The legislation currently prohibits CSR programmes from funding the reserves or corpus of NGO's.
- However, by **covering indirect costs and organisational development**, they still help relieving financial pressure and make organisations more resilient.
- In addition to providing funding, corporations also have a lot of accounting and **financial expertise that they may share with NGOs**.
- A corporate that has developed a relationship of mutual trust with an NGO could offer volunteer financial analysis services to help the NGO calculate true costs and build financial resilience.
- For instance, Edelweiss has a structured employee engagement programme where senior and mid-level professionals voluntarily provide MIS, digitisation, cashflow and financial management, and other support free of charge to NGOs.

Conclusion

- According to research, more CSR decision-makers are putting more emphasis on their social impact than on following CSR legislation. In order to achieve this transformation, CSR funders are adhering to a number of themes, including recruiting specialists, forming collaboratives, and establishing and disclosing their impact measurements to hold themselves accountable.
- It is intended to go beyond simply writing checks and acknowledge that, in the end, what is beneficial to Indian society is also beneficial to business.

What is corporate social responsibility (CSR)?

- A firm can use corporate social responsibility (CSR) to ensure that its activities are moral and advantageous for society by incorporating environmental, social, and human development considerations into its planning and actions. CSR has historically been viewed as a charitable endeavour in India.
- However, India is the first nation to have a statutory mandate for CSR for specific corporations thanks to the enactment of Section 135 in the 2013 Companies Act.
- According to the Act, businesses that have a net worth of at least 500 crore rupees, a revenue of at least 1,000 crore rupees, or a net profit of at least 5 crore rupees during the most recent financial year are required to invest 2% of their average net profits over the immediately preceding three years on CSR activities.
- It lists the possible activities as well as the format in which businesses can carry out CSR projects or programs.

Government policies and interventions for development in various sectors and issues arising out of their design and implementation.

SEMICONDUCTOR PLI: SUPPORT FOR 50% OF PROJECT COST CLEARED

Priority: Medium



Primary Source: Indian Express

Prepp Prelims Booster: Production Linked Subsidy, Semiconductors

Prepp Mains Booster: Government policies and interventions for development in various sectors and issues arising out of their design and implementation.

Why in the news?

- Recently, the Union Cabinet approved changes to the Centre's Rs 76,000-crore semiconductor production linked incentive (PLI) scheme, allowing for a uniform fiscal support of 50 percent of project cost for semiconductor fabs across technology nodes and display manufacturing.
- Additionally, it increased the financial assistance for compound semiconductors, packaging, and other semiconductor facilities from 30% to 50%.



What are Semiconductors and why are they important?

- Semiconductors are materials that have a conductivity between conductors (generally metals) and nonconductors or insulators (such as most ceramics).
- Semiconductors can be pure elements, such as silicon or germanium, or compounds such as gallium arsenide or cadmium selenide.

Importance of semiconductors

- Semiconductor chips are the lifeline of the Fourth Industrial Revolution.
- The semiconductor is the heart of any electronic product.
- Electronic products use semiconductor chips to compute and control operations that make our lives easier.
- These semiconductor chips are the engines of ICT development and one of the primary causes of the world's rapid growth in information technology sectors.

What is the significance of the move?

- Earlier, incentives for semiconductor fabs were determined by the node size: nodes between 28 and 45 nanometers (nm) received a 40% support, nodes between 45 and 65 nm received a 30% incentive, and only nodes between 28 and 60 nm received a 50% fiscal incentive. Following the new modifications, regardless of node size, all fab plants will receive financial support of 50%.
- One of the main reasons the government was raising support for these legacy nodes was because it claimed that this segment made up around 50% of the whole semiconductor market.
- The more expensive nodes are often employed for lower-end laptops and desktops, automobiles, and telecom.
- **Attracting Investors:** The semiconductor strategy revisions will spur investors' interest revisions to the semiconductor strategy will spur more interest from investors and new proposal ideas.

- **Integrated semiconductor ecosystem:** The decision was made to harmonize incentives across semiconductor fab plants, display plants, and packaging. Integrated semiconductor ecosystem to be present in India.
- **Security of critical information infrastructure:** Trusted sources of semiconductors and displays are important to the security of critical information infrastructure in the current geopolitical scenario.
- **Skilled employment opportunities:** It will also offer highly skilled employment opportunities in order to harness the country's demographic dividend.
- **Multiplier effect on various sectors:** The development of the semiconductor and display ecosystems will have a multiplier effect on various sectors of the economy as they become more integrated into the global value chain.
- **Electronics manufacturing:** The program will usher in a new era in electronics manufacturing by giving a globally competitive incentive package to companies that manufacture semiconductors and displays, as well as design.
- This shall pave the way for India's technological leadership in key areas of strategic importance, as well as economic self-reliance.

What is the present scenario of Semiconductor manufacturing?

- The supply chain of semiconductor chips is spread over 70 countries, where semiconductor manufacturing capacities are concentrated in a few geographies like Taiwan and South Korea, with nearly 92 percent located in the former.
- Further, 75 percent of the semiconductor manufacturing capacity is concentrated in East Asia and China
- Global Disruption like the China-led COVID-19 pandemic puts every country at a vulnerable state of supply of semiconductor chips for nearly every sector in the economy.

Other announcements by the Union Cabinet

National Logistics Policy

- The National Logistics Policy, which aims to reduce transportation costs and boost the sector's overall performance, was approved by the Union Cabinet.
- The initiative intends to reduce logistics costs in India so that it can meet international standards by 2030.
- It also aims to raise India's position in the Logistics Performance Index from 44th internationally in 2018 and develop data-driven decision support mechanisms for a productive logistics ecosystem.
- The national program on high-efficiency solar PV (photo voltaic) modules received approval from the Union Cabinet for a PLI plan of Rs 19,500 crore, with the goal of drawing Rs 94,000 crore in investment.

Solar PV module

- The solar program aims to lessen India's reliance on imported renewable energy by installing roughly 65,000 MW per year of manufacturing capacity for completely and partially integrated solar PV modules.

- Approximately 2 lakh direct jobs will be created in the sector. About Rs. 1.37 lakh crore in import substitution is predicted to be reduced as a result of the project.

Issues Relating to Development and Management of Social Sector/Services relating to Health, Education, Human Resources

ONLINE DISPUTE RESOLUTION IS AN EXAMPLE OF 'SOCIAL ENGINEERING'



Priority: Medium

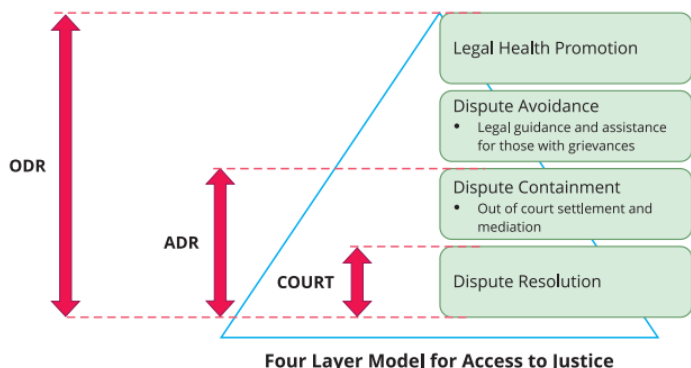
Primary Source: The Hindu

Prepp Prelims Booster: Online dispute resolution

Prepp Mains Booster: Government policies and interventions for development in various sectors and issues arising out of their design and implementation.

Context:

- At the National Law School of India University (NLSIU) convocation, Infosys Chairman and Co-Founder Nandan Nilekani spoke about the value of social engineering and improved informal processes for resolving numerous legal challenges in the nation.
- According to Nilekani, two years after NITI Aayog's push to develop ODRs, more than 16 million disputes have been on-boarded in the nation's online dispute resolution (ODR) systems.
- ODR is presently utilised by more than 100 businesses and 40 government agencies.



What is Online Dispute Resolution (ODR)?

- ODR is the resolution of disputes through the use of digital technology and ADR processes like arbitration, conciliation, and mediation, with a focus on small- and medium-value cases.
- It refers to the method of utilising technology for conflict containment, avoidance, and resolution outside of the conventional legal system.
- It can be offered as a means of resolving disputes both inside and outside of the public court system.
- The potential of dispute resolution processes, particularly those utilising technology, is becoming more widely acknowledged.
- ODR has increasingly gained support from the government, industry, and even the legal system in an effort to get beyond Covid-19's limitations.

Why Do We Need ODR?

- Timely justice:** A significant portion of the population was unable to seek justice in a timely manner as a result of the Covid-19 outbreak. For instance a non-profit organisation by the name of Ajeevika Bureau used ODR to settle over 3,000 salary disputes between migrant workers and their contractors from the pandemic days.
- Lessen the burden on courts:** The pandemic also caused a flood of lawsuits, which added to the already time-consuming legal procedures. ODR has the ability to speed up the resolution of numerous types of cases and lessen the workload on the court.
- Affordable, and effective justice:** It is a game-changing project that will employ technology and innovation to bring quick, affordable, and effective justice to those who needed it most.
- Technology Integration to judiciary:** It may also be integrated to support the judiciary through technology integration in court-annexed Alternate Dispute Resolution (ADR) centres, via e-lok adalats, and also be introduced within Government departments for internal disputes.

Benefits:

- It can reduce unintentional bias that arises from human interactions and is **economical, convenient, effective, and enables** the development of customizable processes.
- ODR can assist in **dispute avoidance, dispute containment, and dispute settlement** in terms of the levels of justice.
- Its extensive application can strengthen the **rule of law in society**, provide greater contract enforcement, and raise India's ranking for **ease of doing business**.
- The advantages of ODR and Digital Courts (technology used in the public court system) could eventually change the way that law is practiced as a whole.

What is the status of ODR in India?

- Governments, authorities, and businesses have all adopted and promoted its use. For instance, platforms inside the UPI ecosystem are required by the National Payments Corporation of India (NPCI) to use the ODR for complaints and grievances relating to failed transactions.
- Other well-known ODR systems in the nation include **MSME Samadhaan** (or the Micro Small and Medium Enterprises Delayed Payment Monitoring System), **SEBI SCORES** (or the Securities and Exchange Board of India SEBI Complaints Redress System), **RBI CMS** (or the Reserve Bank of India Complaint Management System), **MahaRERA** (or the Maharashtra Real Estate Regulatory Authority), and **RTIOnline** (or the Right to Information Online).

Way Forward

- Institutions and systems must be reinvented not only inside the government but also in business and civil society and lack of effective systems and structures affects the poor and marginalised while also widening the opportunity gap.
- The natural consequence of the e-commerce revolution will be disputed. Therefore, it is essential to back this endeavor with a cutting-edge, economical, efficient, and quick dispute resolution system.

- The framework must effectively and appropriately account for factors like participants who live in or operate in several geographic locations and the widespread use of low-value online transactions.

- On November 2021, NITI Aayog released the report '**Designing the Future of Dispute Resolution**: The ODR Policy Plan for India', to scale dispute avoidance, containment and resolution online.
- The implementation of the report's stated suggestions could assist India in becoming a global leader in the successful use of Online Dispute Resolution (ODR) for universal access to justice.
- The report is a culmination of the action plan made by a committee constituted at the peak of the Covid crisis by NITI Aayog on ODR in 2020 and chaired by Supreme Court Justice (Retd) AK Sikri.

legislations that provide legislative backing for the ADR aspect of ODR

- Arbitration and Conciliation Act, 1996 or the Code of Civil Procedure, 1908)
- the technology aspect of ODR (such as the Indian Evidence Act, 1972 and the
- Information and Technology Act, 2000).
- India has also brought into force the United Nations Convention on International Settlement Agreements Resulting from Mediation, 2018.

PANEL FORMED FOR UGC, AICTE TO WORK TOGETHER ON HIGHER EDUCATION POLICIES

Priority: Medium



Primary Source: Indian Express

Prepp Prelims Booster:

Prepp Mains Booster: Issues Relating to Development and Management of Social Sector/Services relating to Health, Education, Human Resources.

Why in the news?

Recently a committee has been formed by the Union Government to develop a plan for the University Grants Commission (UGC) and All India Council of Technical Education (AICTE) to collaborate as an unified regulatory body. This will set the roadmap for the creation of the proposed Higher Education Commission of India (HECI).

What is the Committee formed for?

- A committee has been formed to create a plan for the University Grants Commission (UGC) and All India Council of Technical Education (AICTE) to collaborate as an unified regulatory body.
- The committee is established by the UGC chairperson.
- The committee would initially identify the areas where the two regulators, UGC and AICTE, may collaborate with a shared approach to developing policies and regulations on higher education.

What is Higher Education Commission of India (HECI)?

- The Higher Education Commission of India (HECI) is a proposed regulator for the Higher Education Sector. It is supposed to

Vision of HECI

Less government and more governance:
Downsizing scope of interference and promoting autonomy in good institutions with quality checks

End of inspection raj:
Regulation to be maintained through transparent proactive public disclosure, IT-enabled monitoring systems and merit-based decision-making

Mandate

Provide for mentoring of institutions found to be deficient in academic standards

Specify norms and process for fixing of fee chargeable by institutes and advise states on making education affordable for all

Specify eligibility conditions for appointment of VCs, Pro VCs, chancellors, directors, principals, heads of departments and teaching and non-teaching staff

Structure

HECI will be a 13-member commission with academics on board rather than administrators



It will have on board two vice chancellors - one each from a central and state university, six eminent academicians who should have worked as professors in universities, two academicians from state higher education councils in states/ Union Territories on rotation basis besides the secretary to the higher education department



replace the University Grants Commission (a statutory body), All India Council of Technical Education (AICTE) and other regulator which has been responsible for the maintenance of the standard and disbursement of grant function to higher education in India.

- The purpose of HECI is to serve as a body that establishes common standards for the advancement of education in India.
- In order to review, repeal, and reorganise numerous streams of higher Education, HECI will serve as the sector's common, single point regulator for higher education.
- It is proposed under the Higher Education Commission of India (Repeal of University Grants Commission Act) Bill, 2018.

Objectives:

- HECI seeks to reduce the number of regulatory bodies.
- To reduce government intt in managing educational institutions.
- HECI aims to put higher education institutions subject to more transparent regulation.
- By outlining the many criteria for academic results and performance across all higher education institutions, the HECI promotes public disclosures.

What is the Draft Higher Education Commission of India Bill, 2018?

- The proposed legislation is known as the "Draft Higher Education Commission of India (Repeal of University Grants Commission Act) Bill, 2018".
- In January 2018, it was introduced in the parliament. But The Parliament, however, never passed it.

What are the features of the Draft Higher Education Commission of India Bill, 2018?

Establishment of HECI:

- By repealing the University Grants Commission Act of 1956, the Bill establishes the Higher Education Commission of India.

Coverage of HECI:

- The Bill is applicable to all higher education institutions created by any Act of the Parliament, with the exception of institutions designated as being universities by the government as

institutions of national importance, state legislatures, and institutions deemed to be universities.

Composition of the Commission:

- The proposed law specifies the membership of the HECI, as well as the terms of office for the chairperson, vice chairperson, and 12 members.

Separation of academic and funding aspects:

- HECI will be in charge of ensuring academic quality in universities and colleges
- The Ministry of Education (MoE) will be responsible for funding universities and colleges.

What will be the functions of the commission?

- **Setting up standard:** Upholding intellectual standards within the institution of higher education
- Set standards for curriculum development, teacher preparation, assessment, research, and any other component that affects student learning outcomes in higher education institutions;
- Describe the learning objectives for higher education programmes of study;
- **Performance Evaluation:** Analyze the performance of higher education institutions on a yearly basis in relation to the established standards;
- **Promoting research:** Encourage HEIs to conduct research and work with the government to provide appropriate financing for that research;
- **Conducting Accreditation:** Establish a strong accreditation process that will allow multiple HEIs to evaluate students' academic progress;
- Offer institutions that are deemed to be failing to uphold the necessary academic criteria coaching;
- **Ensuring Adherence to standard:** Order the closure of any institutions that do not meet basic requirements without harming the interests of the students or do not receive accreditation within the allotted time;
- **Establish minimum credit requirements** for institutions awarding degrees, and specify such requirements;
- **Advise the Central Government or any State Government:** Provide advice to the Central Government or any State Government on any matter that they may refer to the Commission for consideration, as the case may be.

What are the issues with the Draft HECI bill 2018?

- **Fear of Political interference:** The structure of the commission is such that it will give executives more say in appointment and thus influencing the decision making regarding education.
- **Vagueness:** The bill is not clear on how shifting the grant-related functions to the ministry will result in less interference of the government in higher education.
- **Fear of Over-regulating and micromanaging of universities:** The HECI is likely to overregulate and micromanage colleges because of its mandate to improve academic standards with an emphasis on learning outcomes, evaluation of academic performance by institutions, and teacher training.
- **Impact on autonomy of the Institution:** The bill proposes to give the Union government the authority to remove the HECI

chairperson and vice-chairperson for reasons such as "moral turpitude" will once more limit the regulators' autonomy, which will have an effect on universities' autonomy.

- **Conflict with Institutions of National Importance:** The proposed HECI Act does not apply to Institutions of National Importance (INIs) which also creates the exception and vagueness.

NAAC'S SYSTEM FOR ASSESSING HIGHER EDUCATION INSTITUTIONS

Priority: Low



Primary Source: Indian Express

Prepp Prelims Booster: NAAC

Prepp Mains Booster: Issues Relating to Development and Management of Social Sector/Services relating to Health, Education, Human Resources.

Context:

- Recently, the National Assessment and Accreditation Council (NAAC), which carries out quality checks or assessments of Indian Higher-level Educational Institutions (HEIs), courted controversy over the rating of the Maharaja Sayajirao University of Baroda and allegations of bribery in the process.
- When the NAAC released the ratings, Maharaja Sayajirao University score changed from A to A+ on the back of improvement across parameters. However, allegations have surfaced when the NAAC is exploring changes in its approach.



NAAC
National Assessment
and Accreditation Council

What is the latest controversy about?

- NAAC had withheld the grading of Maharaja Sayajirao University after receiving an anonymous complaint that the university unduly tried to influence the peer review team with gold, cash and other favours.
- However, later NAAC released the improved grading of Maharaja Sayajirao University, terming the allegations made against the University as "false".

What is the National Assessment and Accreditation Council (NAAC)?

- It is an autonomous body under the University Grants Commission (UGC).
- It was established in 1994 and is based in Bengaluru, Karnataka.
- It assesses and certifies Higher-level Educational Institutions (HEIs) with gradings as part of accreditation.
- Its ratings of HEIs range from A++ to C. If an institution is graded D, it means it is not accredited.
- NAAC's assessment and certification is a multi-layered process. It enables the HEI to learn whether it meets the standards of quality set by the evaluator in terms of curriculum, faculty, infrastructure, research, and other parameters.

How is the NAAC accreditation process carried out?

- Currently, NAAC follows an "input-based" approach for the accreditation process. For this, NAAC relies heavily on self-assessment reports of applicant institutions.
- The first step of this process begins with the applicant institution submitting a self-study report of information related to quantitative and qualitative metrics.
- Then this data is validated by NAAC expert teams, followed by peer team visits to the institutions.

How many institutions in India are accredited?

- There are 1,043 universities and 42,343 colleges listed on the portal of the All India Survey on Higher Education (AISHE).
- As per the latest data, there were around 406 universities and 8,686 colleges accredited by NAAC. Among the states, Maharashtra with 1,869 accounts for the highest number of accredited colleges—followed by Karnataka with 914. Tamil Nadu has the most accredited universities at 43.

GRADE-WISE				TOP FIVE STATES (Accredited)	
Grade	Universities	Colleges	Total	UNIVERSITIES	COLLEGES
A	224	1,778	2,002	Tamil Nadu 43	Maharashtra 1,834
B	165	5,831	5,996	Uttar Pradesh 37	Karnataka 881
C	17	1,077	1,094	Maharashtra 35	Tamil Nadu 829
				Karnataka 33	Uttar Pradesh 604
				Rajasthan 31	Gujarat 492
Total	406	8,686	9,092		

Benefits of NAAC accreditation

- It helps to give recognition to institutions
- It helps them attract capital as funding agencies look for objective data for performance funding.
- It helps them know their strengths, weaknesses, and opportunities through an informed review process.
- It helps students opting for higher education abroad as many global higher education authorities prefer recognition and accreditation of the institution where the students have studied.

Reforms in accreditation process

- Role of peer team visits:** Academic advisory committee and the advisory council of NAAC have proposed reducing the role of the peer team visits in its overall accreditation scheme. These visits should be also made facilitatory in nature and without having a significant weightage in assessment and accreditation.
- Outcome-based approach:** NAAC is also planning to adopt an "outcome-based approach" replacing prevailing "input-based" approach.
- Evidence based Outcomes:** NAAC rather than relying exclusively on the self-study reports of the HEIs, should ask institutions to provide evidence such as samples of learning materials, continuous assessment tasks and final examinations to show they have outcomes of learning specified in the syllabus.
- Strict Implementation:** The accreditation has been made mandatory through the UGC (Mandatory Assessment and Accreditation of Higher Educational Institutions) Regulations, 2012. Despite this some HEI's voluntarily opt out applying for evaluation due to the fear of obtaining a poor grade or no accreditation at all.
- Paramarsh Scheme:** It was launched by UGC in 2011. Under it, some of the best performing institutes were identified to serve as mentors to at least five institutes aspiring to get accredited.
- Emphasis on skills and academic abilities:** NAAC's current system of accepting the claim of a PhD candidate that his thesis is of high quality. Instead, it should give emphasis to find out if students are equipped with relevant skills and academic abilities.

384 DRUGS ON ESSENTIAL MEDICINES LIST

Priority: Medium



Primary Source: The Hindu

Prepp Prelims Booster: NLEM

Prepp Mains Booster: Government policies and interventions for development in various sectors and issues arising out of their design and implementation; Issues relating to development and management of Social Sector/Services relating to Health, Education, Human Resources

Context:

- Recently, the National List of Essential Medicines (NLEM) was released by the Union health ministry on 13th September.
- It added 34 new medicines and dropped 26 old ones from the previous list.
- On NLEM 2022, 384 medications are listed under 27 different therapeutic categories. The initial NLEM was created in 1996, and it underwent three revisions in 2003, 2011 and 2015. The revised list came after a gap of 7 years.



Core medicine needs

■ The pricing of essential medicines is regulated by the National Pharmaceutical Pricing Authority

■ The new list includes four drugs that are still under patent — bedaquiline and delamanid used in the treatment of drug-resistant tuberculosis

resistant tuberculosis, dolutegravir used to treat HIV infection, and daclatasvir used in treating viral infections such as Hepatitis C

The list has 384 drugs across 27 categories

■ No drugs used specifically for the treatment of COVID-19 have been included in the list

Several antibiotics, vaccines, anti-cancer drugs and many other important drugs would become more affordable, and the "out-of-pocket expenditure" on health care would come down —MANSUKH MANDAVIYA, Health Minister

What is the National List of Essential Medicines (NLEM)?

- As per the World Health Organisation (WHO), Essential Medicines are those that satisfy the priority health care needs of the population.
- The list is made with consideration of disease prevalence, efficacy, safety, and comparative cost-effectiveness of the medicines.
- Such medicines are intended to be available in adequate amounts, inappropriate dosage forms, and strengths with assured quality.
- They should be available in such a way that an individual or community can afford them.
- The WHO Essential Medicines List (EML) is a model list. The decision about which medicines are essential remains a national responsibility based on the country's disease burden, priority health concerns, affordability concerns etc.
- The Ministry of Health and Family Welfare, Government of India, hence prepared and released the first National List of Essential Medicines of India in 1996 consisting of 279 medicines.

What is the Significance?

- Better monitoring:** Pharmaceuticals designated under NLEM, also known as scheduled drugs, will be less expensive because the National Pharmaceutical Pricing Authority (NPPA) caps medicine costs and only permits revisions based on wholesale price index-based inflation.
- They represent 17–18% of the local pharmaceutical market, which is thought to be worth 1.6 trillion rupees. Companies who offer non-scheduled medications have the ability to increase prices by up to 10% annually.
- The department of pharmaceuticals under the ministry of chemicals and fertilizers typically adds newly issued NLEM to the Drug Price Control Order after which the NPPA regulates the price.
- Lowering out-of-pocket expenditure:** In addition to lowering "out-of-pocket expenditure" on healthcare, several vital drugs such as antibiotics, vaccinations, and anti-cancer medications would also become more inexpensive.
- Encourage the prudent use of medications: The NLEM's main goal is to encourage the prudent use of medications while taking into account their three key components: cost, safety, and efficacy.

- Accessibility:** This will increase the availability of high-quality, affordable medications and help to lower the amount of money that residents must pay out of pocket for healthcare.
- This is crucial since the National Health Accounts Estimates 2018–19, which was just issued, indicate that a high burden on households to pay for healthcare is a major factor contributing to Indians' poverty.
- Formulation of pharmaceutical policies:** Additionally, it aids in the formulation of pharmaceutical policies and the formulation of drug procurement policies, health insurance, better prescribing practices, and medical education.
- It also aids in the **best use of healthcare resources and budget.**

When is a medicine dropped from NLEM?

- If drugs with greater **cost-effectiveness, safety profiles, or efficacy** become available, they are also removed from the list.
- Additionally, a disease burden that a drug is approved for gets removed from the NLEM if it is **no longer a national health concern.**
- Antimicrobials** are removed from the list if the **resistance pattern has made them useless.**
- Medicines that are **prohibited in India and those with safety profile reports** are among the substances removed from the NLEM.

Drugs added to the list

- Bedaquiline, delamanid, dolutegravir, and daclatasvir, which are used to treat viral infections like Hepatitis C, as well as dolutegravir, which is used to treat human immunodeficiency virus (HIV) infection, are among the **four drugs still covered by patent on the new list**, according to the Health Ministry.
- With their inclusion on the list, a number of **antibiotics, vaccines, and anti-cancer medications** will become more inexpensive. The additions include mupirocin, nicotine replacement therapy, and ivermectin.
- The list now includes the hormone-regulating drugs fludrocortisone, ormeloxifene, insulin glargine, and teneligliptin.
- On the list are the **ophthalmological drug** latanoprost and the respiratory tract medication montelukast.
- Dabigatran and tenecteplase, two medications used in cardiovascular and palliative care, are also included on the list.
- The expensive, successful treatments for a variety of malignancies have not been included in the list with regard to cancer.
- Teneligliptin and insulin glargine have been added to the diabetes area, which is a good thing. However, in light of the diabetes epidemic in the nation, it was necessary to add more synthetic insulins and other types of oral antidiabetics.

PREVENTIVE DETENTION ROSE IN 2021

Priority: Medium



Primary Source: The Hindu

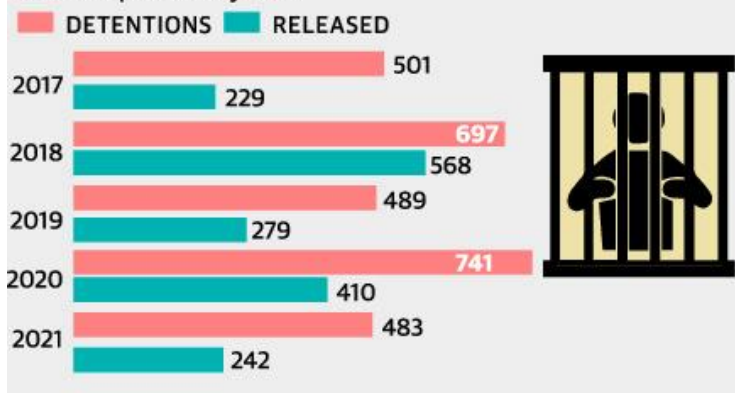
Prepp Prelims Booster: Indian polity

Prepp Mains Booster: Governance, Constitution; Challenges to internal security through communication networks

Context:

According to data issued last month by the National Crime Records Bureau (NCRB), the number of people held under preventive detention increased by over 23.7% in 2021 compared to the previous year, totaling over 1.1 lakh.

Behind bars | A look at the number of preventive detentions under the National Security Act over the past five years

**What is preventive detention?**

- Preventive detention refers to the detention of a person who has not yet committed a crime but is deemed a threat to law and order by authorities.
- Preventive detention existed in India even during British rule.
- The Bengal State Prisoners Regulation of 1818 and the Defence of India Act of 1939 allowed preventive detention.

What do the numbers say?

- Since 2017, there have been more people detained; this number rose to over 98,700 in 2018 and over 1.06 lakh in 2019, before falling to 89,405 in 2020.
- While the number of people held in preventive detention rose in 2021, the NCRB statistics revealed **a sharp decline in the number of people detained** in this way under the **National Security Act** compared to the previous year.
- In 2020, the number of preventive detentions under the NSA rose to 741. In 2021, this number fell to 483.
- The **Goonda Act (State and Central) (29,306)**, the **Prevention of Illicit Traffic in Narcotic Drugs and Psychotropic Substances Act, 1988 (1,331)**, and a category referred to as "Other Detention Acts," under which the majority of the detentions were registered, are among the other laws for which the NCRB has recorded data on preventive detentions (79,514).
- The "Other Custody Acts" category has continuously seen the biggest number of people placed under preventative detention since 2017.
- The **Maharashtra Control of Organized Crime Act and the Unlawful Activities (Prevention) Act**, also permit the use of preventive detentions.
- The police are authorized to make preventive arrests under **Section 151 of the Code of Criminal Procedure** if they feel it is

necessary to do so in order to stop the commission of "any cognizable offense."

- If necessary "under any other provisions of this Code or of any other legislation," this detention may be **kept for longer than 24 hours**.

Related Constitutional Provisions

- Article 22** protects people who have been arrested or detained.
- Article 22 is divided into two parts: the first part deals with ordinary law cases, and the second part deals with preventive detention law cases.
- The **second part of Article 22 protects people who have been arrested or detained under a preventive detention law**.
- This protection is available to both citizens and non-citizens and includes the following provisions:
 - A person's detention cannot be extended beyond three months unless the advisory board reports sufficient cause for such an extension. The board will be made up of high court judges.
 - The detention should be informed of the reasons for his or her detention. However, facts deemed to be in the public interest must not be disclosed.
 - The detention should be given the opportunity to appeal against the detention order.

Article 22 also empowers the Parliament to prescribe:

- the circumstances and classes of cases in which a person can be detained for more than three months under a preventive detention law without seeking the advice of an advisory board;
- the maximum period for which a person can be detained in any classes of cases under a preventive detention law; and
- the procedure to be followed by an advisory board in an inquiry.
- The 44th Amendment Act of 1978 reduced the period of detention without obtaining an advisory board's opinion from three to two months.
- However, because this provision has not yet been implemented, hence the original three-month period remains in effect.

Parliament enacted the following preventive detention laws:

- Preventive Detention Act, 1950. It became expired in 1969.
- Maintenance of Internal Security Act (MISA), 1971. It was repealed in 1978.
- Conservation of Foreign Exchange and Prevention of Smuggling Activities Act (COFEPOSA), 1974.
- The National Security Act of 1980 (NSA).
- The Prevention of Black Marketing and Maintenance of Supplies of Essential Commodities Act (PBMSECA) of 1980.
- Terrorist and Disruptive Activities (Prevention) Act of 1985 (TADA). It was repealed in 1995.
- Prevention of Illicit Traffic in Narcotic Drugs and Psychotropic Substances Act (PITNDPSA) of 1988.
- Prevention of Terrorism Act (POTA), 2002. It was repealed in 2004.
- Unlawful Activities (Prevention) Act of 1967 (UAPA). It was amended in 2004, 2008, 2012, and 2019.

Goonda Act

- According to the Goonda Act, the government has the right to hold a person in custody for up to a year "in order to prevent

him from acting in any manner harmful to the maintenance of public order."

A "Goonda" is said to be "acting in any manner injurious to the maintenance of public order" if they are engaged in any goonda-related actions that negatively affect or are likely to negatively affect maintaining the peace.

INTERNATIONAL RELATIONS

India and its neighborhood- relations, Bilateral, regional and global groupings and agreements involving India and/or affecting India's interests. Effect of Policies and Politics of Developed and Developing Countries on India's interests, Important International Institutions, Agencies and fora - their Structure, Mandate.

STEPPING UP TO THE WORLD

Priority: Medium



Primary Source:

Prepp Prelims Booster:

Prepp Mains Booster: Effect of Policies and Politics of Developed and Developing Countries on India's interests.

Context:

The scholar has highlighted the shift in India's foreign policy to emerge as Global leader in International politics. Indian policymaking has often been criticized for its moral indecisiveness, diplomatic reticence, and ideological confusion. However, India is going to be the next President of the G20 in 2023. This provides a perfect opportunity and beginning for India for the next anniversary era.

What is a Foreign Policy?

- The set of values, interests, and objectives that a nation promotes in its dealings with other nations is known as its foreign policy.
- The goals and actions of a state's external policy, sometimes known as its foreign policy, in regard to its dealings with other states, unions, and other political bodies, whether bilaterally or through multilateral platforms (as opposed to its internal or domestic policy).
- It claims that a government's foreign policy may be influenced by "domestic factors, the policies or behaviour of other states, or plans to achieve specific geopolitical ideas."

What are the principles guiding India's Foreign Policy?

- India's foreign policy is mostly driven by **national interests, territorial integrity, and economic development**. **National security** continues to be the fundamental motivator. Furthermore, a subtle balancing of interests and principles forms the foundation of India's foreign policy.
- Other driving factors include the desire to improve the country's international standing and the urge to benefit others. For instance, during Pandemic COVID-19, India helped more than 90 countries.

What is the evolution of India's Foreign Policy?

During Cold war Period:

- India had a strong sense of equality during the Cold War, believing that its independence would be incomplete without the emancipation of Asia and Africa.
- India has frequently served as a leader and a balancer. India served as the G77 and the Non-Aligned Movement's leader throughout the Cold War.
- India continued to be close to the West while displaying its capacity for cooperation and communication with the "other" side, namely Russia and China.
- India has given its immediate neighbours the utmost attention ever since it attained independence. As an illustration, consider India's assistance in liberating Bangladesh and its military actions in Sri Lanka and the Maldives.
- Due to the history of hostilities between China and Pakistan, India's foreign policy has mostly concentrated on these two countries.

During Post-Cold War Era:

- India has devoted more time and resources to carefully nurturing its relations with major countries including the US, EU, particularly France and Germany, the UK, Japan, Russia, and China after the end of the Cold War.

After 2014:

- From an economy that struggled to feed its inhabitants until the 1960s, India has grown to become the world's fifth-largest economy.
- India now maintains connections with nations throughout the world, including those in the South Pacific, Southeast and South Asia, other areas of Asia, Europe, the Indian Ocean region, Africa, North America, and Latin America. India is demonstrated to be both a big player and one of the aspirants on the international stage.
- Not one of the neighbours has been disregarded. Equations, for instance, are great with Bhutan, Bangladesh, and the Maldives.
- India is currently a prominent UN member, a frequent G7 invitee, a founding member of the BRICS, and a significant player in the G20. India has also grown to be a significant stakeholder.

What obstacles face India's international standing?

- Since the Covid-19 epidemic, India's relationships with its neighbours, including Afghanistan, Nepal, and Sri Lanka, appear to have changed.
- The SAARC and BIMSTEC organisations are not operating at their potential. Despite India's rising GDP and its IT prowess, the UN Security Council's permanent membership doors are still closed.

What is the importance of Indo-Pacific in India's Foreign policy?

- India's foreign policy has made the Indo-Pacific region one of its main diplomatic battlegrounds. For instance,
 - India is firmly pushing back against China with its continued focus on the ASEAN Grouping, notwithstanding the setback of its exit from the RCEP.
 - In addition, India is collaborating with groups like the Quad, AUKUS, the Indo-Pacific Economic Framework, Partners in the Blue Pacific, etc. because there is a heated rivalry between China and India and the United States in the Indian Ocean region (IOR).

- In order to expand collaboration in maritime activity, economic development, and the blue economy, India also concentrates on Africa's eastern and southern flanks.
- Additionally, the I2U2 (India, Israel, U.S., UAE) was established to advance relations between Israel and the UAE, the United Arab Emirates, and India.

What needs to be done?

- In terms of developing foreign policy, the Ministry of External Affairs has more than ever before benefited from the support of academics, think tanks, civil society, and the media. This shows how developed and sophisticated Indian democracy is.

GORBACHEV AND INDIA

Priority: Medium



Primary Source: Indian Express

Prepp Prelims Booster: Cold war

Prepp Mains Booster: Bilateral, regional and global groupings and agreements involving India and/or affecting India's interests

Context:

Recently, Mikhail Gorbachev, who successfully brought an end to the Cold War without any bloodshed but was unable to stop the Soviet Union's demise, passed away.



Mikhail Gorbachev

- The last Soviet leader, Mikhail Gorbachev, worked to bring about the **reunification of Germany by negotiating arms reduction agreements with the United States** and forming alliances with Western nations.
- In contrast to previous Kremlin leaders who had sent tanks to put down uprisings in Hungary in 1956 and Czechoslovakia in 1968, he **refrained from using force when pro-democracy protests** swept across the Soviet bloc countries of communist Eastern Europe in 1989.
- However, the protests fueled a chaotic **disintegration of the Soviet Union's 15 republics** over the course of the next two years.

- His "**glasnost**" (**free speech**) policy encouraged **nationalists to push for independence** in the Baltic republics of Latvia, Lithuania, Estonia, and elsewhere while also allowing previously unthinkable criticism of the party and the state.
- Many Russians never forgave Gorbachev for the unrest his reforms caused because they believed the subsequent decline in their standard of living was too great a cost to pay for democracy.

Gorbachev and India

Gorbachev, who served as the last president of the former Soviet Union from 1985 to 1991, was adamant about forging closer ties with India. He made two trips to India while in office: the first was in 1986 and the second was in 1988.

1986

- In 1986, Rajiv Gandhi was prime minister when Gorbachev made his first trip to India. His visit coincided with a period of intense security concerns for India along its borders with China and Pakistan.
- Gandhi and Gorbachev had joined forces at the time to exert pressure on the US regarding nuclear arms issues.
- The visit had special significance for India because it was an effort to counter Pakistan's growing ties to the US.
- The Washington Post reported that Gorbachev's trip to India was his first official visit to an Asian nation.
- Although no new security agreements between India and the Soviet Union were signed during the visit, both leaders issued the "**Delhi Declaration,**" in which they demanded a **ban on chemical weapons, all weapons in outer space, and nuclear testing.**
- According to Indian officials, they were able to address the security threat posed by Pakistan and China, as The New York Times had previously reported. Gorbachev said that Moscow wanted to work with Islamabad to reduce tensions rather than directly addressing the Pakistan issue.

1988

- Many Indians were left wondering how their nation would fit into Gorbachev's plans as he worked to strengthen ties with the US. At the time, he was widely accused of having abandoned developing countries.
- Gorbachev received the Indira Gandhi Prize for Peace, Disarmament, and Development while he was in town. Additionally, he concluded the Soviet cultural festival that India hosted in his honour.

Post-1991

- India's foreign policy was reset following the fall of the Soviet Union, and with the **aid of economic liberalisation**, New Delhi started to mend relations with the US.
- However, **Russia**, led by President Vladimir Putin, was one of the nations that **did not condemn or impose sanctions on India** when it **conducted nuclear weapons tests in 1998.**

- According to some Russian commentary, India informed the Soviet Union in advance that it planned to conduct a nuclear device test in 1974. The Soviet Union made a valiant effort to prevent it. Additionally, it attempted to persuade India to ratify the Non-Proliferation Treaty (NPT).
- However, despite India aligning its strategic goals with those of the US and other Western countries, and more importantly, diversifying its arms purchases, bilateral relations did not prosper during the first ten years of this century.
- India is one of the few nations that **has remained "neutral" in 2022**, a year in which Putin declared war on **Ukraine**, drastically altering geopolitical decisions made throughout the world.
- India has called for a cease-fire and diplomatic efforts to end the conflict peacefully.
- India **defied US-led Western sanctions** in order to trade for Russian oil.

What is cold war?

A period of geopolitical tension between the United States and the Soviet Union, as well as their respective allies, the Western Bloc and the Eastern Bloc, is commonly referred to as the Cold War.

Cold war 1.0

- India remained ostensibly non-aligned throughout Cold War 1.0. New Delhi was actually much closer to Moscow than it was to Washington.
- India refused to support a US-sponsored resolution denouncing the Soviet invasion of Hungary, and it later remained silent as the Soviets invaded Czechoslovakia.
- In return, the Soviet Union supported India in its conflicts with Pakistan and, more importantly, sold it military hardware, providing between 70 and 80 percent of it during the Cold War and up to 70 per cent today.
- Since the end of the Cold War, New Delhi has made an effort to diversify India's allies, particularly by enlarging ties with the United States, but it still heavily relies on Russia for military supplies.

China and India

- Many people think that China's and India's responses, two other major world powers, will determine whether Putin is successful in Ukraine.
- With India's backing, Putin would gain legitimacy, and China's support would lessen the devastating effects of US sanctions.
- With favourable demographic trends, India has become one of the world's most powerful economies in recent decades.
- In an effort to organise Eurasia's economies in Beijing's favour, China has constructed island fortresses in international waters, asserted sovereignty over sizable portions of land outside of its borders, and started extensive infrastructure projects.
- Since 2008, Russia has invaded two sovereign countries and made numerous attempts to undercut western democracies.

Multipolarity

- To make matters worse, Iran appears to be on the rise as well, increasing its influence over a large portion of Yemen, Syria, Lebanon, and Iraq.
- **Iran:** A potential conflict's stakes are also exponentially raised by the fact that, with the exception of Iran, whose developing nuclear programme causes the West great concern. These differences in ambition and power represent the multipolarity of our current world order at this time.
- **The idea that there are two emerging world orders:** one supported by the **US and its allies** and based on the idea that democracy makes the world more peaceful, and another supported by **China, Russia, and India** and based on the idea that systemic disruptions are part of the natural order.
- China and Russia are the main opponents of Western orders right now as a result of their recent deeds, but it is important to recognise the influence of nations like India and Iran.
- The stakes of the game are constantly increasing as nations form various blocs and alliances.

Cold war 2.0

- The US and Russia have taken opposing positions on a variety of issues in the first two decades of the twenty-first century, including NATO expansion, involvement in the Middle East, and Russia's alleged cyberwarfare against Washington.
- For the first time since the fall of the Soviet Union, Russia poses a serious security threat to US interests, putting the two countries at odds once more.
- The US and its allies appear to be aware of the threat posed by the shifting global order, where authoritarianism and economic coercion are replacing liberalism and capitalism.
- Recognizing this, Joe Biden described the US-China rivalry as a component of a larger conflict between democracy and autocracy during his first press conference as president.
- A new Cold War might take many different forms. The most likely scenario is the development of a loose alliance between **China, Russia, and Iran to challenge American hegemony.**
- If the invasion of **Ukraine by Russia is followed by a Chinese invasion of Taiwan or a nuclear-armed Iran**, the three nations could destabilise the West without formally uniting to do so.
- In addition, if India abandons non-alignment in practice, if not in theory, it could control which way the pendulum swings.
- This result is by no means guaranteed, but it is likely enough to challenge accepted wisdom and usher in a new era of great power competition.

INDIA-NEPAL MOU ON BIODIVERSITY CONSERVATION AND PROTECTION OF TRANSBOUNDARY PROTECTED AREAS

Priority: Medium

Primary Source: PIB



Prepp Prelims Booster:

Prepp Mains Booster: Bilateral, regional and global groupings and agreements involving India and/or affecting India's interests; Conservation

Context:

Recently, the Union Cabinet meeting chaired by the Prime Minister approved the signing of Memorandum of Understanding (MoU) between India and Nepal in the field of biodiversity conservation and protection of transboundary protected areas.

What are the key features of the MoU?

- It aims to strengthen and enhance the coordination and cooperation between both countries in the field of forests, wildlife, environment, biodiversity conservation and climate change.
- It will also strengthen cooperation for restoration of corridors and interlinking areas and share knowledge and best practices between the two countries.
- It will help for better conservation of tigers, elephants and rhinos.
- It will aid immensely in tackling illegal trafficking due to improved information sharing.

**Why is there a need for cooperation?**

- India and Nepal share over 1,850 km long border, which touches five Indian states – Uttarakhand, Uttar Pradesh, Bihar, West Bengal and Sikkim. The joint border between both countries includes many border wildlife habitats. For example
- Dudhwa Tiger Reserve in Uttar Pradesh connects with Shukla Phanta National Park in Nepal.
- Valmiki Tiger Reserve in Bihar connects with Chitwan National Park and Parsa Wildlife Sanctuary in Nepal.

What are Transboundary Protected Areas (TPAs)?

As per IUCN, TPA is an area of land and/or sea that straddles one or more borders between states, and whose constituent parts are dedicated to protection and maintenance of biological diversity through legal or other effective means.

Importance of TPAs

- Ensure long-term persistence of viable populations of species.

- Build greater ecological integrity by increasing the size of the area under conservation management.
- Maintain and strengthen ecosystem resilience in the face of climate change.
- Enhance cooperation in transboundary and tourism planning.
- Offers cultural heritage benefits as many protected areas have significant spiritual and cultural values.

India has TPAs with Nepal and Bhutan

- **Kanchenjunga Conservation Area:** It is located in the northeast corner of Nepal near the border with India and Tibet.
- **Terai Arc Landscape (TAL):** It is spread across the Indian states of Uttarakhand, Uttar Pradesh and Bihar and low lying hills of Nepal.
- **Sacred Himalayan Landscape:** Its 74% area falls in Nepal, 25% falls in Sikkim and remaining falls in Bhutan.
- **Transboundary Manas Conservation Area:** It is a transboundary landscape across Eastern Himalayas, connecting Bhutan and Northeastern states of Assam and Arunachal Pradesh.

INDIA, BANGLADESH DISCUSS RIVER WATER SHARING ISSUES

Priority: Medium



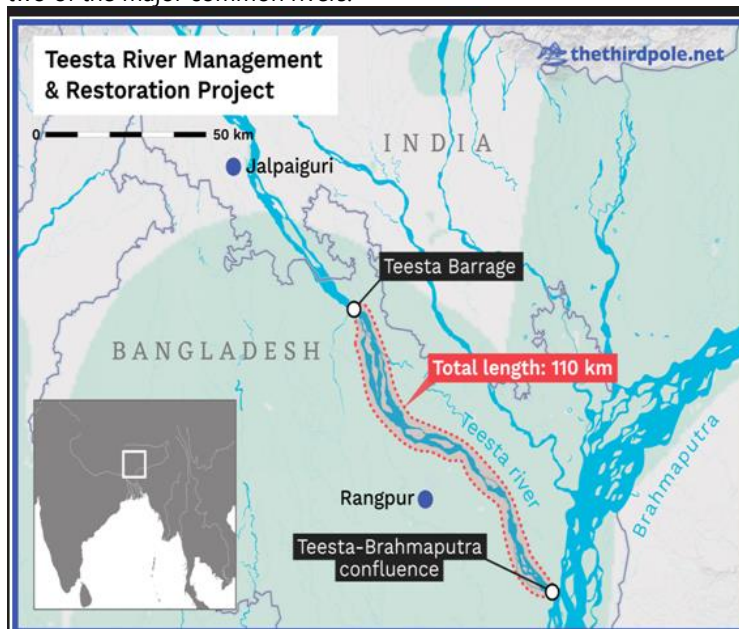
Primary Source: The Hindu

Prepp Prelims Booster: India - Bangladesh

Prepp Mains Booster: India and its neighborhood- Relations

Context:

The Joint River Commission (JRC) convened its 38th meeting, during which India and Bangladesh reviewed a wide variety of issues pertaining to various smaller rivers as well as the Ganga and Teesta, two of the major common rivers.

**Background**

- There are **54 transboundary rivers** between India and Bangladesh, all of which are a part of the Ganga-Brahmaputra-Meghna (GBM) basin's drainage system.

- Bangladesh's ability to sustain food and water security depends on the Padma (the Ganga), Jamuna (the Brahmaputra), and Meghna (the Barak) and their tributaries.
- When Bangladesh was still part of East Pakistan, there were disagreements between India and Bangladesh about the allocation of water resources. India started building the **Farakka Barrage** in 1961; it would be operational by April 1975.
- The barrage's purpose was to redirect some of the dry-season flow and improve the port's navigability in Calcutta (now Kolkata).
- The Indo-Bangla Treaty of Friendship, Cooperation and Peace, which was signed on March 19, 1972, created the Joint River Commission, a two-way working body. It was constituted in November 1972.
- The **Ganga Waters Treaty** was signed by **Prime Minister H.D. Deve Gowda and PM Hasina** on December 12, 1996.
- In an agreement made in October 2019, Bangladesh and India agreed that India could withdraw 1.82 cubic feet per second of water from the Feni River in order to supply Sabroom, a town in the Tripura region of India, with drinking water.
- However, the MoU continues to raise concerns in Bangladesh about potential negative effects on the country's Muhuri-Feni Irrigation Project.

38th Joint River Commission (JRC)

- The JRC had finished drafting the MoU on the interim water sharing of the Kushiya river.
- The **Ganga, Teesta, Manu, Muhuri, Khowai, Gumti, Dharla, Dudkhkumar, and Kushiya** were among the many rivers that the two countries share that were covered during the JRC meeting.
- The **River Interlinking Project of India**, work to protect riverbanks, common basin management, and other topics were also discussed by the two parties.
- The Bangladeshi side asked for the long-delayed **Teesta Waters Sharing Treaty** to be finished as soon as possible.
- The Indian side pledged to make every effort to reach an accord.
- The **JRC meeting, which was held after a 12-year hiatus**, decided to exchange data and information about a few more common rivers in preparation for the draft framework of an interim water sharing agreement.
- The feasibility assessment for the best use of the water acquired by Bangladesh under the terms of the **Ganges Water Sharing Treaty, 1996**, was agreed to by both parties.

Concerns

- **Transboundary river issues:** Bangladesh is a lower riparian nation that is inherently sensitive to transboundary river issues, and the Teesta water sharing agreement is currently the key to bettering relations between India and Bangladesh.
- Between 1983 and 1985, a temporary agreement on the sharing of **Teesta water** was in place.
- India was expected to receive 39% of the flow volume under the terms of the deal, while Bangladesh was to receive 36%. After the end of that agreement, no further agreement or treaty has been signed.

- The main source of disagreement between India and Bangladesh is the Teesta River's lean season flow into Bangladesh.
- **Opposition of West Bengal:** In 2011, India decided to divide the Teesta's waters 37.5% evenly, while keeping 42.5% of them for its own use from December to March, when the river is at its lowest level. Mamata Banerjee, the chief minister of West Bengal, vehemently opposed the agreement, so the deal was never finalised.
- **Role of China:** Bangladesh has attempted to court China in an effort to gain leverage over India due to the latter's stubbornness, and the country was "considering a proposal from China to dredge and embank huge stretches of the Teesta River so that it formed a single manageable channel."
- India had objected to the project because it did not want Chinese workers to be close to the "Chicken Neck" route at Siliguri, which connects the northeastern part of India to the mainland.

Conclusion:

- Bangladesh is an important neighbor of India, sharing a common history, culture, religion, and many other characteristics.
- This issue is still seen as a long-term pain perpetrated by India in Bangladesh.
- Bangladesh's support is vital to India, and without similar open regimes in neighboring countries, India will never be free of terror.
- Given Bangladesh's strategic importance and India's role as a responsible upper riparian state, India must take proactive steps to ensure the river disputes are completed as soon as possible.

India-Bangladesh relations

In 2021, Both India and Bangladesh celebrated **50 years of the establishment of their ties**.

Economic cooperation

- Bangladesh is India's most important South Asian commercial partner. In 2018-19, India exported \$9.21 billion in goods and services. It has also imported products and services worth \$1.04 billion.
- India offered Duty-Free and Quota Free Access to multiple Bangladeshi products.

Infrastructure Cooperation

- Since 2014, India has granted Bangladesh with three Lines of Credit (LOCs) totaling \$8 billion for the construction of roads, railroads, bridges, and ports. However, only 51% of it has been used due to Bangladesh's delayed project implementation.
- The World Bank refused to fund the Padma bridge's construction. However, India gave LOCs for its construction.

Defence Cooperation

- Army (Exercise Sampriti) and Navy (Exercise Milan) joint exercises are held between the two countries.
- Border Management: India and Bangladesh share a 4096.7-kilometer border, making it India's longest land border with any of its neighbours.
- Following the exchange of ratification instruments in June 2015, the India-Bangladesh Land Boundary Agreement (LBA) became effective.

River Cooperation

- India and Bangladesh share 54 rivers in common. Since June 1972, a bilateral Joint Rivers Commission (JRC) has worked to maintain communication between the two countries in order to maximise the benefits of shared river systems.

Connectivity

- Between India and Bangladesh, three passenger and freight railway services are now operational.
- Both governments are currently restoring two more routes. A notable step forward is the recent Chilahati-Haldibari train link.
- In 2015, the Kolkata-Dhaka-Agartala Bus Service was also inaugurated. The distance between Kolkata and Agartala was decreased from 1,650 kilometres (through the Siliguri route) to just 500 kilometres.
- The 'Maitri Setu' bridge was opened by India and Bangladesh in 2021. It is a 1.9-kilometer bridge connecting Sabroom, India, and Ramgarh, Bangladesh.
- Border Haats, which are held in border regions, help to improve trade and people-to-people connections between India and Bangladesh.
- Agreed to speed up the implementation of the Bangladesh-Bhutan-India-Nepal (BBIN) initiative Motor Vehicles Agreement by signing the Enabling Memorandum of Understanding allowing Bangladesh, India, and Nepal to begin moving goods and passengers, with Bhutan joining at a later date.

Energy cooperation

- The Palatana Power Plant in Tripura currently delivers 600MW of power to India. Bangladesh promised to supply India's North Eastern States with a 10 GBPS internet link in exchange.

Tourism sector

- Bangladeshi's make up a sizable share of India's tourist population. They outnumbered all visitors arriving from Western Europe in 2017.

Medical Cooperation

- Bangladesh has received 9 million doses of Covishield vaccines from India so far.
- Apart from that, Bangladesh also accounts for more than 35% of India's international medical patients.
- Bangladesh alone contributes to more than 50% of India's revenue from medical tourism.

Land Boundary Agreement in 2015

- Under this Agreement, both countries have accomplished a fantastic feat. The disputed islands were swapped between India and Bangladesh.
- This gave residents the option of choosing their home nation. The residents were given citizenship in either India or Bangladesh.

Other cooperation

India-Bangladesh signed MOUs in the field of health, medicine, joint research. Further, they both agreed to exchange knowledge between health professionals of both countries.

THE RETURN OF NUCLEAR WEAPONS ON THE GLOBAL PLATFORM: STRONG NUCLEAR DIPLOMACY BRINGS OPPORTUNITIES FOR INDIA

Priority: Medium



Primary Source: Indian Express

Prepp Prelims Booster: Down to Earth

Prepp Mains Booster: Bilateral, Regional and Global Groupings and Agreements involving India and/or affecting India's interests.

Context:

Recently, the Tenth Review Conference of the Nuclear Nonproliferation Treaty (NPT) was concluded at the United Nations in New York without the consensus being achieved for the document.

What is the Review of NPT?

- Every five years, the NPT's parties conduct a review of the treaty's implementation. The NPT entered into force in 1970.
- The Covid-19 pandemic caused the tenth Review Conference, due for 2020, to be postponed which was held recently in August 2022.
- However, The Tenth Review Conference as Russia blocked agreement on the final document of Review of the NPT.

What is the Non proliferation Treaty (NPT)?

- The NPT is a global agreement whose main goals are to promote non-proliferation of nuclear weapons and their technology, promote non-proliferation of nuclear energy, and advance the cause of disarmament.
- The Treaty is the only multilateral agreement that makes a legally binding commitment to the nuclear-weapon states' disarmament as a goal.
- The Treaty was made available for signing in 1968, and it became operative in 1970.
- The five nuclear-armed States are included in the overall number of States that have ratified the Treaty.
 - Israel, South Sudan, India, and Pakistan have never ratified the NPT.
 - North Korea initially enrolled in the NPT in 1985 but left in 2003.
- It requires countries to give up any current or future plans to build nuclear weapons in return for access to nuclear energy for peaceful purposes.
- It is the only legally binding commitment in a multilateral treaty by nuclear-weapon states to the goal of disarmament.
- Nuclear-weapon states that have signed the NPT are those that have manufactured and exploded a nuclear weapon or other nuclear explosive devices prior to January 1, 1967.

What does Failure of Review of NPT reveal about many of the new challenges facing the global nuclear order today?

- Deepening of divide between USA and Russia: Russia took issue with the statement's criticism of its military control of the Zaporizhzhia nuclear power plant in southeast Ukraine. In Zaporizhzhia, where the two armies are engaged in fierce action and raising the possibility of a terrible nuclear emergency, the Ukrainian conflict has started to engulf the region.

- **Emphasis on Utility rather than on Disarmament:** The major powers currently are giving more emphasis on the strategic utility of nuclear weapons than on reducing their relevance. Earlier the non-nuclear state parties have complained about the lack of advancement in the implementation of the NPT's disarmament clauses.
- **Created the Question mark on effort of Disarmament:** The invasion of a non-nuclear weapon state, Ukraine, by a nuclear weapon power, Russia, may lead the non nuclear state to go for the acquiring of the nuclear weapon, Thus leading to failure of NPT.
- **Unease in South China Sea:** Recent development of USA and UK helping australia to develop Nuclear attack Submarine capacity and increased tension between USA and China, may push China violates NPT.
- **In light of the mounting threat posed by climate change,** nuclear power is once again receiving consideration on a global scale as a alternative to addressing climate change, reducing and adapting to its consequence and achieving the SDG, This may fear to proliferation of nuclear Weapons

What kind of implications does the unfolding global nuclear discourse present for India?

- One, given that Delhi has established an ambitious plan to lower the proportion of fossil fuels in its energy consumption, India needs to find solutions to break the current stagnation in its civilian nuclear power generation.
- The 2010 Civil Nuclear Liability Act has made it hard for private players to support the India's Civil Nuclear Development. Any Indian effort to significantly increase the share of nuclear power in India's energy mix must urgently reconsider that law.
- **Reform in Nuclear Doctrine:** India must also recognise and adapt to the return of nuclear weapons as major instruments of great power military strategy. To increase its nuclear deterrence India must shift to strategy of building "credible minimum deterrence".

Way ahead

- It should be highlighted that India has gained significant diplomatic clout in the West as a result of its efforts to become a "responsible nuclear power."
- It would be terrible if India wasted this opportunity due to a lack of a well-thought-out foreign policy that makes use of its nuclear position for the benefit of the country.

Conclusion

- India needs to push for deeper engagements with more significant suppliers and stakeholders in order to realise its military nuclear potential and assert its status as a responsible nuclear state. While its civil nuclear engagements with the international community have improved its position in the global civil nuclear order.

QUAD OFFICIALS DISCUSS CHINA'S CONCERNS IN THE INDO-PACIFIC

Priority: Medium



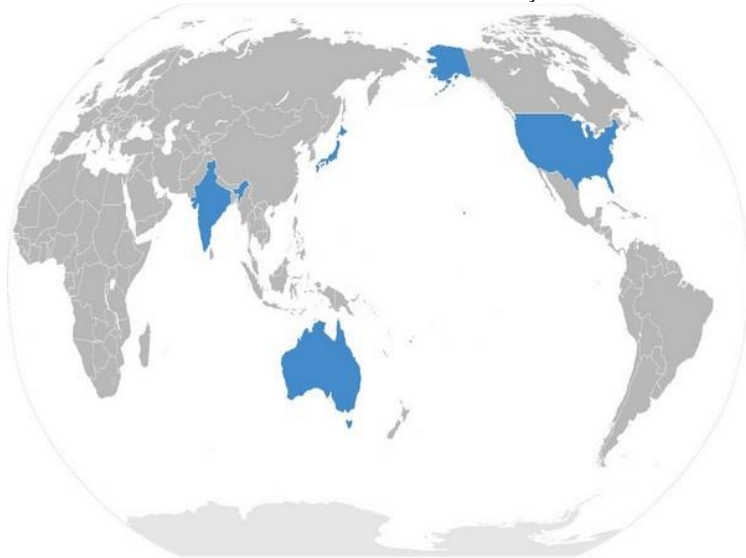
Primary Source: The Hindu

Prepp Prelims Booster: QUAD

Prepp Mains Booster: Bilateral, regional and global groupings and agreements involving India and/or affecting India's interests.

Context:

- Recently, the Senior Officials Meeting (SOM) of Quad countries meeting was held in Delhi.
- It discussed a wide range of issues ranging from concerns over China's moves in both the Indian Ocean Region and the Pacific Island countries, as well to the situation in Sri Lanka.
- The meeting reviewed projects agreed to by leaders of Australia, India, Japan, and the U.S. during the Quad Summit in Tokyo this year and set the course for a Ministerial-level meeting of the four countries, scheduled to be held in India next year.



China Concerns

- **Chinese Spy ship docking in Hambantota:** The landing of China's "research and satellite tracking" ship, the Yuan Wang 5, at Sri Lanka's Hambantota port sparked a dispute between India, the United States, and China earlier this month. However, the ship was permitted to dock and restock supplies despite public requests from both nations to the Sri Lankan authorities.
- **Pacific islands:** The British patrol boat H.M.S. Spey and the U.S. Coast Guard cutter Oliver Henry had to choose alternative ports when the Solomon Islands administration, which recently inked a security agreement with China, refused to let them dock there.

Intelligence sharing

- The Quad SOM discussed the necessity for intelligence sharing on potential security challenges in the Indo-Pacific maritime region and "maintaining the rule-based global order" during its first meeting since the Taiwan crisis.

Quad Vaccine Initiative

- The Issues with the Quad vaccine initiative, which had been announced in March 2021, were also briefly discussed. By the end of 2023, it was intended to produce 1 billion doses of COVID-19 vaccines, including the Johnson & Johnson vaccine.
- However, this plan has run into difficulties due to India's refusal to waive its indemnity obligations for the American-developed

vaccines and a decline in demand due to the Indo-Pacific region's completion of its COVID-19 immunization schedule.

- A repurposing of the concept for collaboration in upcoming pandemic scenarios had been explored by Quad SOM.
- Building collective ability to handle upcoming problems is crucial.

What is a QUAD?

- Originally named the Quadrilateral Security Dialogue (QSD), QUAD or Quad is a strategic security dialogue between Australia, India, Japan, and the United States.
- The dialogue was conceptualized in 2007 by former Japanese Prime Minister Shinzo Abe. However, it gained importance in the recent past with the emergence of the Indo-Pacific as the Centerstage of Global politics.
- It is often termed as an "Asian" or "mini" NATO, and is viewed as a counterbalance to Aggressive China's move in Indo-Pacific and South China Sea Regions and economic clout in the Indo-Pacific region.
- QUAD has been termed as a reply to China's One Belt One Road initiative.
- For India, QUAD helps to counterbalance China in the Indian Ocean Region and for ensuring Open and Free Sea Lanes of Communications in the Indo-Pacific Region and Indian Ocean Region.
- The First Virtual Summit of QUAD member countries was held in March 2021, which led to the announcement of the QUAD Vaccine Initiative for the Indo-Pacific Region.

What are the Principles of Quad?

- The Quad's goal is to keep military and political influence out of the Indo-Pacific's water corridors.
- It is viewed as a strategic alliance aimed at reducing Chinese dominance. The Quad's main goal is to maintain a rules-based global order, freedom of navigation, and a free trading system.
- The alliance also hopes to provide alternative debt financing to countries in the Indo-Pacific.
- Critical and emerging technologies, connectivity and infrastructure, cyber security, maritime security, humanitarian assistance, disaster relief, climate change, pandemic, and education are among the topics discussed by the Quad leaders.

Some of the Quad Initiative's

- The Quad Climate Adaptation and Mitigation Package (Q-CHAMP)
- **QUAD Fellowship Program:** It will bring 100 students from the four countries to the US each year to pursue graduate degrees in STEM fields.
- **The Indo-Pacific Partnership Awareness (IPMDA)** will combat illegal fishing.
- QUAD partnership on **Humanitarian Assistance and Disaster Relief (HADR)** in the Indo-Pacific
- Quad Vaccine Initiative
- Over the next five years, the Indo-Pacific will receive USD 50 billion in infrastructure assistance and investment.

What is the Significance of QUAD for India?

- If Chinese hostilities escalate along the border, India will be able to counter with the help of the other Quad members.

- Quad provides a formidable platform for the US to advance its East Asian interests, coordinate policies with powerful allies, and strengthen its Act East programme.
- It is strengthening India's connections with the United States, Australia, and Japan, and giving New Delhi substantial clout in shaping US policies in Afghanistan and Pakistan to India's benefit.
- India hopes to reassert a rule-based world order through QUAD in response to China's growing influence and assertiveness.
- India can even conduct strategic explorations in the Indo-Pacific area with the help of its naval forces.

What are the Opportunities before QUAD?

- Harnessing commercially-available data using existing technologies.
- Quad partners can create an unprecedented "common thread" of operations by combining an Automatic Identification System and radio-frequency technologies.
- This data will be unclassified due to its business provenance, allowing the Quad to share it with a wide range of partners that want to benefit.

The Quad Vaccine Partnership and Global Health Security

- The Quad is dedicated to retaining its worldwide leadership in the COVID-19 pandemic response and strengthening global health security.
- Quad partners have supplied 257 million safe and effective dosages to the Indo-Pacific region so far.

Critical and Emerging Technologies

- In vital and emerging technologies, four countries have committed to responsible innovation.
- The Quad will collaborate on technical exchanges and testbed activity to enhance interoperability and telecommunications cybersecurity through a new Memorandum of Cooperation on 5G Supplier Diversification and Open RAN.

Space

- Quad countries are strengthening their collaboration and combining their total experience to trade satellite data, promote capacity-building, and consult on rules and guidelines as space leaders.

Infrastructure

- Quad leaders formed the Quad Infrastructure Coordination Group to help meet the Indo-Pacific's infrastructure needs. The group will deepen collaboration and pursue complementary actions in areas such as digital connectivity, transportation infrastructure, clean energy, and climate resilience.

What are the challenges before QUAD?

Russia-Ukraine Conflict:

- Russia's invasion of Ukraine has shattered the old world order and reshaped global geopolitics.
- The United States, as the leader of the Western alliance against Russia, is now fully involved in the conflict.
- The resurgence of Europe and NATO in the aftermath of Putin's actions in Ukraine has placed new demands on US attention and resources, raising questions about the US willingness to take on two adversaries at once: Russia and China.

- The conflict in Ukraine also creates a difficulty within the Quad. Three members, the United States, Japan, and Australia, have taken a firm stance against Russian aggression.
- India has taken a position of studied neutrality, calling for respect for territorial sovereignty and integrity, as well as the UN Charter, but not criticising Russia.

The Threat of China:

Each member of the Quad has a distinct perspective on the Chinese threat.

- **USA:** It's all about commerce and Taiwan for the United States.
- **Australia:** Trade was also the most pressing issue for Australia until the recent installation of a Chinese military facility in the Solomon Islands added a new dimension.
- **Japan and India:** Both are territorial neighbours of China. Both are the closest to China, and both are confronted with aggressive Chinese territorial ambitions.
- **Non-Security Initiatives:** In the competition with China, cutting-edge technology, pharmaceuticals, and infrastructure have been dubbed "important battlegrounds."

Conclusion

- The Quad has developed into a unique cooperation that is well positioned to contribute to Indo-Pacific peace, security, and prosperity.
- The Quad countries are aware of each other's approaches and have worked to revitalise the group by focusing on areas of commonality.
- The recently convened quad summit outlined a vision that spans a wide range of issues.
- It expressed a strong desire to work amicably and collaboratively to address mutual challenges and capitalise on present and potential possibilities.

UKRAINE CONFLICT, COVID HIT GLOBAL SUPPLY CHAIN: PM MODI AT 7TH EASTERN ECONOMIC FORUM

Priority: Medium



Primary Source: The Indian Express

Prepp Prelims Booster: Ukraine conflict

Prepp Mains Booster: - Bilateral, Regional and Global Groupings and Agreements involving India and/or affecting India's interests.

Why in the news?

Prime Minister Narendra Modi virtually addressed the Plenary Session of 7th Eastern Economic Forum which is being held from 5-8 September 2022 where he stated that the Conflict in Ukraine and the Covid epidemic have had a "significant impact" on global supply chains, resulting in shortages of foodgrains, fertilisers, and energy, as Russian President Vladimir Putin listened.



What are highlights of the PM Modi Address?

Supported Russia's economic cooperation

- India is eager to develop its Arctic ties with Russia.
- He also emphasised the enormous possibilities for collaboration in the energy sector.
- He added that with the supply of coking coal, Russia might develop into a significant partner for the Indian steel sector.
- Additionally, there is room for collaboration around talent mobility.

War in Ukraine

- PM Modi stated that India has emphasised the need to seek diplomacy and engagement ever since the Ukraine conflict's inception, but he made no mention of the Russian invasion.

Supply chains have been interrupted by major global events.

- The Ukraine crisis and the Covid epidemic have had a severe influence on global supply chains, leading to shortages of foodgrains, fertilizers and energy.

What is the significance of the address?

- The US and Europe, as well as other Western nations, have expressed worry over nations that get their oil from Russia. This is the context in which PM Modi made his remarks.
- Russia's oil sales to India have drawn criticism from Ukraine.
- Defending the action, India has stated it is buying oil to meet energy demands and reduce the inflationary impact.
- As a result, India's willingness to expand economic ties with Russia is evidence that its foreign policy is motivated by domestic concerns.
- The Western blocs will not be in a position to control it.

What is Eastern Economic Forum?

- Eastern Economic Forum is an international forum held each year in Vladivostok, Russia, for the purpose of encouraging foreign investment in the Far East region of Russia.
- It is held each year since 2015 in September, at the Far Eastern Federal University in Vladivostok, Russia.
- Vladimir Putin, the president of the Russian Federation, founded the Eastern Economic Forum by executive order in 2015.
- It encourages the growth of international collaboration in the Asia-Pacific region as well as the economic development of Russia's Far East.
- It serves as a forum for the debate of important global economic issues, regional integration, the growth of new industrial and

technology sectors, as well as the international difficulties that Russia and other countries are currently facing.

- It has developed into a global forum for discussion of the approach to strengthening political, economic, and cultural connections between Russia and Asia Pacific over time.
- 2022 is the 7th Session of the Eastern Economic Union.

What is the Far East region of Russia?

- It is located in Russia's far east.
- It is surrounded by five nations and two oceans, the Pacific and the Arctic (China, Japan, Mongolia, the United States and the DPRK).
- More than a third of the country comprises the Far Eastern Federal District.
- It is abundant in natural resources such as fish and shellfish, diamonds, stannary, borax materials, 50 gold, and tungsten.
- Here are located around one-third of the nation's coal reserves and hydro-engineering resources.
- 30% of Russia's total forest area is made up of the forests in the region.

What is India's interest in the Far East of Russia?

Energy security:

- The availability of hydrocarbon reserves in the Far Eastern region of Russia is an area of interest to India, particularly in the area of exploration and energy security.

Economic Opportunity:

- Beyond the friendly relations and shared history of India Russia relation, Far East also serves as a significant market and investment opportunity for India.
- This also provides an opportunity to boost the bilateral trade that India wants to increase between the two nations.

What is India's Engagement with Russia's Far East?

- The first nation in the world to establish a consulate in Vladivostok (also known as the Sangam of Eurasia and the Pacific) is India.
- The first Indian Prime Minister attended the 5th EEF (2019) as the chief guest.
- India committed to a "Act Far-East" policy in 2019, with the intention of fostering more collaboration in this region.

International trade and commerce:

- To encourage collaboration between India and the Russian Far East, India and Russia decided to build a marine route between Chennai and Vladivostok.
- Russia and India would be physically closer to one another because of this connectivity project and the International North-South Corridor.

Energy:

- Major gas projects in the Amur region, from Yamal to Vladivostok and further to Chennai, are being worked on by Indian workers.

GLOBAL PANDEMIC TREATY

Priority: High



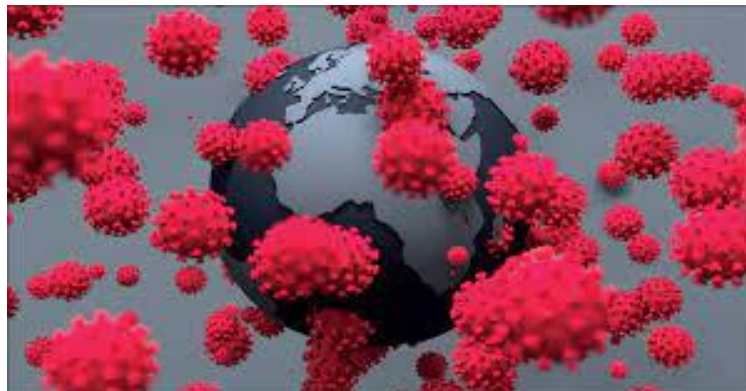
Primary Source: The Hindu

Prepp Prelims Booster: Global Pandemic treaty

Prepp Mains Booster: Important International Institutions, Agencies and fora - their Structure, Mandate.

Context:

This article is based on the editorial published in The Hindu (Title: The outline of an essential global pandemic treaty) on 9 September 2022.



Why need for Global Pandemic Treaty?

- COVID-19 can be counted as one of the most severe pandemics the world has seen in the last 100 years.
- According to various credible estimates, 18 million people may have died from COVID-19, a scale of loss not seen since the Second World War.
- Further, economic disruption caused by it pushed over 120 million people into extreme poverty and led to a massive global recession.
- No single government or institution was able to address this emergency single-handedly. This gives us a larger perspective of how nobody is safe until everybody is safe.
- Health-care systems were stretched beyond their capacity and gross health inequity was observed in the distribution of vaccines, diagnostics, and therapeutics across the world.
- Fewer of their vaccines reached people in low-income countries. As of March 2022, only 3% of people in low-income countries have been vaccinated with at least one dose, compared to 60.18% in high-income countries.
- The international target to vaccinate 70% of the world's population against COVID-19 by mid-2022 was missed because poorer countries were at the back of the queue when vaccines were rolled out.
- High-income economies are still recovering from the after-effects, the socio-economic consequences of the COVID-19 pandemic and it is still an irreversible process in low and low middle-income countries. Thus, inequality was prolonging the course of the pandemic.
- In this backdrop there is a need for the creation of a Global Pandemic Treaty which was proposed at the Special Session of the World Health Assembly.
- The underlying logic behind it is that as global health governance had failed during the pandemic, there is urgent need for political commitment to mitigate future challenges.

What is the proposed Global Pandemic Treaty?

- The World Health Assembly (WHA) in December 2021 adopted a decision titled "The World Together" at its second special session since it was founded in 1948.
- Under this decision, it established an intergovernmental negotiating body (INB) to draft and negotiate the contents of the pandemic treaty in compliance with Article 19 of the WHO Constitution.
- The treaty will be aimed at covering important aspects of the global health system such as data sharing, genome sequencing, and related research about pandemics and equitable distribution of vaccines and drugs.

The vision of the treaty

- To protect from the consequences of pandemic based on "equity, human rights and solidarity".
- To achieve universal health coverage, enhance local production of medical resources, promote genetic sequence monitoring and data sharing, as well as recognize the socioeconomic impacts of such crises.

Will it be a legally binding treaty?

- WHA aims to adopt this treaty under Article 19 of the WHO constitution, this will enable it to draw up binding agreements on a wide range of issues under its mandate.
- Many countries have agreed to this binding clause, but some countries like the USA want the treaty to fall under Article 21, which limits the number of topics that can have binding agreements.

Significance

- It will enable WHO member countries to strengthen national, regional, and global capacities and resilience to future pandemics.
- It will help in early detection and prevention of pandemics. It will aid in ensuring universal access to medical solutions and response to any future pandemics.
- It will help in addressing issues of inequity especially in access to technology, tests, vaccines and therapeutics and make positive obligations on developed countries during future pandemics.

Conclusion

- The Global Pandemic Treaty under the umbrella of the World Health Organisation (WHO) will help to build coherence and avoid fragmentation.
- It will not only contribute to reducing socioeconomic inequalities across nation states but also enhance global pandemic preparedness for future health emergencies. India must take the lead in this.

TOKYO DELHI COMPACT: INDO-JAPAN MINISTERIAL DIALOGUE POINTS TO DEEPENING OF STRATEGIC AND DEFENCE PARTNERSHIP

Priority: Medium



Primary Source: The Indian Express

Prepp Prelims Booster: 2nd India-Japan 2+2 Ministerial Dialogue

Prepp Mains Booster: Bilateral Groupings and Agreements involving India and/or affecting India's interests

Context:

At the second India-Japan 2+2 Ministerial Dialogue, held in Tokyo on September 8 2022, the Defence and External Affairs Ministers of India and Japan met for an in-depth discussion on all critical matters pertaining to the rules-based global order that is increasingly binding the two nations together and giving them renewed push in their unique strategic and international partnership.



What are the outcomes of the 2+2 Ministerial Dialogue?

- **Commitment to Rules-based global order:** Both Countries reaffirmed their commitment to a rules-based global order that respects sovereignty and territorial integrity of nations.
- **Ensuring Free and open Indo-Pacific:** Both nations highlighted their commitment to a common strategic goal of achieving a free and open Indo-Pacific, that is inclusive and resilient, based on the rule of law and free from coercion.
- **Ensured Support for the "ASEAN Outlook on the Indo-Pacific (AOIP)":** India and Japan also reaffirmed their unwavering commitment to the unity and centrality of ASEAN as well as their full support for the initiative.
- **Enhanced Defense cooperation:** The Indian side reaffirmed its support for efforts to improve security and defence cooperation while acknowledging Japan's resolve to strengthen its defence capabilities.
- India appreciated Japan's participation in the multinational exercise MILAN for the first time.
- Both countries also reaffirmed their commitment to carrying out future bilateral and multinational exercises, such as "Malabar," "JIMEX," and "Dharma Guardian."
- India and Japan agreed to begin the Joint Service Staff Talks between the Indian Integrated Defense Staff and the Joint Staff of Japan.

- Both nations also agreed to pursue closer coordination in the areas of HADR and pandemic preparedness.

How Ministerial Dialogue is deepening strategic and defence partnership?

- Circumstances in International relations:** The 2+2 Meeting is Coincided with the Uncertainty in the Global Order. The world is already facing the Russian Invasion into Ukraine and causing disruption.
- Similarly, China is showing assertiveness in Taiwan Strait and firing missiles in the region, of which some landed in Japan's Exclusive Economic Zone. In this background Japan has resolved to develop the capacity to defend itself apart from the American Security Umbrella. This has prompted Japan to look toward India as a Balancer to China in IndoPacific Region. This has led to strengthening of Strategic relations between both.
- India's willingness to support Japan Defence Capability:** India through various initiatives like defence exercise, collaboration and technology development, has committed to Japan to assist in development of defence capabilities. This has pushed the defence cooperation between both to the new level.
- Boost to collaboration in defence technology and equipment:** India is expected to give a boost to collaboration in defence technology and equipment by attending the 2+2 conversation in Tokyo.
- This cooperation is over the **areas of Robotics and Unmanned Ground Vehicles (UGV)**, where Japan has significant strengths.
- The **production of drones** is another possible area of collaboration. The biggest drone manufacturer in Japan, ACSL, has previously partnered with Delhi-based Arc Ventures in India.
- The most recent **cyber and space** conversations have expanded bilateral collaboration into newer, security- and defense-focused areas.
- Signing and Operationalisation of ASCA:** The Self-Defense Forces of Japan and India's armed forces signed the Agreement Concerning Reciprocal Provision of Supplies and Services (ACSA), agreement in 2020 and operationalised it this year.
- With this the two militaries are now able to work together even more closely.
- QUAD and IndoPacific:** Emergence of QUAD and shifting of center of International politics to IndoPacific has also provided a platform for India and Japan for deepening of strategic and defence relations.

What are the other areas of cooperation?

Historical background: Beginning with the visit of the Indian monk Bodhisena in 752 AD, the friendship between India and Japan has a long history steeped in spiritual affinities as well as solid cultural and civilizational ties.

- Swami Vivekananda, Gurudev Rabindranath Tagore, JRD Tata, Netaji Subhash Chandra Bose, and Judge Radha Binod Pal were notable Indians affiliated with Japan in modern times.

Diplomatic Relations: In 1952, India and Japan established diplomatic ties. The year 2022 marked the 70th year of Diplomatic relations

- Several high-level exchanges occurred in the first ten years after diplomatic relations were established, including the Japanese Prime Minister's visit to India in 1957.
- In 2015, Both countries upgraded their relations to Strategic Partnership.
- A venue for India-Japan cooperation under the auspices of Japan's "Free and Open Indo-Pacific Vision" and India's "Act East Policy" is to be provided through the Act East Forum, which was created in 2017.

Investment and Commerce: Four agreements between India and Japan mandate Tokyo's support for health care initiatives in India that are sponsored under the Grant Assistance for Grassroots Projects (GGP) programme.

- The "Grant Assistance for Grassroots Projects (GGP)" provides funding for development initiatives made to address the various basic requirements of people living in developing nations.
- Japan is collaborating closely with India on infrastructure projects in third countries like Bangladesh and Sri Lanka and has invested Rs1,600 crores in development projects in India's northeastern states.
- Both countries have outlined a plan for advancing their Special Strategic and Global Partnership in the post-COVID era.
- The Japanese prime minister visited India in 2019 and pledged to invest \$42 billion (about Rs 3,20,000 crore) there over the next five years as the two countries finalised a number of collaborations and agreements to further their relationship.

Trade and economic relations: Given the complementarities between the two Asian economies, there is enormous room for expansion in the economic links between Japan and India.

- India's enormous and expanding market, as well as its resources, particularly its human resources, have increased Japan's interest in the country.
- In August **2011, the Comprehensive Economic Partnership Agreement (CEPA)** between India and Japan went into effect.
- The agreement, which covers not just trade in products but also services, the movement of natural persons, investments, intellectual property rights, customs procedures, and other trade-related problems, is the most comprehensive of its kind that India has ever signed.
- Japan is **India's greatest bilateral contributor** and has been providing loans and grants to the country since 1958.
- For the **fiscal year 2019–20** (April–December), the two countries' bilateral trade reached **US\$11.87 billion**.
- India imported US\$ 7.93 billion worth of goods from Japan, compared to US\$ 3.94 billion worth of exports from Japan.
- Petroleum products, chemicals, elements, compounds, non-metallic mineral ware, fish and fish preparations, metalliferous ores and scrap, clothes and accessories, iron and steel products, textile yarn, fabrics, and machinery are some of India's main exports to Japan.
- Machines, electrical machinery, iron and steel goods, plastics, non-ferrous metals, auto components, organic chemicals, metal producers, etc. are India's main imports from Japan.
- Science & Technology:** An Inter-Governmental Agreement signed in 1985 formalised bilateral S&T collaboration.
- When PM Modi visited Japan in October 2018, the India-Japan Digital Partnership (IJDP) was established to advance both current

areas of cooperation and new initiatives within the context of cooperation in S&T/ICT, with a greater emphasis on "Digital ICT Technologies."

- The launch of the DST-JSPS Fellowship Program for young researchers, as well as the creation of three India-Japan Joint Laboratories in the field of ICT (AI, IoT, and Big Data), are recent initiatives.
- **Healthcare:** Japan's ASHWIN and India's AYUSHMAN Bharat Programme had been working together to discover initiatives to develop ASHWIN's story for AYUSHMAN Bharat.
- **Indian Diaspora in Japan:** The composition of the Indian community has changed recently due to the influx of many professionals, including IT specialists and engineers working for both Indian and Japanese companies as well as experts in management, finance, education, and S&T research.

What are the challenges with strengthening the ties ?

- **Rising China's Dominance:** China does not hold back in trying to stop the rise of Japan and India, including by increasing military pressure on them and opposing their permanent membership in the UN Security Council.
- **Influence of China-America Rivalry:** The escalating animosity between the two countries has a negative impact on Indo-Pacific regional security.
- Military exercises are routinely conducted in disputed waters, contributing to the militarization of the region and the ongoing arms race. This has a negative impact on the region's peace and prosperity, particularly for nations like India and Japan.
- **Domestic Political Concerns:** The reform of Japan's national security and defence strategy is the subject of a heated domestic discussion that has led to the downfall of the country's former prime minister Shinzo Abe.

Way Forward

- India and Japan, two democratic nations in Asia, can work together to promote peace and prosperity on a global scale.
- Based on the solid basis of shared values and traditions, both countries have mutual political, economic, and strategic interests.
- Infusing meaningful military content into the strategic alliance between India and Japan should be the main goal of the talks. Because Delhi and Tokyo have many things they could do in conjunction to address their shared security issues.

INDO-PACIFIC ECONOMIC FRAMEWORK

Priority: Medium



Primary Source: Indian Express

Prepp Prelims Booster: Indo-Pacific Economic Framework

Prepp Mains Booster: Bilateral, Regional and Global Groupings and Agreements involving India and/or affecting India's interests

Context:

- Recently, India agreed to three out of four pillars of the United States-led Indo-Pacific Economic Framework (IPEF) relating to supply chains, tax, anti-corruption and clean energy.

- However, India opted out from joining the trade pillar of IPEF over its apprehension of binding conditionalities on matters like environment, labour, digital trade and public procurement.

What is the Indo-Pacific Economic Framework for Prosperity (IPEF)?

- It is a US-led economic grouping of 14 countries in the Indo-Pacific region which make up over 40% of the global GDP.
- It aims at strengthening economic partnership among participating countries to enhance resilience, sustainability, inclusiveness, economic growth, fairness, and competitiveness in the Indo-Pacific region.
- It intends to counter the aggressive and non-transparent trade and economic policies of China in the Indo-Pacific.
- **14 member states:** United States, India, Australia, Indonesia, Brunei, Japan, South Korea, Malaysia, New Zealand, Philippines, Singapore, Thailand, Fiji, and Vietnam.
- **4 Pillars:** Its economic framework broadly rests on four pillars, namely, fair and resilient trade, supply chain resiliency, clean energy decarbonisation, and tax and anti-corruption.
- **Trade:** IPEF aims to build high-standard, inclusive, free, and fair-trade commitments.



- For this it will develop new and creative approaches in trade and technology policy that advance a broad set of objectives that fuels economic activity and investment, promotes sustainable and inclusive economic growth, and benefits workers and consumers.
- **Supply Chains:** Under it, IPEF plans to improve transparency, diversity, security, and sustainability in supply chains to make them more resilient and well-integrated.
- For this it will enhance coordinate crisis response measures, expand cooperation to better prepare for and mitigate the effects of disruptions for business continuity, improve logistical efficiency and support and ensure access to key raw and processed materials, critical minerals, semiconductors and clean energy technology.
- **Clean Energy and Decarbonization:** IPEF plans to accelerate the development and deployment of clean energy technologies to decarbonize our economies and build resilience to climate impacts in line with the Paris Agreement goals.

- For this it will deepen cooperation on technologies, mobilising finance including concessional finance, and improving competitiveness and connectivity by supporting the development of sustainable and durable infrastructure and by providing technical assistance.
- Tax and Anti-Corruption:** IPEF commits to promote fair competition by enacting and enforcing effective and robust tax, anti-money laundering, and anti-bribery regimes in line with existing multilateral obligations, standards, and agreements to curb tax evasion and corruption in the Indo-Pacific region.
- For this it will share expertise and seek ways to support the capacity building necessary to advance accountable and transparent systems.



NOTE:

- IPEF is not a free trade agreement or trade bloc to negotiate tariffs or market access, but it is more focused on integrating partner countries in four areas by offering flexibility.
- Its provision of multiple pillars does entail an option to participants to choose what they want to be a part of. It's not a take-it-or-leave-it arrangement, like most multilateral trade deals are. 14 members so far are not obligated by all the four pillars despite being signatories.
- It is also not a QUAD initiative. It is like a declaration of a collective desire of member countries to make the Indo-Pacific region an engine of global economic growth
- It will also not replace the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP) or the Regional Comprehensive Economic Cooperation (RCEP), of which China and all other IPEF countries (excluding the US) are members.

Background

- The US has been looking to have a setup of multi-country trade agreement, considering the emergence of other trade agreements such as the China-led Regional Comprehensive Economic Partnership (RCEP) and Trans-Pacific Partnership (TTP) from which former US President Donald Trump walked out.
- US President Joe Biden first discussed the idea of IPEF in the East Asia Summit on October 2021, saying that US will explore with partners the development of an Indo-Pacific economic framework that will define their shared objectives around trade facilitation,

supply chain resiliency, decarbonization and clean energy, standards for the digital economy and technology, infrastructure, worker standards, and other areas of shared interest.

- IPEF is being seen as the US's pivot to compensate for its exclusion from the revamped Trans-Pacific Partnership (TPP) and a vehicle to re-establish American economic heft in the Indo-Pacific.

Benefits for India

- Strategic Importance:** IPEF is strategically important for India as it is inline with India's vision for the Indo-Pacific Region. It envisages some degree of synergies with Quad members' strategic priorities.
- It is being seen as the latest plank after the Quad's strategic focus and the new economic grouping alongside Israel, the UAE and the US (I2U2) – that focuses on cooperation in health, water, transportation, food security, space and energy.
- Economic engagement:** It will enhance India's economic engagement in the Indo-Pacific region, which was dented after India's withdrawal from the Regional Comprehensive Economic Partnership (RCEP) Agreement.
- It will help control the damage caused by the RCEP withdrawal as all the IPEF members save India and the US are signatories to the RCEP.
- Building resilient supply chains:** It is one of the motives of the IPEF. India can consider members as alternative sources for its raw materials requirements. This could reduce India's overdependence on China for these inputs.
- India's engagement with IPEF also comes at a time when India is attempting to find a place in the Minerals Security Partnership (MSP), an ambitious new US-led 11-member partnership to secure supply chains of critical minerals, aimed at reducing dependency on China.
- Support India's renewed push for free trade agreements:** India's membership of IPEF is a testimony to India's aggressive stance on bilateral and regional trade engagements.
- Inline with India's new consensus:** Of staying off multilateral trade pacts, sticking to bilateral deals that progressively build on an early harvest scheme; actively integrating into specialised global supply chain arrangements such as for pharmaceutical ingredients or rare earths and restricting multilateral exposure to focused agreements such as tackling black money or cryptocurrency rules.
- Thus, India's participation in the agreement is ensured by giving it flexibility in terms of which pillar of IPEF it wants to join.

Concerns of IPEF

- It is stated to be beneficial for the like minded countries in the Indo-Pacific region, but it will require huge investments and active participation in the implementation phase.
- More unilateral and not consensus-based:** IPEF is primarily driven by the agenda of the US and is not a result of arduous negotiations by the members.
- Binding trade rules:** IPEF imposes stringent binding trade rules but no guarantees on market access. Thus, it may fail to bring all

countries in the region on board. This is the main reason India stayed away from the Trade pillar over binding conditionalities.

- **Not in India's interest:** Some IPEF proposed areas do not serve India's interests. For example, it talks about digital governance but its formulation contains issues that directly conflict with India's stated position. India is in the process of firming up its own digital framework and laws, particularly regarding privacy and data.

EASTERN ECONOMIC FORUM



Priority: Medium

Primary Source: The Hindu

Prepp Prelims Booster: Eastern Economic Forum

Prepp Mains Booster: Bilateral, Regional and Global Groupings and Agreements involving India and/or affecting India's interests.

Context:

- Recently, Russia hosted the seventh Eastern Economic Forum (EEF) at Vladivostok from September 5 to 8, 2022.
- The four-day forum is a platform for entrepreneurs to expand their businesses into Russia's Far East (RFE) region. Almost 2,729 investment projects are being planned in this region.
- This year's EEF comes at an opportune time when Russia is dealing with the impact of the sanctions imposed on it due to the Ukraine war. This war is a worrying issue for Russia as it affects its economic growth. However, Russia believes that it can survive the economic crisis and the sanctions with the help of China and other Asian powers.
- Moreover EEF 2022 saw coming together of countries like Russia, China, Myanmar and Armenia to form some kind of an anti-sanctions group in the international order.



What is Russia's Far East (RFE) region?

- **Geographic Location:** It is the easternmost part of Russia. It borders two oceans, the Pacific and the Arctic, and 6 countries- China, Mongolia, North Korea and through connecting waters with Japan, South Korea and the United States.
- **Resource Richness:** It encompasses Russia's one-third territory and is rich with natural resources such as oil, natural gas, fish, wood, diamonds and other key minerals.

- Russia's one third coal reserves and hydro-engineering resources are in the region. It also comprises about 30% of the total forest area of Russia.
- **Economic Significance:** Its riches and resources contribute to 5% of Russia's GDP. It is also geographically placed at a strategic location as it acts as a gateway into Asia.
- **Challenges:** Despite the abundance and availability of minerals and resources, procuring and supplying them is a key issue due to the sparse population of the region.
- **Strategic Significance:** Russia has been strategically developing this region with the aim of connecting Russia to the Asian trading routes. It is aiming to attract more investments in the region especially in its fast modernising cities like Vladivostok, Khabarovsk, Ulan-Ude, Chita and more. Russia is trying to attract the Asian economies in investing and developing this region.

What Is Eastern Economic Forum (EEF)?

- It was established in 2015 by decree of the Russian President Vladimir Putin with the primary objective to increase the Foreign Direct Investments in Russia's Far East (RFE) region.
- It aims to support the economic development of RFE and to expand international cooperation in the Asia-Pacific region.
- EEF takes place every year in the Russian city of Vladivostok and its business programme includes a number of business dialogues with leading partner countries in the Asia-Pacific region and with ASEAN.

Progress Of EEF

- EEF displays the economic potential, suitable business conditions and investment opportunities in the RFE region.
- Over the years, EEF has emerged as an international platform for the discussion of key issues in the world economy, regional integration, and the development of new industrial and technological sectors, as well as of the global challenges facing Russia and other nations.
- It is also now serving as an international platform for discussing the strategy for developing political, economic and cultural ties between Russia and Asia Pacific.

Agreements Signed At The EEF

- They have increased from 217 in 2017 to 380 agreements in 2021, worth 3.6 trillion roubles.
- These agreements focus on infrastructure, transportation projects, mineral excavations, construction, industry and agriculture. As of 2022, almost 2,729 investment projects are being planned in the region.

Who are the major actors in the EEF and their interests?

China

- It is the biggest investor in the RFE as it sees potential in promoting the Chinese Belt and Road Initiative (BRI) and the

Polar Sea Route in this region. It accounts for 90% of the total investments in this region.

- Russia also has been welcoming Chinese investments since 2015 as both countries share a 4000-kilometre-long border, which enables them to tap into each other's resources with some infrastructural assistance.
- China is also looking to develop its underdeveloped Heilongjiang province which connects with the RFE. The Trans-Siberian Railway also has further helped both countries in advancing trade ties.
- Both countries also have invested in a Far East Development Fund (FEDF) to develop northeastern China and the RFE, through collaborations on connecting the cities of Blagoveshchensk and Heihe via a 1,080 metre bridge, supplying natural gas, and a rail bridge connecting the cities of Tongjiang and Nizhnelenskoye.

South Korea

- It has also been gradually increasing its investments in the region. It has invested in shipbuilding projects, manufacturing of electrical equipment, gas-liquefying plants, agricultural production and fisheries.
- In 2017, the FEDF and the Export-Import Bank of Korea had announced their intention to invest \$2 billion in the RFE in a span of three years.

Japan

- It is another key trading partner in Russia's Far East Region. In 2017, Japanese investments through 21 projects in this region amounted to \$16 billion.
- It has identified eight areas of economic cooperation and pushed private businesses to invest in the development of the RFE.
- It is also dependent on Russian oil and gas resources after the 2011 meltdown in Fukushima which led the government to pull out of nuclear energy.
- It also sees RFE as a market for its agro-technologies which have the potential to flourish in this region, given similar climatic conditions.

India

- India is also seeking to expand its influence in the RFE through the EEf to establish a strong inter-state interaction with Russia. It has expressed its readiness in expanding trade, connectivity and investments in this region.
- It is keen to deepen its cooperation in energy, maritime connectivity, pharmaceuticals, healthcare, tourism, the diamond industry and the Arctic.
- In 2019, India had offered a \$1 billion line of credit (LoC) to develop infrastructure in this region. Business representatives of Gujarat and Russia's Sakha province have launched agreements in the diamond and pharmaceuticals industry.

India's Balancing Act between EEf and Indo-Pacific Economic Framework for Prosperity (IPEF)

- India has vested interests in both Russia's EEf and as well as US-led IPEF. The IPEF is a vital platform for India to strengthen its presence in the Indo-Pacific region.
- The IPEF and the EEf are incomparable based on their geographical coverage and the partnership with the host-countries.
- India has vested interests in both of these forums and has to balance its involvement to meet its interests. It has not shied away from investing in the Russia-initiated EEf despite the current international conditions.
- India perceives the IPEF as a vital platform to strengthen its presence in the Indo-Pacific region and at same time sees the benefits of being involved in the development of the RFE.
- IPEF also presents India an ideal opportunity to act in the Indo-Pacific region, without being part of the China-led Regional Comprehensive Economic Partnership (RCEP) or other regional grouping like the Trans-Pacific Partnership (TPP) Agreement.
- It will play a key role in building resilient supply chains and India's participation in it will help in disengaging from supply chains that are dependent on China and at same time make it a part of the global supply chain network.
- Additionally, the IPEF partner countries will act as new sources of raw material and other essential products for India, further reducing its reliance on China for raw materials. This comes even after India refrained from full participation in the trade pillar of the IPEF.
- India, Australia and Japan in 2022 also had launched the Supply Chain Resilience Initiative (SCRI) to create a virtuous cycle of enhancing supply chain resilience for attaining strong, balanced, sustainable and inclusive growth in the Indo-Pacific region.

About Indo-Pacific Economic Framework for Prosperity (IPEF)

- It is a US-led economic grouping of 14 countries in the Indo-Pacific region which make up over 40% of the global GDP.
- It aims at strengthening economic partnership among participating countries to enhance resilience, sustainability, inclusiveness, economic growth, fairness, and competitiveness in the Indo-Pacific region.
- It intends to counter the aggressive and non-transparent trade and economic policies of China in the Indo-Pacific.
- **14 member states:** United States, India, Australia, Indonesia, Brunei, Japan, South Korea, Malaysia, New Zealand, Philippines, Singapore, Thailand, Fiji, and Vietnam.
- **4 Pillars:** IPEF is not a Free Trade Agreement (FTA) but allows members to negotiate along its four main "pillars" namely, fair and resilient trade, supply chain resiliency, clean energy decarbonisation, and tax and anti-corruption.
- India agreed to three out of four pillars of the IPEF. It has opted out of the trade pillar due to apprehension over its binding conditionalities on matters like environment, labour, digital trade and public procurement.

INTERNATIONAL TREATY ON PLANT GENETIC RESOURCES FOR FOOD AND AGRICULTURE

Priority: Medium



Primary Source: The Hindu

Prepp Prelims Booster: The International Treaty on Plant Genetic Resources for Food and Agriculture

Prepp Mains Booster: Bilateral, Regional and Global Groupings and Agreements involving India and/or affecting India's interests, GS3- Conservation, Environmental Pollution and Degradation, Environmental Impact Assessment

Why in the News?

- Recently, the ninth session of the governing body of the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA) was held in New Delhi.
- The theme of this session was 'Celebrating the Guardians of Crop Diversity: Towards an Inclusive Post-2020 Global Biodiversity Framework'.

What is the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA)?

- It is a comprehensive international agreement in harmony with the Convention on Biological Diversity (CBD) for ensuring food security through the conservation, sustainable use and exchange of the world's Plant Genetic Resources for Food and Agriculture (PGRFA).
- It is also known as the International Seed Treaty or Plant Treaty. It was adopted by the Food and Agriculture Organisation (FAO) of the United Nations in 2001 and entered into force in 2004.
- Participating countries:** 149 contracting parties to this treaty- 147 Member States including India and 1 intergovernmental organisation-European Union.



Objectives of ITPGRFA

- Guaranteeing food security through the conservation
- Exchange and sustainable use of the world's plant genetic resources for food and agriculture (PGRFA)
- Fair and equitable benefit sharing arising from its use

- Recognition of farmers' rights.

Key provisions of ITPGRFA

- Multilateral system:** ITPGRFA puts 64 most important crops – accounting for 80% of the food production- into an easily accessible global pool of genetic resources that is freely available to potential users ratifying member countries for some uses.
- Access and benefit sharing:** It facilitates access to the genetic materials of the 64 crops for research, breeding and training for food and agriculture.
- It prevents the recipients of genetic resources from claiming intellectual property rights over those resources in the form in which they received them.
- Farmers' rights:** ITPGRFA recognizes the enormous contribution farmers have made to the ongoing development of the wealth of plant genetic resources.
- It protects the traditional knowledge of these farmers, increases their participation in decision-making processes and ensures that they share in the benefits from the use of these resources
- Sustainable use:** ITPGRFA helps to maximise the use and breeding of all crops especially local crops and promotes development and maintenance of diverse farming systems.

Significance of ITPGRFA

- It is the first legally-binding international treaty to formally acknowledge the enormous contribution of indigenous people and small-holder farmers as traditional custodians of the world's food crops.
- It establishes a multilateral system that facilitates continuous exchange of PGRFA i.e. Multilateral System of Access and Benefit-sharing.
- It also calls on member nations to protect and promote their rights to save and use the seeds they have taken care of for millennia.
- Brings together signatory parties to come together to discuss governance of agricultural biodiversity and global food security.

Highlights of 9th session of ITPGRFA

- Farmers' rights issue:** It was the focal point of discussions. India stood for the creation of an option for implementation of farmers rights and proposed that use of Global Information System (GIS) for Plant Genetic Resources for Food and Agriculture needs capacity building among contracting parties.
- Revival of multilateral system:** India also pushed for the revival of enhancement of multilateral system as from 2019.
- For this, India along with Switzerland had organised an informal meeting at UN-Geneva and prepared a document for the 9th meeting of the general body to deliberate.

Enhancing capacity building: India also called for capacity building to use the GIS on Plant Genetic Resources for Food and Agriculture among contracting parties for continued efforts towards conservation and sustainable use of Plant Genetic Resources for Food and Agriculture.

GENERAL STUDIES 3

Conservation, environmental pollution and degradation, environmental impact assessment;

ACHIEVING THE 2070 NET-ZERO TARGET COULD BOOST INDIA'S GDP



Priority: High

Primary Source: The Hindu

Prepp Prelims Booster: Environmental Pollution

Prepp Mains Booster: Conservation, environmental pollution and degradation, environmental impact assessment;

Context:

- According to the "Getting India to Net Zero" report released in New Delhi by former Australian prime minister Kevin Rudd and others, India will need an economy-wide investment of **\$10.1 trillion** from now on to reach its **net-zero emissions objective by 2070**.
- At the COP26 climate change conference in Glasgow, India's Prime Minister Narendra Modi declared that India would attain net-zero emissions by 2070.

What does the 'Getting India to Net Zero' report say?

- The Getting India to Net Zero report contains new research and modeling and finds that policies to initiate the clean energy transition will be critical in determining when India achieves net zero emissions and how much it could benefit from it.
- It could **boost India's economy** by 4.7% above the projected baseline growth in GDP terms by 2036, amounting to a total of \$371 billion, and could create 15 **Million jobs** by 2047.
- Greater advantages will result from reaching net zero by 2050, increasing India's GDP by up to 7.3%, and generating 20 million new jobs by 2032.
- Getting India, China, and Indonesia to Net Zero is the goal of the independent commission.
- According to the study, achieving net zero emissions by 2070 would need an economy-wide investment of \$10.1 trillion from now; Achieving net zero by 2050 would require \$13.5 trillion investment.

How will it benefit India?

- Improved the trade balance:** Reduced demand for fossil fuels will improve the trade balance by \$236 billion, which has had a positive economic impact.
- Increase GDP:** According to the analysis, India could increase yearly GDP by up to 7.3% (\$470 billion) and
- Employment:** It would roughly add 20 million employment by 2032 if it achieves net zero by 2050 in comparison to present practises.
- Achieving net zero emissions by the middle of the century:** Maximising realistic policy choices to decarbonize India's economy and energy grid might result in the country having net zero emissions by the middle of the century.
- Prevent death related to air pollution:** According to research by the Lancet Commission on Pollution and Health, air pollution is thought to have contributed to 1.6 million fatalities in India in

2019 — the highest number anywhere in the world. The particulate matter 2.5 (PM2.5) pollution was to blame for the majority of these fatalities. The second leading cause of death in the nation was household air pollution.

- Global Leadership:** India has the potential to become a worldwide manufacturing base for the **net-zero economy** as well as a paradigm for robust, healthy economic growth.
- India can demonstrate its initiatives and inspire other nations to adopt them, cooperate, and invest **when it hosts the G20 in 2023**.

Challenges

- Transfer of finance and technology:** The transfer of money and technology to poor nations is essential in this task as is the acceptance and understanding that the West historically bears responsibility for emissions and climate change.
- Developed country's targets must be increased:** Over the next few years, developed country's targets for climate finance must be increased.
- Equity:** To achieve this at the expense of some of these countries' development would be unfair. Therefore, the issue of equity must be taken into account.
- Coal-fired power plants:** To get India to net zero emissions sooner, it will be especially beneficial to stop producing new coal as soon as possible by 2023 and switch from unabated coal power by 2040. However, the majority of electricity is produced by coal-fired thermal power plants, which provide about 75% of all electricity.
- Oil and Gas:** Indian corporations must reconcile these obligations with the difficulties of meeting rising fuel demand.

Way forward

- Transition to a green economy:** On the domestic front, financial regulators such as the RBI and SEBI must establish an enabling ecosystem for financing India's transition to a green economy.
- Private Finance:** Given the magnitude of the investments necessary, private money from domestic and international institutions should account for the majority of investment. At the same time, public funds should act as a catalyst by de-risking investments in existing and emerging clean technology. Additional funding would free up available funds to address the detrimental effects of climate measures like carbon levies.
- Change in lifestyles:** If we cannot alter our way of life, we will be unable to alter the planet on which we live.
- Popularisation of schemes:** Sustainable patterns of living practiced by certain indigenous groups should be included in school curricula, and India's adaptation efforts through programmes such as the Jal Jeevan mission, Swachh Bharat mission, and mission Ujjwala should be popularised globally.

Conclusion:

- India's route to net zero may generate new employment, guarantee livelihoods, and enhance health if approached with comprehensive, all-encompassing planning, in a way that draws more investment and assures a just transition for those who are most dependent on fossil fuels.

Net Zero: Net zero refers to a condition in which a nation's greenhouse gas emissions are completely balanced, either through the physical removal of greenhouse gases utilizing cutting-edge technologies or through the absorption of carbon dioxide through biological processes like photosynthesis in plants.

Initiatives:

- **Indian Railways** alone will reduce emissions by 60 million tonnes yearly by achieving its **Net Zero goal by 2030**.
- Similar to this, India is decreasing emissions by 40 million tonnes a year thanks to a large **LED bulb push**.

Effects of liberalization on the economy, changes in industrial policy, and their effects on industrial growth.

BREATHER FOR COAL PLANT DRAWS ANGUISH

Priority: Medium



Primary Source: The Hindu

Prepp Prelims Booster: Coal power plants

Prepp Mains Booster: Environmental Conservation, Environmental Pollution and Degradation.

Why in the news?

Recently, environmental and clean-energy campaigners have criticised the Union Environment Ministry for extending the deadline for coal plants to install pollution control devices to reduce emissions for a third time.



What is the latest notification about compliance of norms by power plants?

- The most recent notification extends the compliance date for power plants within a 10-km radius of Delhi-NCR and close to cities with a population of more than one million people from December 31, 2022, to December 31, 2024.
- The deadline for power plants located within a 10-km radius of "critically polluted" areas, as determined by the Environment Ministry, has been moved up from December 31, 2023 to December 31, 2025.
- Finally, the new deadline is December 31, 2026, for all other power facilities across the nation that had an earlier deadline of December 31, 2024.
- In addition, all power plants scheduled to shut down before December 31, 2027 will no longer be required to install Flue Gas Desulphurization (FGD) equipment, which reduces emissions of sulphur dioxide.

- Instead, they will only need to submit an exemption request to the Central Pollution Control Board (CPCB) and the Central Electricity Authority (CEA), citing the reasons for retirement.

What is the issue?

- This is the third extension to the deadline to comply with the various norms to reduce the emissions from the Coal fired power plants.
- Sulphur dioxide (SO₂), nitrogen oxides (NO_x), and mercury (Hg) emission norms for coal-fired power plants were originally defined by the Ministry in December 2015, allowing thermal power plant operators until December 2017 to install equipment that would contain the emission of these pollutants.
- Then, the deadline was brought forward to 2022.
- The hefty expense of retrofitting plants, according to plant operators, has caused a delay in the adoption of the standards.

Why is it relevant?

- As a public health emergency approaches, air quality is not just a seasonal annoyance.
- Spending on healthcare, both public and private, could be negatively impacted.
- If the criteria are not followed, society will pay a much higher price in terms of health than is necessary for their implementation.
- It might reduce foreign investment's appeal for Indian towns.
- An sick population may also weaken long-term production.
- Therefore, it is essential that power plants implement the emission regulations.

Why is it important to install FGD Units?

- Some of the most polluted air in the world is found in Indian cities. India currently emits roughly twice as much SO₂ as Russia, which is the next greatest emitter.
- Approximately 80% of industrial emissions of sulphur and nitrous oxides, which are responsible for respiratory ailments, acid rain, and smog, are produced by thermal utilities, which generate 75% of the nation's electricity.
- Delays in putting the rules into practise and the failure to build the FGD system are seriously harming our society's health and economy every single day.
- Since flue-gas desulphurization technologies have shown to be effective in lowering emission levels in China, the country responsible for the highest level in 2005, the high levels of harmful SO₂ pollution in India can be avoided much sooner.

What is Sulfur Dioxide Pollution?

- The burning of fossil fuels by power plants and other industrial facilities is the main cause of SO₂ in the atmosphere.
- Smaller sources of SO₂ emissions include industrial processes like mining for metal, natural sources like volcanoes, and big machinery like trains and ships that run on gasoline containing a lot of sulphur.

What are the Impacts of sulphur pollution?

- The environment and human health are equally impacted by SO₂.

- Breathing can become difficult and the human respiratory system can be damaged by brief exposures to SO₂. Children in particular are sensitive to these effects of SO₂, as are people with asthma.
- It is thought to be responsible for 4.2 million deaths annually, according to the WHO.
- High SO₂ airborne concentrations caused by SO₂ emissions typically also result in the creation of additional sulphur oxides (SO_x). Small particles can be created by the reaction of SO_x with other atmospheric substances. Pollution from Particulate Matter (PM) is a result of these particles.
- If there are enough little particles, they can enter the lungs profoundly and cause health issues.
- Additionally, it may result in acid rain, which harms the environment on a large scale.

What is the status of Sulphur pollution in India?

- According to a report by Greenpeace India and the Centre for Research on Energy and Clean Air (CREA), India's sulphur dioxide (SO₂) emissions registered a significant fall of almost 6% in 2019 compared to 2018, the steepest drop in four years.
- India continued to be the biggest SO₂ emitter, nevertheless.
- For eight pollutants (PM₁₀, PM_{2.5}, NO₂, SO₂, CO, O₃, NH₃, and Pb) for which short-term (up to 24-hours) National Ambient Air Quality Standards are prescribed, an air quality sub-index has been developed.

What are the issues and difficulties in adoption of the emission standards?

- Currently, the operations of power utilities result in losses totaling Rs 700 billion each year.
- This is because, as a result of political pressure, consumers either receive subsidies or free electricity.
- As a result, utilities are unable to recoup even the cost of providing power.
- They are therefore unlikely to recoup the increased expenses brought on by plant retrofits.
- The cost of purchasing FGD equipment from coal-fired power plants could go up due to the construction and operation of these retrofits.
- It can lead to a 20% rise in the typical procurement expenses today.
- Conversely, plant owners worry about their capital expenditure if utilities do not pay up.
- There may be more delays as a result of the standards' implementation speed being far too slow.
- The fact that India has adopted a command and control strategy presents another difficulty.
- By defining a largely identical norm for all plants, it achieves this.
- The US has previously implemented a comprehensive cap-and-trade system for SO_x emissions to address the issue of acid rain.
- However, India faces a number of difficulties in implementing a cap-and-trade system, including:
 - inadequate levels of emissions monitoring
 - insufficient capability in state pollution control boards
 - shortage of administrators to act as watchdogs

What is the way forward?

- The first best scenario is accepting the higher costs of implementation for the retrofitting of the equipment.
- It's crucial to have a team of monitors in place to keep an eye on pollution limits.
- Another approach is to combine pollution reduction with higher power plant efficiency.
- In the meanwhile, a more adaptable power infrastructure will be needed as renewable energy sources become more prevalent.
- Some of the more aged facilities could use renovation and modernization.

Effects of liberalization on the economy, changes in industrial policy, and their effects on industrial growth. Indian Economy and issues relating to Planning, Mobilisation of Resources, Growth, Development and Employment. Government Budgeting

THE AGE OF HYPER-LAPSE CONSUMERISM

Priority: Medium



Primary Source: The Hindu

Prepp Prelims Booster: Hyper consumerism ,Hyper lapse consumerism

Prepp Mains Booster: Effects of liberalization on the economy, changes in industrial policy, and their effects on industrial growth.

Context:

- Covid-19 pandemic lockdown impacted consumer behavior, encouraging more people to participate in online shopping.
- The pandemic's effects on the global economy caused demand to decline. However, the post-pandemic economic recovery and repressed consumerism are now encouraging "revenge shopping."

Role of Consumption

- Consumption plays a significant role in human civilization. The amount and type of consumption determine modern economies' success and are key indicators of it.
- The nature of consumerism has undergone significant changes, from the hunter-gatherers whose focus on consumption was survival to the millennials for whom consumption is about achieving aspirations.
- Consumption has increased since the industrial revolution as a result of the expansion of the middle class in developed nations.
- While a large portion of society, on the one hand, accepts and even enjoys the acquisition and display of material wealth, another school of thought promotes minimalism.

What is Hyper consumerism?

- Hyperconsumerism, hyper-consumerism, hyperconsumption, or hyper-consumption is the consumption of goods for non-functional purposes and the significant pressure that modern capitalist society places on people to consume those goods because those goods help to define their identities.

The Effects of Hyper-Consumerism



- Whether directly or indirectly, hyperconsumerism and the culture of spending and owning more have an impact on all of us.

Poor financial practices

- A lot of our impulsive purchases, including those made online, are made possible by having access to credit.
- Online platforms that enable an impulse purchase with just a few clicks have increased this.
- Credit cards teach us to act impulsively, according to psychological research.

Mental Health and Stress

- Consumer debt has a clear connection to anxiety, depression, and other mental health issues.
- The pressure on consumers to spend money on gifts, decorations, or meals to have the "perfect" holiday during occasions like Christmas makes this situation worse.
- It only gets worse with all the **social media** posts showcasing other people's **extravagant purchases** and epic holidays.
- In addition to the **stress brought on by consumer debt**, studies reveal that people who believe their happiness comes from having material possessions but **cannot afford them are frequently unhappy and dissatisfied**.

Realistic Unfulfillment

- Hyper-consumerism exists as a result of our successful persuasion that it improves our quality of life, boosts our mood, and satisfies our emotional needs. Of course, this is not at all the case.
- When you buy more than you need, you always experience a momentary sense of happiness.

Impact on the environment and waste

- Hyper-consumerism prioritizes the health of the economy over all other considerations, including the environment. That puts your entire world in danger.
- According to a study published in the Journal of Industrial Ecology, household consumption accounts for more than half of all land, material, and water use as well as more than 60% of greenhouse gas emissions.

What is Hyper Lapse Consumerism?

- Hyper lapse consumerism, which refers to not only the kinds of products being sold but also the ease with which consumers order them and the speed at which such products are delivered, has been fueled by the pervasive growth of the Internet and the rise of e-commerce.
- Invesp conducted a study that found that 61% of online shoppers between the ages of 18 and 34 want their packages even faster — within 1-3 hours — and that 56% of them expect their orders to arrive the same day.
- Food and grocery delivery services in India recently announced 10-minute deliveries for customers in a few cities.
- To achieve this, the hyper-local logistical network is being strengthened, predictive algorithms are being used, processes are being optimized, and, in some cases, delivery partners are being given incentives and penalties.

Contribution to the economy

- According to a report titled "**Unlocking the Potential of the Gig Economy in India**" by the **Boston Consulting Group** and the Michael and Susan Dell Foundation, India's expanding gig economy has the potential to create up to 90 million jobs in the non-farm **economy alone, produce more than \$250 billion in work, and eventually contribute 1.25% of the nation's GDP**.
- Consumer behavioral changes are the driving force behind the growth of the gig economy. Shopping has become quicker and more impersonal.
- Nowadays, a lot of people purchase their groceries on a more sporadic basis rather than once a month.

What are the concerns?

- Policymakers and experts expressed concern when the **10-minute delivery plan** was unveiled that delivery professionals might turn to **reckless driving and endanger others in their haste to meet deadlines**.
- **Indiscriminate work pressure can cause delivery professionals fatigue, mental health problems, and other health problems**.
- This could have serious repercussions in a sector **where gig workers receive little to no social security**.
- Businesses frequently have a tendency to **ignore the social, ethical, environmental, and personal costs of business** decisions in the rush to develop better value propositions for the customer.
- Although educating consumers is a good thing for advertising, the issue of whether **advertising is manipulative** has received a lot of attention.

Conclusion

- The legal and technical aspects of 10-minute delivery have been extensively discussed, but we also need to examine it from an ethical, social, and behavioral standpoint.
- A 360-degree analysis of business decisions must be conducted for the greater good, and both consumers and businesses should be aware of the broad effects of their choices. After all, technology gives us the power to address a wide range of issues,

but only wisdom can help us determine which issues are truly worth addressing.

NEED 8-8.5% GROWTH TO BE HIGHER INCOME NATION BY 2047



Priority: Medium

Primary Source: Indian Express

Prepp Prelims Booster: Higher Income Nation by 2047

Prepp Mains Booster: Indian Economy and issues relating to Planning, Mobilisation of Resources, Growth, Development and Employment.

Context:

Recently, the Economic Advisory Council to the Prime Minister (EAC-PM) held that 7 to 7.5% real economic growth can make India an upper-middle income country by 2047. It was noted in 'The Competitiveness Roadmap for India@100' report jointly published by the EAC-PM and the Institute for Competitiveness.

What are the key highlights of the report?

- With conservative real rates of growth of 7 to 7.5%, India can get a per capita income of about \$10,000 by 2047.
- India's growth rate needs to accelerate to 8 to 8.5% to make it a higher income nation and increase per capita income from \$10,000 per capita income to \$12,000.
- Measures suggested as essential areas of action:** Improving enhancing labour mobilisation and labour productivity, boosting the creation of competitive job opportunities, and improving policy implementation through greater coordination.



Classification of Countries into four income groups

- The World Bank assigns the world's economies into four income groups—low, lowermiddle, upper-middle, and high-income countries.
- Classifications are updated each year and are based on gross national income (GNI) per capita (current US\$) calculated using Atlas method.

- GNI per capita (at purchasing power parity) of a particular country is obtained by dividing GNI with the population of that country.
- India is currently placed in a lower-middle income country bracket with average per capita income at \$2,000.

Group	July 1, 2022 for FY23 (new)
Low income	< 1,085
Lower-middle income	1,086 – 4,255
Upper-middle income	4,256 -13,205
High income	> 13,205

What is Gross National Income (GNI)?

- GNI is a measurement of a country's income that includes all the income earned by a country's residents, businesses, and earnings from foreign sources.
- It comprises GDP plus net receipts of primary income (compensation of employees and property income) from non-resident sources.
- It does not count income earned by foreigners located in the country.

What is the Economic Advisory Council to the Prime Minister (EAC-PM)?

- It is a non-constitutional, non-statutory, independent body constituted by the Government to give advice on economic and related issues, specifically to the Prime Minister.
- Functions:** It advises the Prime Minister on economic issues and on policy-related matters like microfinance, inflation and industrial output etc.
- It also highlights key economic issues to the government from a neutral viewpoint.
- Nodal Agency:** NITI Aayog serves as the nodal agency for the EAC-PM for administrative, logistic, planning and budgeting purposes.
- Composition:** Present EAC-PM comprising seven members was constituted in October 2021 with Dr. Bibek Debroy as its Chairan for a period of two years.

Terms of Reference of EAC-PM

- Analyse any issue, economic or otherwise, referred to it by Prime Minister and advising him,
- Address issues of macroeconomic importance and present views thereon to the Prime Minister.
- Take either suo-motu or on reference from the Prime Minister or anyone else.
- Attend any other task as may be desired by the Prime Minister from time to time.

Periodic Reports: It publishes Annual Economic Outlook, Review of the Economy.

CENTRE MULLS ALLOWING 100% WORK FROM HOME FOR EMPLOYEES OF SEZ UNITS: REPORT



Priority: High

Primary Source: Hindustan Times

Prepp Prelims Booster: SEZ

Prepp Mains Booster: - Indian Economy and issues relating to Planning, Mobilization of Resources, Growth, Development and Employment.

Context:

- According to the Union minister of Commerce the government is considering to allow 100 percent Work From Home (WFH) for employees of units in Special Economic Zones (SEZ).
- Minister added that the work from home policy can help in creating job opportunities in smaller cities, stating that it is in the interest of the country to allow work from home.



What is the policy initiative the Government is thinking about?

- Government is thinking of a policy initiative to extend the Work from Home Policy to allow 100 percent WFH for all employees of units in special Economic Zones (SEZ) in a push to create new employment opportunities.

What is the present situation on WFH?

- At present, in a SEZ unit, WFH is permitted for a maximum of one year, with the possibility of an extension for up to 50% of the workforce.

What is Work From Home (WFH)?

The term "Work From Home (WFH)" refers to employment arrangements in which employees do not commute to a central place of employment, such as an office building, warehouse, or retail store. It is also referred to as "remote work," "work from anywhere," "telework," "remote job," "mobile work," and "distance work."

How significant will the decision be?

- Employment Generation in Small Cities:** This will lead to more opportunities for employment in small cities specially for young girls and women.
- Increase in the Women participation in Workforce:** WFH has proven more beneficial for women in employment as it addresses the concerns of migration, security and other related problems.
- WFH as an Alternate solution to corporate for Maternity Act Compulsion:** WFH provides an alternative to hire more women employees without getting affected by provisions of Maternity Benefit (Amendment) Act which will ultimately lead to more women in the workforce.
- Reduced Cost of Operation for the SEZ unit:** This will lead to increased cost competitiveness of the SEZ unit and more profitability. Finally leading to more economic activity from SEZ.
- Increased leisure time for employees:** WFH eliminates the travelling time for jobs, thus giving more time to employees for leisure activity.

Advantages and Disadvantages of WFH:

Advantages:

- Avoids the problem of travelling to job and giving more time to leisure activity
- Provides the easy balance of Professional and Personal life.
- Helps to avoid problems of Traffic congestion majorly in metro cities.
- Leads a way towards a conservation of resources like fossil fuels, water, electricity, etc.

Disadvantages:

- May lead to reduction in productivity of the unit.
- May lead to reduced creativity and innovation in firms.
- Risk of isolation and professional growth of employees.

What are the initiatives taken by the Government for generation of employment in recent times ?

- PM SVANidhi:** It is a special micro-credit facility plan to provide affordable loan of up to ₹10,000 to more than 50 lakh street vendors, who had their businesses operational on or before 24 March.
 - SIDBI is the technical partner for implementation of this scheme.
 - It will manage the credit guarantee to the lending institutions through **Credit Guarantee Fund Trust for Micro and Small Enterprises**.
- Garib Kalyan Rojgar Abhiyaan:** It aimed to boost livelihood opportunities in rural India amid the ongoing Covid-19 crisis.
 - The scheme aims to provide workers who have returned to their regions with the immediate needs they have by giving them possibilities for employment.
 - It is a targeted effort that spans 116 districts over 125 days in six states, working in mission mode.
 - To develop jobs and long-lasting infrastructure, it includes the focused implementation of 25 various types of activity.
- Aatmanirbhar Bharat Rojgar Yojana (ABRY):** It was launched in 2020 as a component of Atmanirbhar Bharat package 3.0 to encourage employers to create new jobs while also providing social security benefits and regaining lost jobs due to the Covid-19 pandemic.

- This programme, which is being carried out by the Employees' Provident Fund Organization (EPFO), aims to lighten the financial load on companies and motivate them to hire additional staff.
- **Aatmanirbhar Bharat package:** This aimed to boost the economy and lessen the negative effects of the pandemic.
- The government offered fiscal stimulus totaling more than Rs. 27 lakh crore as part of this package.
- This package consists of numerous long-term plans, programmes, and policies to increase employment opportunities and national independence.

What is a Special Economic Zone (SEZ)?

- With the aim of attracting investment and generating jobs, a SEZ is a region of a nation that is often duty-free (Fiscal Concession) and has its own set of economic and commercial regulations.
- Additionally, SEZs are created to enhance these regions' governance and facilitate Ease of Doing Business.
- The Central Government has enacted the SEZ Act 2005 which provides for the creation, regulation and management of the SEZ in India and the rules for it.

Objectives of the SEZ Act:

- To enhance the creation of SEZ and its regulation and management
- To increase economic activity.
- To boost the volume of exports of products and services.
- To open up employment options.
- To boost both domestic and foreign investment.
- Infrastructural facilities to be built.

WHY SHOULD INDIA CHOOSE MANUFACTURING OVER SERVICES?



Priority: Medium

Primary Source: The Hindu

Prepp Prelims Booster: PLI scheme

Prepp Mains Booster: Indian Economy and issues relating to Planning, Mobilisation of Resources, Growth, Development and Employment.

Context:

- Recently, the former Governor of the Reserve Bank of India (RBI) Raghuram Rajan, questioned the Central government's production-linked incentive (PLI) scheme, arguing that it works against the interests of Indian consumers.
- In doing so, he revived the larger debate on the government's efforts to promote the country's manufacturing sector through subsidies, and on its relative importance vis-a-vis the services sector.



Why should India focus on manufacturing over services?

Services sector failed to create more jobs

- The service sector (also known as the tertiary sector) is the third tier in the three-sector economy. Instead of product production, it produces services, maintenance and repairs, training, or consulting. Examples of service sector jobs include housekeeping, tours, nursing, and teaching.
- India's services sector covers a wide variety of activities such as trade, transport, storage and communication, hotel and restaurants, financing, insurance, real estate, business services, community, social and personal services.
- So far, India has certainly developed some advantage in the services sector and is doing rather well. This sector is a key driver of India's economic growth and accounts for more than 50% of the GDP. However, it still employs only 25% of the labour force.
- Thus, the service sector has not been able to create enough jobs in a commensurate manner. The result is that agriculture still continues to sustain nearly half of India's workforce i.e. 15% of GDP is supporting around 45% of India's workforce.

Manufacturing can provide productive jobs

- Manufacturing sector is part of the goods-producing industries supersector group. It basically comprises establishments engaged in the mechanical, physical, or chemical transformation of materials, substances, or components into new products.
- India's Manufacturing sector currently contributes 16-17% to GDP and employs only around 12% of the country's workforce.
- Considering India's demographic dividend and young population, there is a need to create more productive job opportunities for the workforce to shift away from agriculture.
- So there is a need to focus attention on the manufacturing sector because it has huge potential to create higher productivity jobs direct and indirect jobs for people stuck in agricultural activities as it has the highest backward and forward linkages.

What are the challenges faced by India's manufacturing sector?

- **Underdeveloped manufacturing Sector:** India is still aiming to bring old-school, labour-intensive manufacturing to an economy that desperately needs to create millions of new jobs.
- While the competing countries like China is currently going beyond labour-intensive manufacturing and into cutting-edge sectors like robotics and aerospace
- **Weak Infrastructure:** India's weak infrastructure continues to be a fatal flaw for the manufacturing sector.
- India just uses only 3% of its GDP for infrastructure construction each year, as compared to China which uses around 20% of its GDP for infrastructure construction.
- India's transportation systems are yet to meet the expectations of modern high-speed logistics which forms the backbone of efficient manufacturing.
- **Numerous regulatory roadblocks:** Such as unfavourable land and labour laws, inadequate transport, communication and energy infrastructure, among others hamper competitiveness of India's manufacturing sector.
- **International factors:** India's manufacturing sector faces stiff competition from South-East Asian and other South Asian countries. It is also facing fast paced global technological and geo-economic changes.
- **Lack of certified factories:** Majority of India's manufacturing units are SMEs and don't meet any basic global inspection standards. This discourages serious international buyers from considering India as a sourcing destination.
- **Inadequate electricity supply:** Poor and erratic electricity supply puts the country's manufacturers at a distinct disadvantage. India has one of the lowest per capita power consumption around the world and has an annual power gap of more than 10%.
- **Impact of abundant schemes:** The bulk of the government schemes related to the manufacturing sector rely too much on foreign capital for investments and global markets for produce.
- This has created an inbuilt uncertainty, as domestic production had to be planned according to the demand and supply conditions elsewhere. Moreover, there is poor implementation of these schemes.

Why is there a need for government intervention?

- The job of the government is to create a broad enabling environment in the economic transition. This can be seen from examples of each of the East Asian countries such as Japan, South Korea, Taiwan, Malaysia, Thailand, China and Vietnam.
- Each of these countries had seen unique strategic interventions by their government a few decades back that enabled them to become a manufacturing powerhouse running consistent trade and current account surpluses.
- There is something to be learned from them. In such a context, the Central Government decision to promote the manufacturing sector is timely because India has favoured an agriculture and services-dominated economy over the years.

Various Government Initiatives:

- **Make in India initiative:** Its primary goal is to make India a global manufacturing hub.

- **Zero defect zero effect Scheme for MSMEs:** It aims to deliver top quality products using clean technology.
- **Skill India Mission:** It is a multi-skill development programme with a mission for job creation and entrepreneurship.
- **Labour reforms:** Through codification of various labour laws and launching of dedicated Shram Suvidha Portal, Random Inspection Scheme, Universal Account Number and Apprentice Protsahan Yojana.
- **Defence Procurement Policy (DPP):** Under this policy priority is given to the indigenously made defence products.
- **Technology Acquisition and Development Fund (TADF):** It is proposed under the National Manufacturing Policy (NMP) to facilitate acquisition of Clean, Green and Energy Efficient Technologies by MSMEs.
- **Pradhan Mantri MUDRA Yojana (PMMY):** It aims at providing loans to small-scale businesses.
- **Aatmanirbhar Bharat Abhiyan:** It aims to make the country and its citizens independent and self-reliant in all senses especially in five pillars of Economy, Infrastructure, System, Vibrant Demography and Demand.
- **Production Linked Incentive (PLI) Scheme:** It provides incentives to companies for enhancing their domestic manufacturing apart from focusing on reducing import bills and improving the cost competitiveness of local goods. It offers incentives on incremental sales for products manufactured in India.

Way Forward

If India offers a conducive business climate with better infrastructure and logistics, simplified land and labour laws and single window clearances it can enable development of a robust manufacturing ecosystem. This will help attract foreign capital, latest technology, create jobs and boost our exports.

CENTRAL GOVERNMENT'S INITIATIVE TO BOOST THE CAPITAL EXPENDITURE TO BOOST THE ECONOMY POST PANDEMIC ERA

Priority: Medium



Primary Source: The Hindu

Prepp Prelims Booster: Capital Expenditure

Prepp Mains Booster: Government Budgeting.

Why in the News?

Central Government has taken three steps recently that has brightened the outlook for capital expenditure by state governments:

1. Stepped up tax devolution to states during July-August 2022.
2. Sharp off-take of Interest-free capex loan scheme for states in July 2022.
3. Eased norms for the adjustment of off-budget borrowings for the current fiscal have been eased.

Doubling of tax devolution in August 2022

- The Central Government in August 2022 released over Rs.1.16 lakh crore to States, equivalent to two monthly instalments of tax devolution.
- It is nearly double tranches to the previous one to help front-load State governments' capital expenditure abilities in this financial year.
- **Reasons:** The doubling of tax devolution is due expected overshooting of its tax revenues relative to the budget estimates for 2022-23.
- **Benefits:** This revenue visibility will enable states to plan their capital spending, given the lead time required to plan and execute capital projects.
- It may result in more accurate assessments of their quarterly market borrowings, which have been woefully off-the-mark in recent quarters.

Interest-free Capex loan scheme for states in July 2022

- It was a special assistance scheme to states for capital investment launched in October 2020 as part of the measures to support economic activity which had been negatively impacted by the Covid-19 pandemic. Under it, states are given loans, over and above the normal borrowing ceiling fixed.
- In the Union Budget 2022-23, the Central Government had increased allocation towards this scheme to Rs 1 lakh crore for FY 2022-23 from under Rs 15,000 crore in the previous two years.
- Funds under this scheme permit the states to settle their pending bills for ongoing capital projects in addition to using them for new and ongoing capital projects that are duly approved by the Centre.

Ease of off-budget borrowings for states

- Central Government's latest guidelines indicate that states' off-budget debt only for 2021-22 will be adjusted over a four-year period beginning 2022-23 and ending in 2025-26.
- This will provide relief to those states that had undertaken large off-budget borrowings in the previous two years, thereby creating the fiscal space for them to ramp up capital expenditure spending.

What Is Capital Expenditure?

- It is the money spent by the government on the development of fixed assets such as road construction and health facilities, education, etc. that gives profits or dividends in future.
- It is associated with investment or development spending, where expenditure has benefits extending years into the future.
- It includes money spent on the following: (i) acquiring fixed and intangible assets (ii) upgrading an existing asset (iii) repairing an existing asset and (iv) repayment of loan etc.
- The Central Government is emphasising on capital expenditure (CAPEX) to push economic growth hit by the pandemic. As a result, it has raised capex by 35.4% for the financial year 2022-23

to Rs. 7.5 lakh crore (4.2% of GDP) compared to Rs. 5.5 lakh crore in FY 2021-22.

Importance of capital expenditure

- **Multiplier effect:** Capital expenditure leads to the creation of assets that are long-term in nature and allow the economy to generate revenue for many years by adding value or improving production facilities and boosting operational efficiency.
- It has the maximum multiplier effect i.e. change in rupee value of output with respect to a change in rupee value of expenditure.
- **Increases Productivity:** It also raises its capacity to produce more in future, increases labour participation and takes stock of the economy.
- **Macroeconomic stabiliser:** Capital expenditure acts as a macroeconomic stabiliser and is an effective tool for countercyclical fiscal policy.
- **Revenue generation:** It helps the creation of long-term assets that allows the economy to generate revenue for many years and boosts operational efficiency.
- **Liability reduction:** Repayment of loan is also capital expenditure which helps to reduce liability.
- **Economic growth:** It catalyses private investment, increases production capacity thereby speeding up economic growth which in turn creates more jobs.

INDIA OVERTAKES THE UK AS WORLD'S FIFTH-LARGEST ECONOMY: 5 CHARTS TO PUT THIS IN PERSPECTIVE

Priority: Medium



Primary Source: Indian Express

Prepp Mains Booster: - Indian Economy and issues relating to Planning, Mobilization of Resources, Growth, Development and Employment.

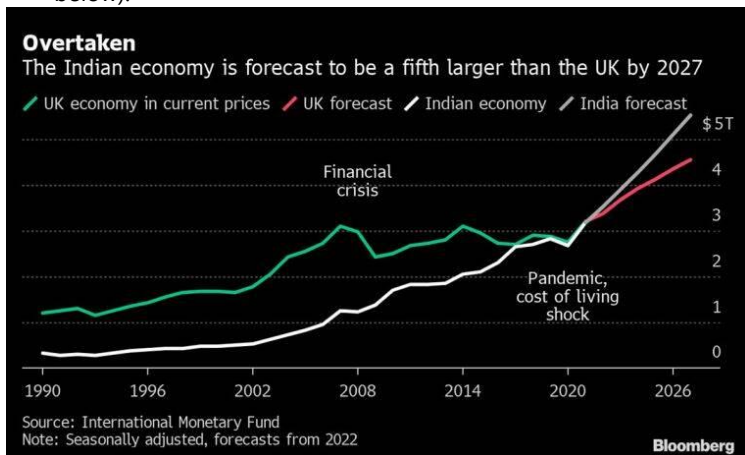
Context:

According to the most recent estimations by Bloomberg, India passed the United Kingdom in end-March 2022 to become the fifth-largest economy in the world. While this has been expected for some time, Bloomberg came to this conclusion by examining historical exchange rates and the IMF database.

What are the findings of The Bloomberg's Forecast Report?

- According to Bloomberg, India has surpassed Britain to become the fifth-largest economy in the world.
- The United Kingdom has dropped to sixth place as a result of the rating shift, as the nation struggles to cope with the harsh cost of living burden.
- The size of the Indian economy in "normal" cash terms in March 2022 was USD 845.7 billion, on an adjusted basis and using the dollar exchange rate on the last day of the relevant quarter.
- According to the report, the UK had a USD 816 billion market value.
- This year, the Indian economy is anticipated to expand by more than 7%.

- Bloomberg forecasts that due to India's rapidly expanding economy, there will likely be a significant difference between India and the UK within the next few years (see Bloomberg Graph below).



What was the IMF Forecast?

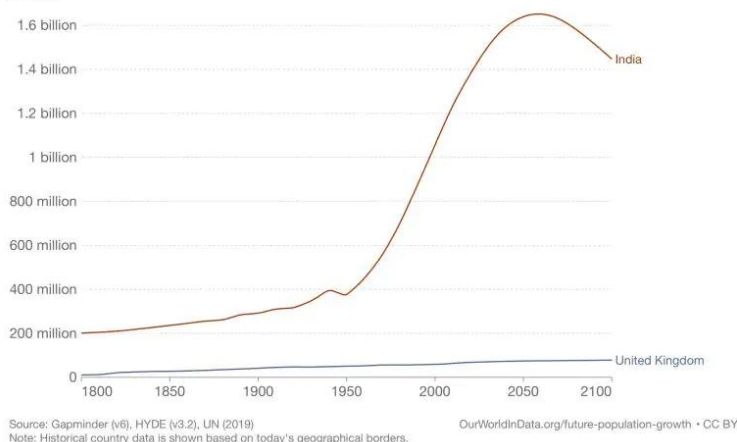
- IMF Forecast: According to the IMF's own projections, this year will see India surpass the UK in dollar terms annually, putting the Asian powerhouse behind the US, China, Japan, and Germany.
- India was the eleventh-largest economy ten years ago, while the UK was the fifth-largest.
- In keeping with its predictions from the start of this fiscal year, the government anticipates that the economy would expand by 7 to 7.5 percent in 2022–2023.
- India saw growth of 8.7% in 2021–2022.

However, these are the five perspectives to analyze the development of India and the UK as the world's fifth largest economy.

Population size

Population, 1800 to 2100

Historical estimates of population, combined with the projected population to 2100 based on the UN's medium variant scenario.

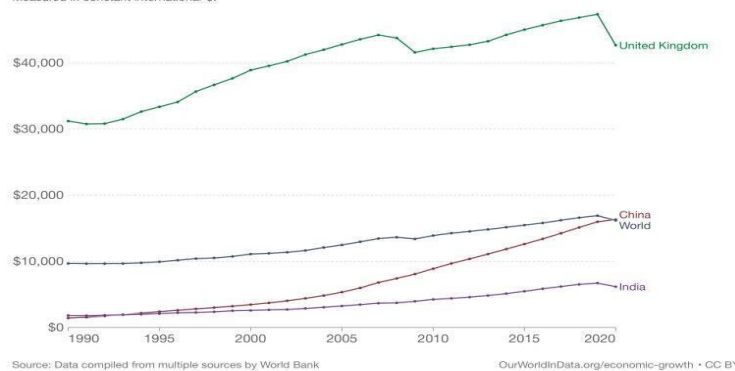


- This is one of the most important distinctions between the two nations. India will have 1.41 billion people as of 2022, compared to the UK's 68.5 million people.
- India has a population that is 20 times larger than the UK and this gap is not likely to be closed quickly.

GDP per capita

GDP per capita

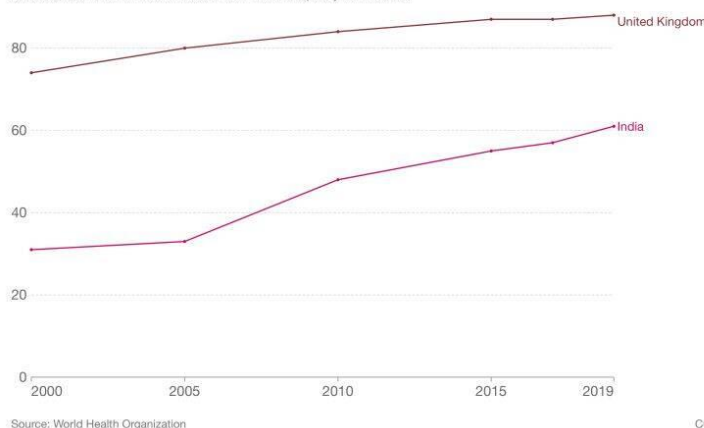
Measured in constant international-\$.
Our World in Data



- Given the dramatic disparity in population between the two nations, dividing a country's GDP by its population yields GDP per capita, which offers a more accurate comparison of income levels.
- Unsurprisingly, the average Indian's income is much smaller.

Universal Health Coverage Index, 2000 to 2019

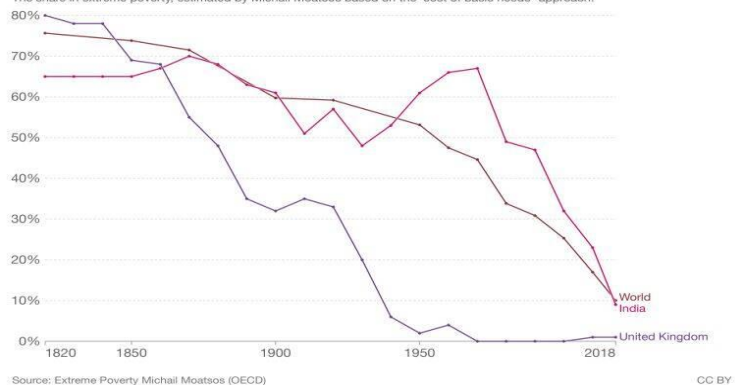
The Universal Health Coverage (UHC) Index is measured on a scale from 0 (worst) to 100 (best) based on the average coverage of essential services including reproductive, maternal, newborn and child health, infectious diseases, non-communicable diseases and service capacity and access.



Levels of poverty

Share in extreme poverty, 1820 to 2018

The share in extreme poverty, estimated by Michail Moatsos based on the 'cost of basic needs'-approach.



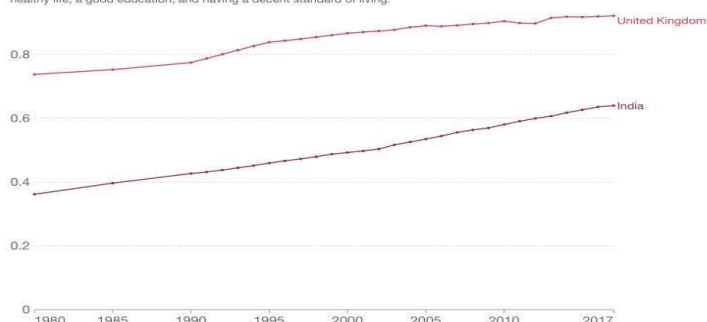
- Low per capita earnings can indicate severe poverty. It is interesting to notice that India's share of extreme poverty was far lower at the beginning of the 19th century than it was in the UK.

- Even though India has achieved significant progress in reducing poverty, the relative positions have now reversed.

Human Development Index

Human Development Index, 1980 to 2017

The Human Development Index (HDI) is a summary measure of key dimensions of human development: a long and healthy life, a good education, and having a decent standard of living.



Source: United Nations Development Programme, Human Development Report 2020. OurWorldInData.org/human-development-index/ • CC BY

- The health, education, and standard of living indicators that make up the Human Development Index are combined.
- Despite its secular progress, India may still require ten years to catch up to the UK in 1980.

Universal Healthcare Coverage

- The standard of living that residents may access is a critical component of a nation's ability to get wealthy.
- Based on the average coverage of basic services such as reproductive, maternal, neonatal, and child health, infectious illnesses, non-communicable diseases, service capacity, and access, the Universal Health Coverage (UHC) Index is rated on a scale from 0 (worst) to 100 (best).
- There is still a long way to go, even if India's faster economic growth and the government's policy focus on healthcare programmes since 2005 have made a noticeable improvement.

Conclusion

The analysis from above five perspectives of the two economies points to the fact that, though India has overtaken the UK to become the World's 5th largest economy, there is a long way ahead to have the same Living Standard and Human Development level as compared to the UK. India needs to aspire to achieve the same level of progress on human development.

WHY IS THERE DIVERGENCE IN INFLATION ACROSS STATES?

Priority: Medium



Primary Source: The Hindu

Prepp Prelims Booster: Inflation

Prepp Mains Booster: Indian Economy and issues relating to Planning, Mobilization of Resources, Growth, Development and Employment.

Context:

Retail inflation which peaked in April at 7.79%, an eight-year high, dipped to 6.7% in July. However, consumers continued to experience over 7% inflation in July in 11 States and Union Territories (UTs).



How Inflation is across the states of India?

- Consumer Price Index (CPI) inflation exceeded the RBI's 6% upper tolerance limit in January and has averaged 6.8% since then.
- However, a study of State-level inflation figures for this time period reveals that 14 States and three UTs have seen inflation rates greater than the national average throughout this time, with the majority of them averaging over 7%.

High Inflation States:

- Consumers in Telangana (8.32%), West Bengal (8.06%), and Sikkim are the worst affected with 8%-plus inflation.
- Maharashtra and Haryana** have average 2022 retail inflation rates at **7.7%**, followed by Madhya Pradesh (7.52%), Assam (7.37%), Uttar Pradesh (7.27%), Gujarat and J&K both at 7.2%, and Rajasthan (7.1%).

Low Inflation Rate:

- Twelve States, including Kerala (4.8%), Tamil Nadu (5.01%), Punjab (5.35%), Delhi (5.56%), and Karnataka (5.84%), have seen retail inflation less than 6% until 2022. Whereas Manipur (at 1.07%), Goa (at 3.66%) and Meghalaya (at 3.84%) averaged inflation below 4%.

What are the reasons for variation in the inflation rate across states?

Food Inflation as major contributor:

- Inflation in food prices is a significant contributor for states' inflation experiences.
- States that don't grow a lot of crops experience higher food inflation as a result of rising transportation costs.
- Since food is given more weight in the CPI for rural areas, those with a predominance of rural areas also experience higher inflation.

Fuel Inflation:

- Diesel prices were negative for the first time since November 2019 at (-)2.4%, while overall transportation fuel inflation dropped to a 32-month low of 0.3%.

- It made a difference that several States cut their fuel taxes.

Inequitable industrial growth:

- This leads to artificial supply shortage, which drives the prices in the local markets and causes temporary local inflation.

Unregulated Stocking and Hoarding:

- Negligence of the state government to enforce regulation of stocking, hoarding and blackmarketing leads to shortage in the supply. This disturbs demand supply in agriculture and other goods, creating inflation in states. This Situation varies across the states and creates variation in the inflation rate across the states.

Why is it important?

- Even while private consumption has increased upto 60% of GDP in the first quarter of 2022–2023, persistent high inflation has reduced consumers' propensity to spend, especially in rural India, where there are more pricing pressures.
- Private consumption would have increased more quickly if it weren't for high inflation and weak rural demand caused by negative real wage growth.
- Even as inflationary pressures continue to squeeze household budgets, there is concern regarding rural demand due to the monsoon's continuing uneven progress.

Way Forward:

- In addition to other strategies like interest rate hikes and trade barriers to cool prices of individual items, policy officials might target those pressure points more carefully by understanding what is pushing inflation higher (or lower) in some States compared to others.
- To identify and manage pricing triggers that might not be caused by global headwinds but rather local issues, the Centre and States can coordinate.

Infrastructure: Energy, Ports, Roads, Airports, Railways ;Government policies and interventions for development in various sectors and issues arising out of their design and implementation.

PRODUCTION LINKED INCENTIVE SCHEME: MAKING IN INDIA. BUT HOW?

Priority: Medium



Primary Source: Indian Express

Prepp Prelims Booster: PLI

Prepp Mains Booster: Indian Economy and issues relating to Mobilization of Resources, Growth, Development.

Context:

Recently, in the article published in Indian Express "Making In India. But How?" the former RBI Governor Raghuram Rajan and Rahul Singh Chauhan discussed the scope and viability of the Production Linked Incentive scheme (PLI) in Cellphone Industry.

Production Linked Incentive scheme (PLI), is intended to create a sustainable manufacturing base in India.



What is the Production Linked Incentive scheme (PLI)?

- Creating a sustainable industrial base in India is the objective of the scheme.
- With an increased allocation of Rs 19,500 crore for PLI for solar PV modules, the government has allocated Rs 1.97 lakh crore in the Budget 2022–23 for PLI programmes in various industries.

The PLI scheme was started for the following reasons:

- The share of manufacturing in India's GDP is low.
- For instance, the Gol reports that the electronics industry has a competitive disadvantage of about 8.5–11% as a result of the following variables:
 - India's inadequate infrastructure and its high cost of borrowing.
 - inadequate access to reliable power.
 - Industry's limited design capabilities and its disregard for R&D.
 - Indian labourers' abilities are insufficient.
- Sectors covered under PLI scheme:** The government has so far launched PLI plans for 14 industries.
- These sectors include: Drones, Advanced Chemical Cell Batteries, Solar Modules, Electronics and IT Hardware, Telecom, White Goods, Medicines, Metals and Mining, Textiles, Automobiles & Auto Components, specialised steel, Food Processing Industries.

Measurement of the PLI scheme's incentive

- The incentives, which are based on increased sales, range from 1% for electronics and technology products to 20% for the production of certain medication intermediaries and important key beginning pharmaceuticals.
- In other industries, such those producing drones, textiles, and advanced chemical cell batteries, the incentive will be calculated over a five-year period based on sales, performance, and local value addition.

Understanding the PLI in the context of the cellphone industry

- Hiked custom duty: Customs duties on imported mobile devices were first raised to 20% in April 2018.
- Effect: This quickly raised mobile phone prices domestically, enabling manufacturers to raise rates for Indian consumers.

- **PLI introduced:** Next, the GoI launched PLIs, which provided manufacturers with a government payment of 6% in the first year for each Indian-made cellphone, decreasing to 4% in the fifth year, provided they meet additional investment and sales requirements.
- **Warning:** Even if a manufacturer just assembles the product in India using all foreign parts, he still receives the 6% subsidy on the invoice.
- **State waivers:** States also provide additional subsidies for land, power, and capital expenditures, as well as state-GST waivers (approximately 9% of the cost). As a result, manufacturing in India and even exporting are very profitable due to the protection and subsidies. As a result, firms are vying to be chosen for the programme.
- **Who pays:** Because of tariffs, the Indian consumer pays a higher price. In addition to overseas manufacturers like electronics giants Foxconn and Wistron, the Indian taxpayer also provides subsidies to Indian businesses that are chosen for PLI.

Statistics: EXIM data of telephones, cellular phones and related equipment

- **Prior to the launch of PLI:** In 2019 and before the launch of Covid, exports were \$1. with \$4 billion in imports. 4 billion, resulting in a \$2 net deficit. 8 billion.
- **Following the implementation of PLI:** exports were \$2.7 in 2021 and imports \$5.2 billion. , resulting in a \$2.4 billion net deficit
- **Trend:** However, imports were heading downward and are now trending upward, which is consistent with PLI's encouragement to manufacturers to import parts as long as the final assembly is carried out in India.

What are the key issues with the PLI scheme?

- **Uncertainty over continuation of the scheme:** It is unclear whether manufacturers will carry on with production even after the programme expires.
- **Fear for Relocation to the Better economies:** When PLI ends, producers may relocate production to a better climate and ecosystem, like Vietnam, and gain scale economies without suffering consequences. There won't be anything connecting them to India given the little investment necessary to fulfill PLI eligibility (about \$125 million over four years).
- **Intensify demands:** Increased production may be possible, but the producers will still need protection from tariffs and subsidies. Businesses are already pushing for PLI to be prolonged to account for the epidemic period. They may even make threats to fire employees and shut down when the scam is over. The administration might accede to their request out of fear of disruption.
- **Other associated risks:** PLI-induced domestic manufacturing will decrease exports in other sectors if it cannot become internationally cost-competitive. For instance, PLI-favored semiconductors produced domestically

at high cost will make two-wheeler exports that depend on chips less competitive.

What are some reformative steps?

- **Monitoring:** The NITI Aayog has just started working on developing a set of objective standards to monitor the value generated by businesses that get financial incentives under Production-Linked Incentive (PLI) schemes. Additionally, a dashboard will be created to track state-level obstacles.
- **Agency:** In order to build and prepare a consolidated database to track success in the PLI projects across sectors, the NITI Aayog plans to recruit the assistance of an outside agency, maybe the state-owned Industrial Finance Corporation of India (IFCI) Ltd. or SIDBI.

Relevance of the steps taken:

- This database will monitor job creation, value addition, and actual exports compared to commitments.
- There is currently no method to compare two separate PLI systems because different ministries each track the value contribution of their individual PLI programmes.
- The value added by businesses that have received or are projected to receive PLI programme incentives was not understood by a standard set of parameters.

Way Forward

For longer-term tasks like boosting human capital investment, developing a straightforward but equitable land acquisition process, stopping the ongoing revision of tariffs and taxes that make it difficult for producers to invest, and bolstering infrastructure, new alternatives must be found.

THE ROAD TO ENERGY ATMANIRBHARTA

Priority: Medium



Primary Source: Indian Express

Prepp Prelims Booster: Energy

Prepp Mains Booster: Infrastructure: Energy, Ports, Roads, Airports, Railways ;Government policies and interventions for development in various sectors and issues arising out of their design and implementation.

Context:

- Recently, Prime Minister Modi has called for achieving the "Energy Atmanirbharta" by 2040.
- Vikram S Mehata ,chairman and distinguished fellow of the Centre for Social and Economic Progress in his article in "The Road to Energy Atmanirbharta" in The Indian Express, recommended certain suggestions to achieve Energy Atmanirbharta.

Recommendations

1. Definitional Clarity: Atmanirbharta literally means self-reliance. Many people understand it to indicate self-sufficiency. However,energy independence is both impossible and unprofitable. "Strategic autonomy" would be a better indication of the goal.

2. Access to Fossil Fuels: Access to fossil fuels should be prioritized. It will take time to switch to a green energy grid. It took four decades for American factories to convert from steam to electric power.

- This goal could be partially achieved by stepping up **domestic exploration**. However, there are challenges in domestic exploration like complex geology, costs of exploration, exploration being a capital-intensive enterprise, and PSUs having a poor track record in this area. Perhaps it's time to privatize ONGC.

3. Access to the building blocks of green energy: By 2030, wind and solar energy will account for about 51% of the installed power generation capacity of 830 GW, according to the Central Electricity Authority (CEA).

- This is an increase from the current 22%. Cost-competitive access to the minerals and components (copper, cobalt, lithium, semiconductor chips, etc.) needed to make EVs, solar panels, wind turbines, and batteries will be a requirement in order to realize this forecast.
- The issue is that these resources are concentrated in nations that disagree with India politically.
- For instance, S&P Global research found that Chile and Peru are responsible for producing 38% of the world's copper. **These nations have left-leaning governments that are hostile to mining in the private sector.**
- Furthermore, China is responsible for 47% of copper smelting and 42% of copper refining.
- Cobalt, nickel, and heavy rare earth metals are among the resources that India has, but nothing has been done to hasten their extraction and processing.
- India must remove the barriers preventing domestic mining and create plans to deal with market concentration, international competition, and unfavourable geopolitics.

4. Infrastructure development: The German economy is currently in danger because of lack of a pipeline connection to the Spanish-built LNG import and regasification facilities.

- Therefore, Germany has no choice but to get its gas from Russia. That has been turned into a weapon recently. India cannot afford such vulnerability.
- Additionally, in order to scale up renewable energy and stabilise its supply, we must update the transmission grid and battery storage technologies as well as increase our strategic petroleum reserves to at least 30 days' worth of usage.
- To finance green infrastructure, creative funding methods must be created.
- It should be emphasized that if state discoms experience financial insolvency, all such investments will experience impairment.

5. Green Incentives: The production-linked incentive programme (PLI) of the government provides advantages for investments in renewable energy.

- We need to work, keeping the interests of private investments in mind.

6. Efficiency and demand conservation: Standards for energy use need to be tightened and standardized. To ensure compliance, legislation should be taken into consideration.

7. Upskilling and retraining: With the gradual shift to a green energy system, jobs will be altered. For instance, technicians on solar farms might be more in demand than maintenance personnel on oil rigs. It is important to plan ahead and provide the training and skills that will be necessary as a result.

8. Energy diplomacy : The arrows of energy diplomacy should be added to the arsenal of our diplomats. This is a result of our reliance on global energy supply networks. Skillful diplomacy will be crucial for navigating the crosscurrents of economic and geopolitical uncertainty.

9. Holistic governance: Energy governance's present segmented structures are not ideal. To facilitate **integrated energy planning** and implementation, institutions should be established.

10. Political statesmanship: The expression "the tragedy of horizons" was created by Mark Carney, a former governor of the UK central bank, to emphasize the **different time horizons of politics, economics, and society with reference to the energy transition**. Leadership is required that can bridge gaps in time and strike a balance between the demands of elections and sustainability's longer-term goals.

Conclusion

For India to be atmanirbhar in energy, leadership is required to strike a balance between the longer-term imperatives of sustainability and the short-term constraints of elections.

'INDIA MAY NEED UP TO 28 GW IN NEW COAL-FIRED PLANTS BY 2032'

Priority: Medium



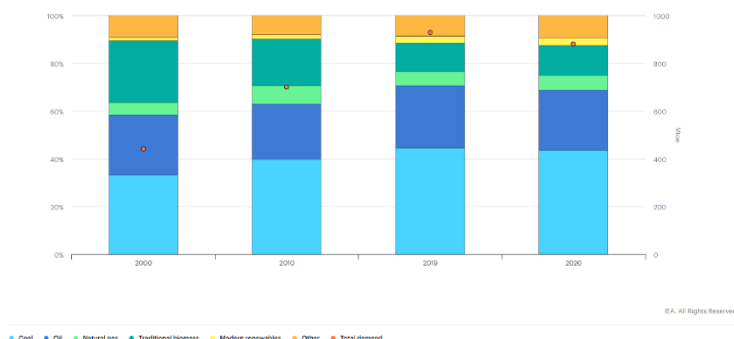
Primary Source: The Hindu

Prepp Prelims Booster: Coal fired plants

Prepp Mains Booster: Infrastructure: Energy, Ports, Roads, Airports, Railways etc; Government policies and interventions for development in various sectors and issues arising out of their design and implementation.

Context:

- According to the Central Electricity Authority report, India may require up to 28GW more coal-fired power generation capacity by 2032 in addition to the 25GW thermal projects that are now under construction (CEA).
- In a draft national electricity plan, CEA stated that "it is seen that apart from under construction coal-based capacity of 25GW, the new coal-based capacity required till 2031-32 may vary from 17 GW to roughly 28 GW."
- The CEA has put up the 'Draft National Electricity Plan (Vol-I Generation)' for feedback from stakeholders on September 8, 2022.



- The National Electricity Plan must be prepared by CEA **once every five years in accordance with the Electricity Act of 2003.**
- The Act mandates that CEA publish the draft of the National Electricity Plan (NEP) and invite comments and objections from licensees, generating businesses, and the general public.
- The inputs on the draft can be given latest by December 5, 2022.

What does the report say?

- The study noted that the required **BESS (Battery Energy Storage System)** varies from 51GW to 84GW in 2031–2022.
- Additionally, it was said that an **extra 4 GW of coal would be needed** in the capacity mix in 2026–2027 in the event that hydro-based facilities, which are currently in the concurred/under construction stage, were not completed on time.
- The **study model chooses less expensive coal candidates** that are available to provide base load backup in the event that the base load nuclear capacity is not available, it was noted.
- When the peak demand and energy requirement increases, both the coal-based capacity and storage requirement — **PSS (Pumped Storage Schemes) and BESS — increase along with a marginal increase** in hydro-based capacity, it found.
- **Rise in electricity demand:** According to the preliminary estimates of demand predictions, the estimated all-India peak electricity demand and electrical energy requirement are 272 GW and 1,874 BU (billion units) and 363GW and 2538 BU for the years 2026–27 and 2031–32, respectively.
- **Plant Load Factor:** It was determined that in 2026–2027, the average PLF (Plant Load Factor) or capacity utilization of the total installed coal capacity of 239.3 GW will be around 55%.
- In the period from 2031–32, it was discovered that the average PLF of the 248.9 GW installed total coal capacity was roughly 62%.
- **Double rate of increase:** India's annual electricity demand could grow by an average of 7.2% over the five years to March 2027, which is nearly twice as fast as the pace of growth during the fiscal years from 2017 to 2022.

- **Fall in the share of energy generated from coal:** The share of coal in India's total power generation, however, is likely to fall below 60% by 2027, with India targeting the addition of 500 GW in non-fossil-based installed capacity by 2030, according to the plan.
- **Requirement of additional capacity:** To meet the peak electricity demand and energy needs for the years 2026–27, it was stated that a capacity addition of 2,28,541 MW, consisting of 40,632 MW of conventional capacity addition (coal–33,262 MW, nuclear–7,000 MW, gas–370 MW) and 1,87,909 MW of renewable-based capacity addition (large hydro–10,951 MW, solar–1,32,080, wind–40,500 MW, biomass–2,318 MW)
- According to generation planning studies done for the years 2022–2027, the likely installed capacity for the years 2026–2027 is 6,22,899 MW, made up of 3,44,517 MW of renewable-based capacity addition and 2,78,382 MW of conventional capacity addition (large hydro–52,929 MW, solar–1,86,076 MW, wind–80,858 MW, small hydro–4,848 MW, biomass–13,000 MW, PSP–6,806 MW).
- **'Low per capita demand'** : India, along with China, produces a significant amount of greenhouse gases, although its per capita energy consumption and emissions are far lower than those of most wealthy nations.
- India along with china accounts for the lion's share of the world's additional renewable energy output
- India may construct new coal-fired plants due to their lower cost, according to a draft electricity policy paper published last year. However, the report did not provide any estimates for the potential construction of how much capacity.

Way Forward

- India has promised to develop 50% of its installed generation capacity based on non-fossil fuel sources by 2030, reduce its projected carbon emissions by 1 billion tonnes, reduce the carbon intensity of the economy by 45%, and have 500 GW of non-fossil fuel-based energy capacity in place as part of its COP 26 goals.
- On the other hand, coal is the primary source of our structural dependence on energy. India has some of the greatest coal deposits in the world, making coal more than just an economic growth driver for the country because it is essential to guaranteeing energy security.
- But it is essential to optimise coal-based power and make it more effective and clean in order to serve the greater good and create a sustainable ecosystem. Additionally, it is important to keep in mind that coal can only support us in the short term; vital steps must be taken to balance our reliance on coal and guarantee a smooth transition to a green economy.
- To meet India's evolving demand profile, an adequate combination of generation technologies is required.

Battery energy storage systems (BESS): Battery storage, or battery energy storage, is a technology that enables energy from renewables, like solar and wind, to be stored and used when needed.

Pumped Storage Hydropower : PSH plants are very helpful solutions for integrating renewable energy into the electricity grid.

- PSH plants are hydropower-based storage systems that connect two reservoirs that differ in elevation.
- At the time of demand, downward water flow generates electricity and water is pumped back to the upper reservoir using power from grid or RE sources.

Plant Load Factor: The PLF is the ratio of the average power generated by the plant to the power that could have been generated in a given time. More PLF increases income and reduces cost per unit (kWh).

SCHEME FOR THE PROMOTION OF BULK DRUG PARKS



Priority: Medium

Primary Source: PIB

Prepp Prelims Booster: Bulk drugs park

Prepp Mains Booster: Infrastructure: Energy, Ports, Roads, Airports, Railways etc.

Context:

Recently, the Department of Pharmaceuticals granted 'in-principle' approval to the proposals of the three States- Himachal Pradesh, Gujarat and Andhra Pradesh for establishing three Bulk Drug Parks under the Scheme for Promotion of Bulk Drug Parks.

Why is there a need for promoting the domestic bulk drugs industry?

- The Indian Pharmaceutical industry is the 3rd largest (in terms of volume) and 14th largest (in terms of value) in the world. India contributes 3.5% of total drugs and medicines exported globally.
- India is the largest provider of generic medicines globally, occupying a 20% share in global supply by volume, and also supplies 50% of global demand for vaccines. Its pharmaceutical industry was valued at \$ 36.7 billion in 2018 and is expected to reach \$ 55 billion by 2025.
- **Import Dependence:** However, despite these significant achievements, India is heavily dependent on the import of some of the critical basic raw materials like Active Pharma Ingredients (API) or bulk drugs that are used to produce the finished pharmaceutical.



- India annually imports APIs worth \$3.5 billion and around 70% (or \$2.5 billion) of this import is from China. The import dependence of the Bulk Drug/APIs is mainly because of economic considerations.

What is Active Pharma Ingredient (API) or bulk drug?

- It is a biologically active component of a drug product (e.g. tablet, capsule). Drug products are usually composed of several components and the API forms the primary ingredient of it.

- **Measures taken:** The Central Government is striving to minimise dependence on Bulk Drug/APIs imports and to give fillip to indigenous manufacturing. It is aiming to make the country a hub for end-to-end drug discovery under its 'Pharma Vision 2020'.
- The Department of Pharmaceuticals is implementing various schemes in order to make the country self-reliant in APIs and drug intermediates. One of the key interventions is the Scheme for Bulk Drug Parks.

What is the Scheme for the Promotion of Bulk Drug Parks?

- It was launched by the Department of Pharmaceuticals (Union Ministry of Chemicals and Fertilisers) in 2020 with the vision of making India Atma Nirbhar (self-reliant) in the pharma sector.
- **Objective:** Promote domestic manufacturing of critical Active Pharmaceutical Ingredients (APIs) in the country by providing financial assistance to three states for establishing Bulk Drug Parks.
- Bring down the cost of manufacturing bulk drugs by creating world-class common infrastructure facilities.

Key Features of the scheme

- **Three mega Bulk Drug parks:** They will be established in India in partnership with States.
- **Grant-in-aid:** The Central Government will provide a one-time grant-in-aid will for the creation of common infrastructure facilities (CIF) in selected Bulk Drug Park proposed by a State

Government. Maximum grant-in-aid for one bulk drug park will be limited to Rs 1000 crore.

- The grant-in-aid will be 70% of the project cost of the CIFs. In the case of the North Eastern States and the Hilly States, the grant-in-aid will be 90% of the CIFs.
- CIFs in these parks will have a solvent recovery plant, distillation plant, power & steam units, common effluent treatment plant etc.
- **Implementation:** It will be implemented through a State Implementing Agency (SIA), a legal entity, set up by the concerned State Government.

Significance of the Scheme

- The Bulk Drug Parks developed under this scheme will provide common infrastructure facilities at one place, thus creating a robust ecosystem for the bulk drug manufacturing and also reducing the manufacturing cost significantly.
- It will encourage domestic manufacturing of bulk drugs, thus helping to reduce import dependence and to establish India's dominant position in the global market by providing easy access to standard testing and infrastructure facilities.
- It will also help industry meet the required environmental standards at a reduced cost through innovative methods of the common waste management system and also to exploit the benefits arising due to optimization of resources and economies of scale.
- It reflects the spirit of cooperative federalism where the Central and State Governments partner with each other to develop the Bulk Drug parks for better performance of the sector.

Other Government interventions for promoting domestic manufacturing of the Bulk Drugs

- **Production Linked Incentive (PLI) Scheme:** It was launched in 2020 for domestic manufacturing of KSMs/ Drug Intermediates (DIs) and APIs.
- Under it, a total of 51 projects have been approved so far, out of which, 14 projects have already been commissioned and started manufacturing of the drugs.
- **PLI Scheme for Pharmaceuticals:** It provides for financial incentive to 55 selected applicants for manufacturing of identified products under three categories and eligible drugs under it include APIs.
- **100% Foreign Direct Investment (FDI):** Government has allowed it under the automatic route for greenfield pharma projects.

HOW WILL THE NATIONAL LOGISTICS POLICY SPEED UP THE LUMBERING FREIGHT SECTOR?

Priority: High



Primary Source: Mint

Prepp Prelims Booster: National Logistics Policy

Prepp Mains Booster: Infrastructure: Energy, Ports, Roads, Airports, Railways etc.

Context:

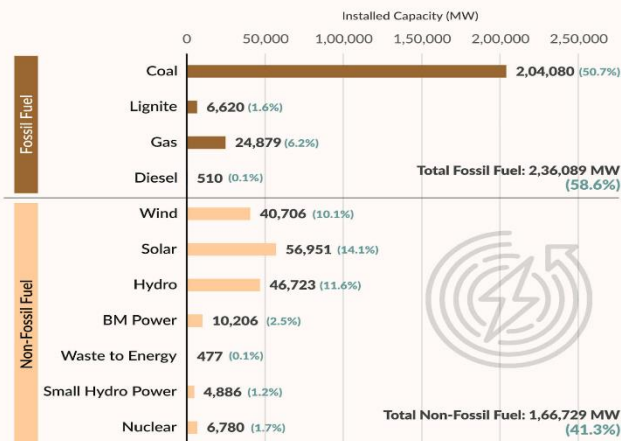
On September 17, the government will unveil the National Logistics Policy (NLP), which aims to reduce logistics costs and address issues that both importers and exporters face. In this background the author looks at how the new policy might expedite the flow of logistics.

What is Logistics?

The term "logistics" describes the total process of controlling the acquisition, storage, and delivery of resources to their intended location.

It entails locating potential distributors and suppliers and evaluating the viability and accessibility of such parties.

Total Installed Energy Generation Capacity in India (May 2022)



Source: powermin.gov.in

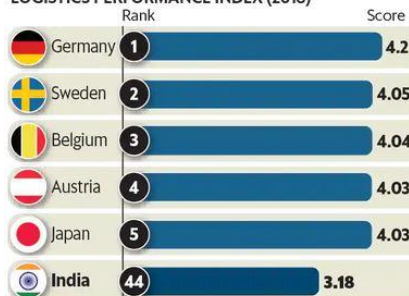
Note: As of May 2022



Why does India need a logistics policy?

Inefficiencies have plagued India's logistics sector for long. About 16% of India's agri production is wasted at different stages of the supply chain.

LOGISTICS PERFORMANCE INDEX (2018)



► GLOBALLY, logistics was a \$4.3 trillion industry as of 2018, the latest World Bank estimate shows.

► INDIA'S logistics cost is estimated to be about 14% of its GDP, according to the government.

► A commerce ministry index in 2021 ranked Gujarat, Haryana and Punjab at the top on the ease of logistics.

► AMONG the "North Eastern States and Himalayan UTs" category, the leaders are Jammu and Kashmir, Sikkim and Meghalaya.

- **Organizing and Formalizing the sector:** The logistics industry in India has to be organised and consolidated because it is highly unorganised and fragmented.
- **Reducing the cost of logistics:** Logistics costs in the country are as high as 14–15% of GDP, compared to 7–8% in industrialised countries like Singapore and the US, who use logistics to increase exports. In the next five years, the NLP wants to reduce India's logistics costs to 8%.
- **Improving Cold Chain Efficiency and reducing perishable loss:** Avoiding the wasting of perishables According to some estimates, 16% of Indian agricultural produce is lost at various points throughout the supply chain.
- **Development of warehousing and Storage capacity:** Additionally, the cost of a transaction rises as a result of variables like capacity restrictions and a lack of available warehouses.
- **Integration of Multimodal Transportation:** The new policy will focus on simplification, technology, and a multimodal strategy that combines train, sea, and air – all means of transportation.
- **Employment Generation:** More than 22 million people in India depend on the logistics industry for their livelihood and has potential to increase in employment, according to the Economic Survey 2017–18.
- **Export promotion:** Enhancing this industry will enable a 10% reduction in indirect logistics costs, which will result in growth of 5 to 8% in exports.
- **Climate change commitment:**

How will technology be used to improve the logistics sector?

- **Advanced analytics:** The NLP will try to make use of blockchain and AI technology. In order to promote more openness and ongoing monitoring of important logistics parameters, it seeks to establish a data analytics centre.
- **Single window portal:** As part of NLP, a portal will be developed that will bring together service providers such as warehouse companies, shipping professionals, transport companies, customs brokers, and various governmental organisations.

How will National Policy increase ministry cooperation?

- **Integrating various departments:** Several ministries—road transport and roads, shipping, trains, and civil aviation—manage the logistics value chain at the moment.
- **Single-point clearances:** Organizations like the Food Safety and Standard Authority of India and the Central Drug Standard Control Organization offer permissions.

- **Integration across the country:** The NLP could improve integration at the central level.

How will National policy transform the way goods are transported in India?

- **Transport of crucial commodities:** the suggested programme is to concentrate on the transportation of essential goods such coal, steel, iron ore, food grains, steel, cement, fruits, and vegetables.
- **Establishing national clusters:** Currently, the logistical system for moving them is largely limited to regional clusters.
- **Integrating national supply chains:** The NLP could assist in establishing a connection between the place of origin and the location of destination and bring the supply together on a national scale.
- **Identification of the best logistics:** The draft also suggests determining the best route of transportation for each of these goods to reduce losses during transport.

What are the Government Initiatives taken for the Logistics Sector?

- **Implementation of GST:** Due to the elimination of checkpoints, it is predicted that the GST system will hasten the formalisation of informal logistical arrangements and the movement of freight over state lines.
- **A national committee** under the direction of the Cabinet Secretary is developing a pan-Indian plan to facilitate trade.
- **New Division:** The Department of Commerce has established a new Logistics Division to manage integrated sector development via policy modifications, enhanced current procedures, detection of bottlenecks and gaps, and application of technology-based solutions.
- **Integrated Logistic Portal:** In order to create a transactional e-marketplace, the Ministry of Commerce and Industry (MoCI) has build an integrated logistics portal that will link customers, logistics service providers, and pertinent governmental organisations like customs, port community systems, port terminals, shipping lines, and railways.
- **LEADS Index:** A new Logistics Ease Across States Index, which assesses states according to how supportive they are of enhancing the logistics infrastructure within their borders, was also recently introduced by the Ministry.
- **Infrastructure Status:** The Infrastructure Sub Sector Harmonized Master List now includes the logistics industry. This inclusion has benefited the logistics sector because it would provide it access to more affordable, longer-term loans.
- **Multi Modal Logistic Park project:** The Multi Modal Logistic Park project is the development of state-of-the-art large scale warehousing facilities for different types of commodities transported by Rail, road and Inland waterways. It is also aimed to become a one stop solution for services related to cargo movement like warehousing, custom clearance, parking, maintenance of trucks etc.

Conclusion:

- The new National Logistics Policy will certainly be the right step in the direction. But consistent effort is needed to improve the logistic cost performance.
- Positive outcomes will surely result from the government's commitment to a sector development that integrates policy improvements, infrastructure growth, tax reforms, and technology adoption.
- It will increase India's ability to compete internationally, generate employment, raise its standing on the world stage, and clear the way for it to develop into a logistics powerhouse.
- By 2025, such efforts will also assist India in becoming a New India.

DRAFT INDIAN PORTS BILL, 2022: ISSUES BETWEEN THE CENTRE AND MARITIME STATES



Priority: Low

Primary Source: The Hindu

Prepp Prelims Booster: Indian port bill

Prepp Mains Booster: Infrastructure: Energy, Ports, Roads, Airports, Railways etc.

Context:

- This article is based on the editorial titled- "An improved Bill, but still contentious", published in The Hindu on 14 September 2022.
- The Indian Ports Act, 1908 has become obsolete in many respects and needs urgent complete overhaul.
- The Union Ministry of Ports, Shipping and Waterways has proposed draft Indian Ports Bill, 2022 to replace the 1908 Act after four pre-legislative consultations.
- The 2022 draft of the bill is an improvised version of the 2021 draft. But it has still only tinkered at the margins without resolving the main issue of disagreement between the Centre and the maritime States.



Background

- India has 13 major ports and 212 non-major ports. Major ports come under the Union List and jurisdiction of the Central government.

- Non-major ports come under the Concurrent List and jurisdiction of the respective State governments, but the Centre has overriding legislative and executive powers over the states in this regard.
- Most of the non-major ports are small fishing harbours and only a few of them cater to international shipping.

Problems of the 2022 draft Bill

Maritime State Development Council (MSDC):

- It was created by an executive order in 1997 with the Union Minister of Shipping as chairperson and the Ministers in charge of ports of the maritime States/Union Territories (UTs) as members.
- It serves as an apex advisory body for the coordinated development of major ports and non-major ports. It has met only 18 times in the last 25 years. The Union Ministry of Shipping provides secretarial services for its meetings.
- The 2022 draft Bill gives statutory status to MSDC along with wide-ranging powers and functions and makes it a permanent body with its own office, staff, accounts and audit.
- Maritime States suspect that giving a statutory-cum-permanent MSDC will curtail their powers to develop and manage non-major ports. Thus, it is less about efficient allocation of resources and more about control by the Centre.

Promoting Central Planning And Inspector Raj

- The draft Bill 2022 empowers the MSDC to formulate a national plan, to be notified in the official gazette, for the development of major and non-major ports.
- It also empowers it to monitor the development of non-major ports and ensure their integrated development with major ports and the national plan.
- It also allows MSDC to order an appropriate inquiry if any port contravenes the national plan. It empowers the Centre to make a port non-operational if it was not in consonance with the national plan.
- It also prescribed draconian penalties including imprisonment for non-compliance with the directions of MSDC by port authorities, port officials and other persons.

Centralising Tendencies:

- The 2022 draft Bill has open-ended provisions that authorise the Central government to entrust any administrative and financial functions to the MSDC.
- The composition of the MSDC provided by the draft Bill also tilts towards Centre as it provides for composition five Secretaries and one Joint Secretary to the Central Government, besides the administrators of the coastal UTs, as members.

Suggestions

International Experiences of Decentralisation:

- In contrast to the centralising tendency reflected in the draft Bill, most ports in the United States are owned and managed at local level by counties and municipalities with port operations largely in private hands.
- This is also the same for ports in Germany which are also managed at the municipal and regional levels.
- Even in China, ports are managed by local authorities at the municipal level as they have substantial stake in corporatised ports. Thus, international experience shows that ports are best managed by local and regional governments.

Performance-Based Control of Ports:

- The Centre/MSDC may play a more active role with regard to non-major ports if they are performing poorly. But data show that non-major ports have fared much better than major ports. Between 1993-94 and 2021-22, the share of the total cargo handling of non-major ports went up from 8% to 45%, and the total share of cargo traffic of non-major ports was 14% compared to the 4.8% of major ports.

Public-Private Partnership (PPP):

- The major ports performed the various port functions with their own staff and equipment as public sector enterprises, maritime States developed non-major ports almost entirely on a public-private partnership (PPP) basis.
- Gujarat was the trendsetter of PPP model in development of non-major ports. It had developed India's first private port at Pipavav (with APM Terminals), the largest captive port at Sikka (with Reliance Industries) and the largest commercial multipurpose port at Mundra (with Adani). Other maritime States — Maharashtra, Tamil Nadu and Andhra Pradesh— followed suit. From 1996 onwards, the Centre also adopted the PPP model but its process of awarding concessions to private players has been rather slow.

Deregulation:

- According to the 2011 World Bank Report- 'Regulation of the Indian Port Sector', non-major ports are perceived as more business oriented, customer friendly, cheaper and in general more efficient.
- Whereas unnecessary regulatory and financial burdens are imposed by the Central government upon Port Trusts, private terminal operators and investors have hampered their growth potential.
- Thus, central planning has no place in a market-oriented economy where non-major ports and now even major ports are developed almost entirely through private investments.

Way Forward

- In keeping with port reform strategies worldwide, the Central Government should work towards greater decentralisation, deregulation, corporatisation and private sector participation in the ports sector.

- It should give the concerned maritime States and city municipal corporations a substantial equity stake in corporatised major ports.
- It should limit itself to overseeing only the 'higher functions' of border control, port security, competition policy, hinterland connectivity and environment protection.

Challenges to Internal Security through Communication Networks, Basics of Cyber Security, Role of Media and Social Networking Sites in Internal Security Challenges

EXERCISE SYNERGY: CERT-IN HOSTED CYBER SECURITY EXERCISE WITH 13 COUNTRIES

Priority: High



Primary Source: PIB

Prepp Prelims Booster: Exercise Synergy

Prepp Mains Booster: Challenges to Internal Security through Communication Networks, Basics of Cyber Security.

Context:

- Recently, Indian Computer Emergency Response Team (CERT-In) in collaboration with Cyber Security Agency of Singapore (CSA) successfully conducted the Cyber Security Exercise "Synergy" with 13 Countries.
- It was conducted as part of the International Counter Ransomware Initiative- Resilience Working Group (CRI-RWG) which is being led by India under the leadership of National Security Council Secretariat (NSCS).



What is Exercise Synergy?

- It was hosted on an exercise simulation platform of CERT-In.
- **Theme:** "Building Network Resiliency to Counter Ransomware Attacks".
- **Objective of the exercise:** To assess, share and improve strategies and practices among member-states to build network resiliency against ransomware and cyber extortion attacks.

- To provide insights for better coordination and cooperation among CRI member states to build network resiliency and counter ransomware attacks.
- **Features:** Its scenario was derived from real life cyber incidents, in which a domestic level (limited impact) ransomware incident escalates to a global cyber security crisis.
- Each State participated as a National Crisis Management Team having composition from different government agencies including National CERTs/CSIRTs, Law Enforcement Agencies (LEA) and Security agencies, and Communication & IT/ICT Ministry.

What is the Indian Computer Emergency Response Team (CERT-In)?

- CERT-In is the national nodal agency for protecting Indian cyberspace and deals with cyber security incidents as and when they occur.
- It was established in January 2004.
- It functions under the Ministry of Electronics and Information Technology (MeitY).

Functions

In the IT Amendment Act 2008, section 70B mandates CERT-In to serve following function

- Collection, analysis and dissemination of cyber incidents information.
- Forecast and issue alerts of cyber security incidents.
- Take emergency measures to handle cyber security incidents.
- Coordinate cyber incident response activities.
- Issue guidelines, vulnerability notes, advisories and whitepapers related to information security practices, prevention, procedures, response and reporting of cyber incidents.

What are various Government Initiatives for Cyber Security?

- **Cyber Surakshit Bharat Initiative:** It was launched in 2018. Its aim is to spread awareness about cybercrime and build capacity for safety measures for frontline IT staff and Chief Information Security Officers (CISOs) across all government departments.
- **Cyber Swachhta Kendra:** It was launched in 2017 for internet users to clean their computers and devices by wiping out viruses and malware.
- **Information Security Education and Awareness Project (ISEA):** It was launched in 2015 to raise awareness and to provide education, research and training in the field of Information Security.
- **Online cybercrime reporting portal:** It is an initiative of the Ministry of Home Affairs. It was launched in 201 under the National Mission for the safety of women to facilitate victims and complainants to report cybercrime complaints online.
- **Indian Cyber Crime Coordination Centre (I4C):** It is an initiative of the Ministry of Home Affairs (MHA) to combat cyber crime in

the country, in a coordinated and effective manner. It was launched in 2018.

- **National Critical Information Infrastructure Protection Centre (NCIIIPC):** It is the nodal agency to secure India's critical information infrastructure. It was established in 2014 under the Information Technology Act, 2000.
- **Information Technology Act, 2000:** It provides a legal framework to regulate use of computers, computer systems, computer networks and also data and information in electronic format.
- **National Cyber Security Strategy 2020:** It was formulated by the Office of National Cyber Security Coordinator at the National Security Council Secretariat. Its objective is to improve cyber awareness and cybersecurity through more stringent audits.

CENTRE SIGNS PACT WITH EIGHT ARMED TRIBAL GROUPS IN ASSAM

Priority: Medium



Primary Source: Indian Express

Prepp Prelims Booster: Internal security

Prepp Mains Booster: Challenges to Internal Security through Communication Networks.

Context:

Recently, the Central Government, Assam Government and eight armed adivasi groups signed a tripartite agreement to end the decades-old crisis of adivasis and tea garden workers. The agreement will result in bringing armed groups into the mainstream society and give them political and economic rights.



Which eight adivasi groups signed the agreement?

- The eight adivasi groups are: All Adivasi National Liberation Army (AANLA), AANLA (FG), Santhal Tiger Force, Birsa Commando Force (BCF), BCF (BT), Adivasi Cobra Militant of Assam (ACMA), ACMA (FG) and Adivasi People's Army (APA).
- There are 1,182 cadres total across the eight adivasi groups.
- Since 2016, these organisations and the Indian government have observed a cease-fire.

What is the settlement agreement signed?

- The agreement's key provisions focused on achieving political, economic, and educational aspirations.

- Additionally, this agreement intends to safeguard, maintain, and advance social, cultural, linguistic, and ethnic identities.
- The Assam government would set up an Adivasi Welfare and Development Council.
- The necessary steps would be taken to ensure the welfare of tea garden employees and the rehabilitation of armed group cadres.
- Infrastructure development in villages and locations with a high Adivasi population would be supported by a special development package of Rs. 1,000 crore over the course of five years.

Who are the Tea Tribes Community?

- Assam is home to more than 1000 tea gardens where labourers who initially came from Orissa, Madhya Pradesh, Bihar, Andhra Pradesh, and West Bengal have worked and then permanently resided.
- They are referred to as Tea and Ex-Tea Garden Tribes and are classified by the government as Other Backward Classes.
- These people play a significant part in the State's tea production in addition to making up a sizable portion of the State's population.
- The Assam State is home to several members of the tea tribe communities.
- Economically, they are quite underdeveloped, and these areas have very low levels of literacy.

Why did this community choose for violence?

Historical wrongdoing

- Under the colonial rule, these Adivasis, who had lived in Assam tea estates, were put through different sorts of torture and misery (slave-like conditions).
- The lands of the native tribal population in Assam were also routinely taken by British planters working with the government throughout nearly the whole duration of the colonial period.
- In the post-colonial era, little changed regarding their situation. As a result, they became more and more mobilised on numerous levels during the post-colonial era.

Politics of identity

- As a unique population in Assam, the tea tribes are requesting governmental recognition as a Scheduled Tribe.
- To combat the unfair distribution of power and resources in modern Assam, they are requesting this status.
- Tensions in society and politics have been sparked by this.

Persecution faced

- Following the emergence of ethnic nationalism and associated militancy in Assam, the violence against the community has grown.
- At the height of the Bodoland statehood movement in the 1990s, there were two ethnic confrontations between Bodo and Adivasi.

Statistics: Number of insurgency-related incidents in the Northeast

- In the northeast, the incidents connected to the insurgency have decreased from the past.
- According to the Minister of Home Affairs, there were 158 fewer insurgency-related incidents in the northeast in 2016 than there were in 2014 (824).

- After 2014, over 10,000 cadres had given up and entered the mainstream, and over 7,000 weapons had also been given up.

Statistics: Disturbed Areas in the Northeast

- The Northeast's disturbed zones, as defined by the Armed Forces Special Powers Act (AFSPA) 1958, have decreased, according to the Union Home Ministry.
- This took place as a result of the security situation getting better.
- Currently, the AFSPA is not in effect in over 60% of Assam. In Manipur, six districts and 15 police stations were removed from the outer ring of the troubled area.
- Only three districts and two police stations in one other district in Arunachal Pradesh still adhere to the AFSPA.
- The disturbed area notification was taken down from 15 police stations across seven districts in Nagaland.
- The AFSPA was totally repealed in Tripura and Meghalaya.

SAFE HARBOUR RULES UNDER LENS IN US, INDIA TO KEEP BIG TECH IN CHECK

Priority: Medium



Primary Source: Indian Express

Prepp Prelims Booster: Social Media

Prepp Mains Booster: Role of Media and Social Networking Sites in Internal Security Challenges

Context:

- Recently, the United States identified six key principles to keep influence and dominance of large social media platforms like Facebook and Twitter in check.
- The principles areas include competition; privacy, youth mental health, misinformation and disinformation, illegal and abusive conduct, including sexual exploitation and algorithmic discrimination; and lack of transparency.
- These principles are in line with global scepticism around the influence of social media platforms as countries around the world, including India, look to check the dominance of these platforms.
- For this, the US is looking to remove special protection available to social media platforms called 'safe harbour'. In India, too, the IT Rules place significant due diligence requirements on large social media platforms.



Why is there a need to change Safe Harbour rules?

- Although large social media platforms help to keep everyone connected, create a vibrant marketplace of ideas, and open up new opportunities for bringing products and services to market, they can also create division in the societies and wreak serious real-world harms.
- A small number of dominant Internet platforms are abusing their power to exclude market entrants, to engage in rent-seeking, and to gather intimate personal information that they can use for their own advantage.
- This calls for clear rules on handling competition issues to put regulatory limits on their ability to collect, use, transfer, and maintain our personal data, including limits on targeted advertising.

What did the US propose?

- US has proposed "fundamental reforms" Section 230 of the US' Communications Decency Act (CDA) which gives special legal protection to social media platforms for preventing magnitude of illegal and abusive conduct hosted or disseminated by them.
- This section is similar to Section 79 of India's Information Technology Act, 2000, (IT Act) which classifies social media platforms as intermediaries and broadly shields them from legal action based on content users post on their platform.
- Both these regulations offer social media platforms something called 'safe harbour', shielding them from being held liable for what users post on their site as long as they agree to take such content down when flagged by the government or various courts.
- Since social media platforms are generally considered crucial tools for freedom of speech and expression, safe harbour is typically seen as a core tenet of enabling freedom of expression on these platforms.

What is Section 79 of Information Technology (IT) Act?

- Section 79 of the IT Act provides for the Safe Harbour protection to social media giants. It says that any

intermediary will not be held legally liable for any third-party information, data or communication link made available on its platform.

- However in this case, the intermediary must not be involved in initiating the transmission of the message in question, select the receiver of the transmitted message and not modify any information of the transmission.
- This means that as long as a platform acts just as the messenger carrying a message from point A to point B, it will be safe from any legal prosecution due to the transmission of a message. However, it should be done without any interference with its content in any manner.

Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules 2021

- These rules were framed in exercise of powers under section 87 (2) of the Information Technology (IT) Act, 2000. They broadly deal with social media and over-the-top (OTT) platforms and replaces earlier Information Technology (Intermediary Guidelines) Rules 2011.
- **Categories of Social Media Intermediaries:** These rules categories social media intermediaries in two groups based on the number of users. They are Social media intermediaries and Significant social media intermediaries.
- **Due Diligence:** It is mandatory for social media intermediaries to carry out due diligence. In case, they don't follow due diligence then safe harbour provisions will not be applicable to them.
- The safe harbour provisions have been defined under Section 79 of the IT Act. It protects social media intermediaries by giving them immunity from legal prosecution for any content posted on their platforms by third parties.
- **Grievance redressal mechanism:** It makes this mechanism for social media intermediaries mandatory. It is compulsory for them to appoint a Grievance Officer (GO) to deal with complaints and share the name and contact details of such officers. It is duty bound to acknowledge the complaint within 24 hours and resolve it within 15 days from its receipt.
- **Online safety and dignity of users:** Intermediaries must remove or disable access within 24 hours of receipt of complaints of private contents of individuals or is in the nature of impersonation including morphed images etc. Such a complaint can be filed either by the individual or by any other person on his/her behalf.
- **Identifying Originator:** It is mandatory for significant social media intermediaries providing messaging services to identify the first originator of the information.
- This is required only for the purposes of detection, prevention, investigation, prosecution of an offence related to sovereignty and integrity of India, friendly relations with foreign States, the security of the State, or public order or incitement to an offence in relation with rape, sexually explicit material or child sexual abuse material punishable with imprisonment for a term of not less than 5 years.

- **Removal of Unlawful Information:** It is mandatory for an intermediary to remove unlawful information from their platform upon receiving an order by a court or by the appropriate Government agencies.

Agriculture, Food Security, Marketing of Agricultural Produce and Issues and Related Constraints; E-technology in the aid of farmers.

THESIS ON AGRARIAN CONSTRAINT TO ECONOMIC DEVELOPMENT: ABHIJIT SEN



Priority: Low

Primary Source: Indian Express

Prepp Prelims Booster: Agrarian constraint

Prepp Mains Booster: Indian Economy and issues relating to planning

Context:

On August 29, Professor Abhijit Sen, an economist and former faculty member at Jawaharlal Nehru University's Centre for Economic Studies and Planning (CESP), passed away from a sudden heart attack.

About Abhijit Sen

- He was primarily a teacher, but he also played a number of roles in policy-making for more than a decade, including chair of the **Commission for Agricultural Costs and Prices (CACP)**, **member of the Planning Commission** (2004–14), and the 14th finance commission, among other roles he held throughout his nearly two decades of involvement with policy making.

Thesis on Agrarian Constraint to Economic Development



- Beginning with his influential Ph.D. thesis on the "Agrarian Constraint to Economic Development" that he submitted at Cambridge University, Sen was primarily an agricultural economist.
- Based on a careful examination of the first three decades of post-Independence economic growth, his fundamental claim that

agricultural issues continue to be the primary growth restraint is still valid today.

- According to his thesis, increasing input intensity or institutional solutions like **share-cropping are unlikely to address the issues of excess labor** and poverty in agriculture because they don't address the root causes of the agrarian problem in Indian agriculture.
- Given the current agricultural structure, it is unlikely that the nature of the agriculture problem will be solved **without state intervention**. According to Sen, **addressing the agrarian issue was crucial for overall growth as well as for addressing the issue of widespread poverty**.

Opinion on public policy

- He believed that the purpose of public policy should be to improve the lives of the poor in addition to promoting economic growth.
- This belief stemmed not only from his in-depth analysis of India's poverty trends but also from his intense interest in policy and the function of the state.
- India as well as the rest of the world acknowledge Sen's contributions to the measurement of poverty and the underlying data on consumption expenditure.
- In particular, his input on some methodological issues during the first "**Great Indian Poverty Debate**" not only persuaded the government to drop its contentious estimates of poverty for the **years 1999–2000, but** also helped to further improve the methodology for gathering data on consumer spending.
- In addition, he provided input for the **Tendulkar Committee's report** on poverty lines.
- If the facts were in conflict with his beliefs and ideas, he was prepared to abandon them and change his mind.
- His openness also enabled him to respect academics, activists, and students from various fields.

Conclusion

He had a lot more to offer, especially now when wisdom and knowledge are needed to understand what is happening with respect to poverty, inequality, employment, state finances, and a host of other issues on which he continued to be the voice of authority for many.

PRECISION FARMING NEEDS TO BE PROMOTED



Priority: High

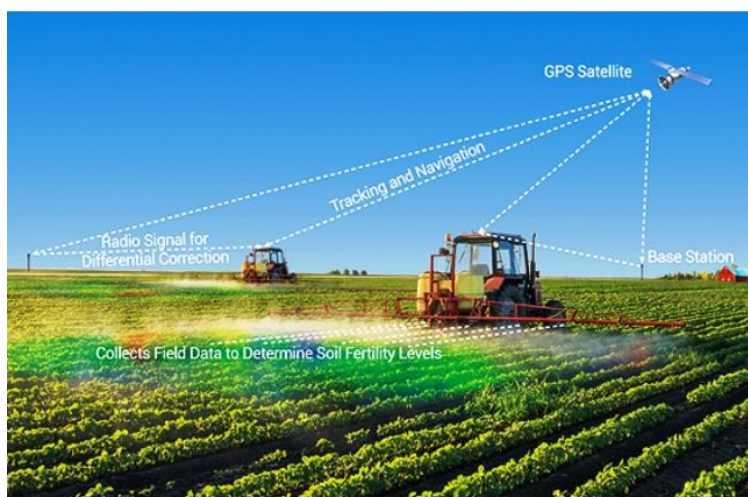
Primary Source: The Indian Express

Prepp Prelims Booster: Precision Farming

Prepp Mains Booster: Agriculture, Food Security, Marketing of Agricultural Produce and Issues and Related Constraints; E-technology in the aid of farmers.

Context:

Recently Agro economic scholar Ashok Gulati in his article Feeding the Humanity, Saving the planet in The Indian Express writes about the need for India to adopt precision farming to improve the productivity in Indian agriculture.



What is precision farming?

- A technology-enabled approach to farming management, also known as precision farming (PF), satellite farming, or site-specific crop management (SSCM), is described as "observing, measuring, and analysing the needs of individual fields and crops."
- Precision farming, in layman's terms, is farming that gathers and uses data of land area for monitoring and optimising crop production.

Precision Farming: Significance

- The Precision farming heavily utilises technology-driven solutions to manage the comprehensive range of "Agricultural Management Systems (AMS)" for a variety of interventions, including:
- Generating on-site/on-farm data about various agricultural practices on a continuous basis (from sowing, growing of crops, to harvesting/post-harvest processing), thus using the technological tools to improve the yield, quality, and profits for the farmers in the agricultural production systems.
- Using Robotics and Analytics, Remote Sensing, Geographic Information Systems (GIS) and global positioning systems (GPS) to make data-driven decisions about managing farms.
- Adoption of cutting-edge technologies by farmers for growing agricultural products, such as big data and advanced analytics capabilities, robotics, aerial images, smart local weather forecasts, etc.
- By adopting resilience to the changing climatic conditions, this will lead to a reduction in unwarranted variances and an improvement in the stability of crop yields.

Why does India need to adopt precision farming?

- With about 155 million hectares of fertile land, India is one of the world's largest agricultural producers.
- More than half of India's population is employed in the agricultural industry, which in 2019 generated 18% of India's GDP.
- However, the industry has structural problems such as low productivity, unprofitable landholding size, inefficient resource

utilisation, significant biotic losses, and a low level of mechanisation.

- The agricultural sector must immediately implement cutting-edge digital and precision agriculture technologies to increase farm production and democratise access to market information for all farmers if India is to quadruple its farmer earnings.

How does it benefit India's agricultural industry?

- **Increase in Yield of crop:** During harvest, grid-based records of crop yield are made using yield monitors. With the variable rate of application of agricultural inputs to various grids fine-tuned, yield differences are analysed. GPS and GIS data on soil fertility, weather patterns, and yield monitor information aid in the efficient planning of all agricultural activities, further increasing production.
- **Increase in Productivity:** Farmers distribute water, pesticides, or fertilisers in precisely measured quantities to only the places that require them after receiving feedback in real-time. Additionally, technology can aid farmers in making planting and harvesting decisions. This can increase the crop covering area per day and greatly reduce labour burden on agricultural tasks like applying pesticides or fertilisers.
- **Soil and field planning:** Precision farming can be used to analyse soil and fields for irrigation, fertilisation, and planting operations, as well as to check for erosion, moisture concentrations, and nutrient levels. Drones and sensors can both be utilised in this activity.
- **Crop monitoring:** Drones can be used to monitor crops continuously which can prompt interventions to lessen the impact of various biotic and abiotic pressures on crops. Such surveillance data can aid site-specific agronomy in maximising input utilisation and advancing sustainable farming.
- **Crop protection from weeds, pests, and diseases:** Precision farming equipment can spray precisely measured amounts of insect, weed, and disease control products in a way that can ensure correct dosage, minimise unintentional exposure to applicators, and improve the overall effectiveness of the products and, consequently, the results of growers.
- **Promotion of Climate-smart agriculture:** Based on regional crop and site-specific conditions, remote sensor and GIS technology enables efficient field management plans for chemical application, cultivation, and harvest. Pesticides and fertilisers used in excess can harm the natural equilibrium. This data can be used to determine how much carbon is being captured in soil or how much is being sequestered by which plants.

What are the challenges for Precision Farming in India?

Challenges in adopting new technology:

- **High levels of illiteracy (digital and numerical) and digital divide** among Indian farmers prevent them from implementing modern technology in their farming methods.
- **The small size of landholdings** creates the challenges for adoption of precision farming and limits the economic gains from currently available precision farming technology.

Economic Hurdle:

- **Higher initial cost** —Precision farming requires a number of **pricey equipment and machines** that are out of the financial grasp of small and marginal farmers.
- Precision farming's **operational costs** for equipment and tools are a barrier to adoption.
- Farmer loans can encourage the adoption of agricultural technology.

Social and behavioural issues:

- A major barrier to the adoption of precision agriculture in farming communities is the lack of knowledge and the lack of focused instruction in this field. Ancient farming techniques abound in Indian agriculture. The same agricultural methods have been used for generations. Precision farming adoption is hampered by resistance and rigidity.

Way Forward

Rapid socioeconomic developments including urbanisation, energy consumption, and economic expansion are opening up new possibilities for the use of precision farming in India. India should employ technology depending on the demands of the nation's socioeconomic situation rather than mindlessly embracing the sophisticated Precision Agriculture technologies used by Western nations.

WHAT GOVT CURBS ON EXPORTING RICE MEAN FOR INDIA AND THE WORLD

Priority: Medium



Primary Source: Indian Express

Prepp Prelims Booster: Food security

Prepp Mains Booster: Food security; Major Crops - Cropping Patterns in various parts of the country. Issues related to Agriculture

Context:

Recently, the Union government banned the export of broken rice while highlighting its rising price, a lack of supply for domestic use, and an abnormal rise in exports. Earlier, the Union Government also levied a 20% export duty on all varieties of non-basmati rice apart from rice that has been par-boiled.

BROKEN RICE EXPORTS OVER THE YEARS

COUNTRY	FY19	FY20	FY21	FY22
China	—	—	2.73	15.85
Senegal	6.73	1.62	8.64	9.22
Vietnam	—	—	1.87	3.44
Djibouti	1.08	0.17	1.07	2.44
Indonesia	1.51	—	0.41	2.08
TOTAL	12.21	2.7	20.64	38.9

(Lakh metric tonnes)



What restrictions have been put on rice export?

- With effect starting on September 9, the Department of Revenue in the Ministry of Finance announced the imposition of a 20% duty on exports of rice "other than parboiled and basmati rice."
- This would cover all exports of raw, non-basmati rice (whole or broken grains).
- However, In a different announcement from the Ministry of Commerce and Industry's Directorate General of Foreign Trade placed a blanket export prohibition on broken rice.
- As a result, even for raw non-basmati, only entire grain shipments could be exported with the payment of a 20% duty.
- At present there are four categories of rice exports. Out of these, exports in the case of two – basmati rice and parboiled non-basmati rice –are allowed.
- While the export restrictions are only for the other two categories- raw (white) and broken non-basmati rice.

How much will this restriction affect rice exports generally from India?

- The planned restrictions will have an impact on more than a third of the value and slightly less than half of India's rice exports.
- India exported a record 21.21 million tonnes (mt) of rice worth \$9.66 billion in 2021–22 (April–March). This includes 17.26 mt of non-basmati rice valued at \$6.12 billion and 3.95 mt of basmati rice valued at \$3.54 billion, for which there is no restriction of export.
- Parboiled rice exports, which are also freely permitted, made up 7.43 mt (\$2.76 billion) of the non basmati rice.
- The limitations only apply to the remaining \$9.83 mt (\$3.36 billion) of Non basmati rice.
- This includes 5.94 mt (\$2.23 billion) of non-parboiled non-basmati rice, whose shipments will now be subject to a 20% levy, and 3.89 mt (\$1.13 billion) of broken rice, whose exports have been banned.

What are the reasons for restrictions on the export of rice from India?

- **Deficit Monsoon:** The first is the potential for a large decline in India's rice production as a result of insufficient monsoon rains in Uttar Pradesh, Bihar, Jharkhand, and Gangetic West Bengal.
- **Less Area under the Rice in Kharif Season:** In comparison to the same time last year, farmers planted 2.1 million less hectares (mh) of rice during the current kharif farming season, which runs from June 1 to September 9.
- With an average yield of 2.7 tonnes per hectare throughout all of India, the reduction in rice output will be in the 6–12 mt range.
- **Disease on the Rice:** If harvests in Punjab and Haryana prove to be lower as a result of a new virus that has "dwarfed" paddy plants in several of those fields, the cost may even be higher.
- **Less Stocks available:** Given the political pressure to extend the free-food-grains programme (Pradhan Mantri Garib Kalyan Anna Yojana) past September, there is less stock available in Govt Godowns.
- For example, on August 1, public wheat stocks stood at 26.65 mt, the lowest level for this year in 14 years. Similarly, the government is concerned about their depletion in the stock event of a poor kharif harvest, even if the same for rice, at 40.99 mt, was

relatively comfortable (albeit lower than the 44.46 mt on August 1, 2021).

- **Long Heat Wave and Decline in Rice Production During Rabi Season:** The 10-mt decline in rice production that is anticipated for this year during the rabi season due to the long heat wave led to less rice availability.

What is the relevance of India to the global rice trade?

India's Rice and Wheat exports
(Quantity in lakh tonnes; Value in \$ million)

	Non-Basmati		Basmati		Wheat
	Quantity	Value	Quantity	Value	
2012-13	66.88	2651.89	34.60	3564.04	65.15
2013-14	71.48	2925.13	37.54	4864.89	55.72
2014-15	82.26	3319.81	37.02	4518.25	29.15
2015-16	63.74	2307.72	40.45	3477.35	6.14
2016-17	68.13	2553.79	40.00	3222.35	2.62
2017-18	86.33	3558.11	40.52	4165.00	2.30
2018-19	75.34	2999.51	44.15	4712.62	1.83
2019-20	50.36	2024.66	44.55	4371.93	2.17
2020-21	130.88	4796.02	46.32	4018.65	20.86
2021-22	172.61	6123.94	39.48	3540.22	72.35
Apr-Jul 21	52.86	1909.54	14.30	1213.57	14.87
Apr-Jul 22	58.14	2085.98	15.06	1567.06	38.26

Source: Department of Commerce

- India has a 40% share of the world's total rice exports, with its 21 mt-plus shipments in 2020-21, way ahead of Thailand's (7.2 mt), Vietnam's (6.6 mt) and Pakistan's (4.8 mt).
- Thus, India matters to the global trade in rice – unlike in wheat, where it is only an occasional large exporter (see table).

Where does India export rice to?

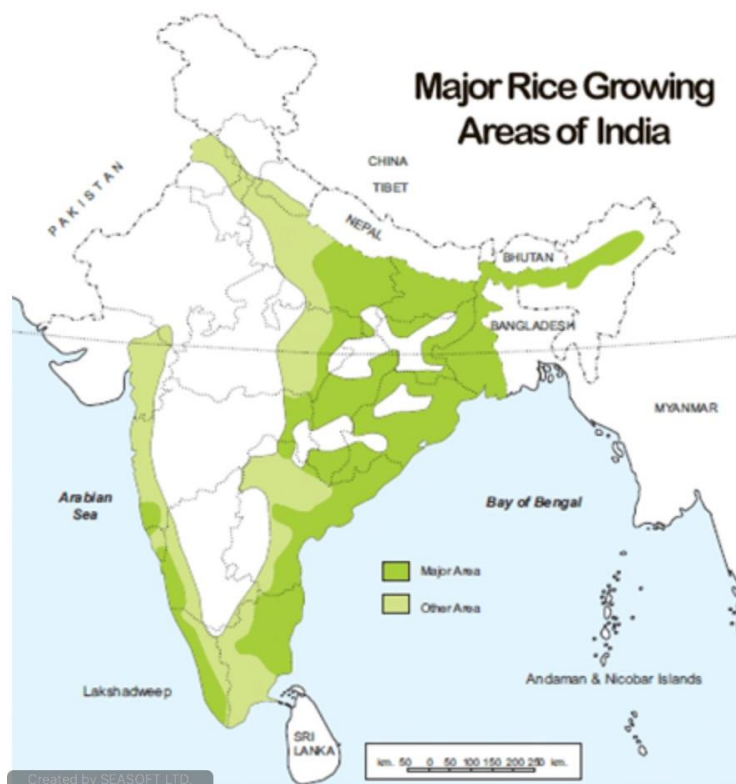
- Iran and countries on the Arabian Peninsula accounted for more than 75% of basmati exports in 2020-21, with the US, UK, Canada, and Australia contributing another 10%.
- Nearly 55% of non-basmati rice was exported to African nations, including Liberia, Djibouti, Somalia, the Ivory Coast, Senegal, Togo, Guinea, Madagascar, and Cameroon.
- The top two individual buyers, China and Bangladesh, contributed another 9.5% apiece, while Benin and Nepal, with 8-9% each, were next.

Rice:

- Rice, also known as *Oryza sativa*, is a type of wild grass.
- There are numerous points of view regarding the origin of rice. Others believe it originated in Southern India and spread to countries like China, Korea, the Philippines, Japan, etc. from the foothills of the Himalayas.
- One of the major producers of rice is India. It is the leading exporter of basmati.
- Unique rice varieties are cultivated in India, including Ambemohar (GI-tagged to Maharashtra), Seeraga Samba, Jasmine, etc.
- The black rice from Manipur known as "Chakhao" is the newest addition to rice with GI tags.
- Rice is mostly grown in India during the Kharif season, particularly in the northern states. However, it is also grown as a Rabi crop in states like West Bengal, Assam, Tamil Nadu, Odisha, and Andhra Pradesh.

Climatic Conditions:

- High temperature (over 25°C),
- High humidity, and 100 cm or more of annual precipitation.
- It is grown with the use of irrigation in areas with lower rainfall.
- In West Bengal and the southern states, the climatic conditions permit the cultivation of two or three rice crops in a farming year.
- Three varieties of rice, known as "aus," "aman," and "boro," are grown by farmers in West Bengal.



- About one-fourth of all arable land in India is used to grow rice.
- The **top three producing states** are Punjab, West Bengal, and Uttar Pradesh.
- **States with high yields** include Punjab, Tamil Nadu, Haryana, Andhra Pradesh, Telangana, West Bengal, and Kerala.
- India is the world's second-largest producer of rice after China.
- Various cultivation methods are used depending on a number of factors, such as the soil's properties, the availability of water, the labour force, the climate, etc.
- **Dry/ semi-dry upland rice cultivation methods:** Seed dispersal technique and seeding or drilling behind the plough.
- **Wet/ lowland rice cultivation methods:** Broadcasting germinated seeds in puddled fields (also known as the "transplantation/puddled method")
- One of the most common cultivation techniques is **Transplantation** in puddled fields where the seeds are planted and cultivated in nurseries.
 - The size of the nursery bed is 15 to 20% of the main field where the crops will be cultivated later.
 - After 25 to 35 days, the seedlings are then put onto the puddled field.

Issues relating to Intellectual Property Rights

TO CURB USE OF CHEMICAL FERTILISERS, GOVT TO GIVE NOD TO PM PRANAM

Priority: High



Primary Source: Indian Express

Prepp Prelims Booster: PM PRANAM scheme

Prepp Mains Booster: Issues related to Direct and Indirect Farm Subsidies and Minimum Support Prices; Technology Missions; Economics of Animal-Rearing.

Context:

- The Union Ministry of Chemicals and Fertilisers is planning to launch a scheme called PM PRANAM. The PM PRANAM, also known as the PM Promotion of Alternate Nutrients for Agriculture Management Yojana.
- The proposed scheme intends to encourage governments to use fewer chemical fertilisers and lessen the cost of chemical fertilisers' subsidies.

What is the PM Promotion of Alternate Nutrients for Agriculture Management (PRANAM) Yojana?

- The central government recently conveyed the PM-PRANAM proposal with state government representatives at the National Conference on Agriculture for Rabi Campaign.
- This plan's draft has not yet been completed.

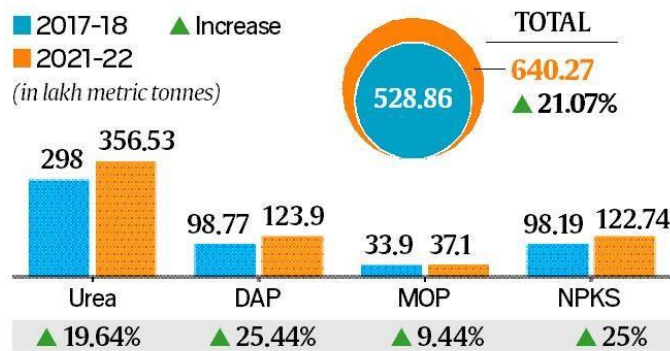
Features of the PM PRANAM:

- Officials claim that the scheme won't have a separate budget and will instead be supported by savings from current fertiliser subsidies under programmes managed by the Department of Fertilizers.
- The state will receive the money as a grant which will be 50% of the subsidy savings:
 - At the village block and district levels, assets related to the technological adoption of alternative fertilisers and alternative fertiliser production units may be created using up to 70% of the grant allocated under the scheme.
 - Farmers, panchayats, farmer producer organisations, and self-help organisations engaged in fertiliser reduction and awareness raising can be rewarded and encouraged with the remaining 30% of the award money.
- A state's increase or decrease in urea consumption in a given year will be compared to its average consumption over the preceding three years to demonstrate the calculation in lowering the usage of chemical fertilisers.
- For this, information from the dashboard for the Fertilizer Ministry's iFMS (Integrated Fertilizers Management System) will be used.
- The action is in line with the government's recent push to encourage the balanced use of fertilisers or alternative fertilisers.

What are the Fertilisers?

- Chemicals that offer one or more of the elements necessary for plant growth are known as fertilisers, which can be both organic and inorganic.

SPIKE IN CHEMICAL FERTILISER REQUIREMENT



- According to professionals in the field, of the 16 components required for plant growth, nine (major elements) are needed in significant quantities, while the other seven are only needed occasionally (minor elements).
 - The **primary plant nutrients** are nitrogen, phosphorus, and potassium.
 - Secondary plant nutrients** are calcium, magnesium, and sulphur.
 - Micronutrients or trace elements** are iron, manganese, copper, zinc, boron, molybdenum, and chlorine.
- Major elements are the primary and secondary nutrition elements.

Statistics: Fertilizer consumption in India

- India's fertiliser industry is largely responsible for the agricultural sector's prosperity.
- It gains relevance in light of the country's overall fertiliser requirement having sharply increased during the previous five years.
- According to the Union Ministry of Chemicals and Fertilizers, the country's overall demand for the four chemical fertilisers that are most commonly used - urea, DAP (di-ammonium phosphate), MOP (muriate of potash), and NPKS (nitrogen, phosphorus, and potassium) - will increase by 21% in 2021–2022 compared to 2017–18.
- The DAP requirement has experienced the most growth.

What is the fertilizer subsidy and its burden?

- Farmers buy fertilisers at MRPs (maximum retail prices) which are less than the market rates, the cost of production, or the cost of importing them.
- In the case of neem-coated urea, for instance, the government fixed the MRP at Rs 5,922.22 per tonne (in 2020), but the average cost-plus price paid to domestic producers and imports is roughly Rs 17,000 and Rs 23,000 per tonne, respectively.
- Because the MRPs for non-urea fertilisers (such as DAP, MOP, etc.) are decontrolled or established by the firms.
- The government provides a flat per-tonne subsidy to guarantee that the cost of these nutrients is set at "acceptable levels."
- Although the fertiliser producers receive the subsidy, the farmer ultimately benefits because they must pay MRPs that are less than the prevailing rates in the market.

- In 2022–23, the subsidy burden for chemical fertilisers is projected to increase by 39% to Rs 2.25 lakh crore (from Rs 1.62 lakh crore last year).

What will be the potential benefits of the PM PRANAM?

- **Reduced Use of Chemical fertilizer:** The proposed scheme explicitly aims at promoting the reduced use of chemical fertilizers.
- **Reduced Fertilizers Subsidy:** The scheme is aimed at reduction in fertilizers subsidy. This will be diverted for the use of scheme. The scheme will result in saving the public resources.
- **Promotion of Increased use of Other nutrients and fertilizers:** The scheme will promote the use of other fertilizers including natural and other nutrients.
- **Improved Soil quality:** reduced use of chemical fertilizers may result in improved quality of soil in the long run.. This will improve the productivity and yield of Indian agriculture.

What are the various Government initiatives to reduce usage of chemical fertilisers and to plug leakages in fertiliser subsidy?

- In 2018, the Center put into effect a Direct Benefit Transfer (DBT) scheme for fertilisers.
- According to this method, fertiliser firms receive a 100% subsidy on a range of fertiliser grades based on the actual sales that merchants make to the recipients.
- The Department of Fertilizers' e-Urvarak DBT portal is now connected to every retailer (more than 2.3 lakh in India), and every one of these machines is a point-of-sale (PoS) device.
- A company cannot collect a subsidy until the sale has been registered on the e-Urvarak portal.
- The Fertilizer Control Order-1985 was also updated by the government to include modern nutrients such as Nano urea and bio-stimulants.
- Additionally, programmes like the Soil Health Card and neem-coated urea have been put into practise.

CONNECTING THE DOTS TO BOOST THE PATENT ECOSYSTEM

Priority: Medium



Primary Source: The Hindu

Prepp Prelims Booster: Patents

Prepp Mains Booster: Issues relating to Intellectual Property Rights

Context:

- This article is based on the editorial titled- "Connecting the dots to boost the patent ecosystem", published in The Hindu on 14 September 2022.
- The recent report of the Economic Advisory Council to the Prime Minister (EAC-PM) titled- 'Why India Needs to Urgently Invest in its Patent Ecosystem?', highlights the significance of a robust patent system for a knowledge economy and for the promotion of technological innovations in India.

Key highlights of this report

Rise in patent applications:

- There is a rise in the share of residents in the total number of patent applications filed in India. It has more than doubled during the last decade.
- The number of patent applications to the Indian patent office has increased by 48% between 2010-11 and 2020-21, largely driven by applications by residents.
- This is for the first time, the number of patent applications filed by residents has surpassed that of foreign applications in 2021-22.
- The Economic Survey 2022-23, for instance, also highlighted the rising share of Indian residents in patent applications.



Recommendations:

- There is a long pendency of processing patent applications in India.
- The report has recommended several measures such as increasing the efficiency of processing patent applications to reduce this. This will certainly improve the patent ecosystem in the country.
- There is a need to investigate the patent ecosystem in order to connect the dots so that appropriate measures are adopted to improve the patent ecosystem, keeping in view the national innovation ecosystem.

Abandoned Applications:

- The report highlighted that the total number of abandoned patent applications also increased at an astonishing rate during this period.
- The share of abandoned patents on account of not meeting the requirements under Sections 9(1) and 21(1) of the Patents Act, 1970 in the total number of patent applications grew from 5,186 in 2010-11 to 23,291 in 2019-20, an increase by almost 350%.
- Section 9(1) of the Patents Act, 1970 provides that those applications accompanied by provisional specifications be supported by complete specifications within 1 year. Section 21(1) of this Act requires patent applicants to re-file documents if the patent examiner finds them not meeting the requirements.

Reasons for Abandoned Applications:

- It may be that the applicants are not confident about their applications passing scrutiny and, therefore, do not pursue their applications.
- This may be possible, especially in the case of innovations with short-life spans, that the long pendency discourages applicants from following up on their applications. But this is an aspect of the patent ecosystem that requires more information to connect the dots.

Other Key Issues Associated With Patent Ecosystem

- **Emphasis on filing of patent applications:** Since the adoption of the National Intellectual Property Rights Policy 2016 (NIPR 2016), the emphasis has been attached to the filing of patent applications.
- It is believed that some perverse incentives have been created in the process which encourages the filing of patent applications even when the innovator knows that their claims will not pass scrutiny.
- So there is an urgent need to eliminate such perverse incentives which will add to improving the patent ecosystem of India in the long run.

Rise in R&D Ecosystem:

- The higher education sector of India has seen rise in prominence in the research and development (R&D) spending and patenting landscape of India.
- As per UNESCO data, the share of this sector in the gross domestic expenditure on R&D (GERD) has increased from 5% in 2013 to 7% in 2018.
- The number of patent applications filed by the top 10 academic institutes and universities in India has doubled from 6.4% to 12.2% during the period 2015- 2020.
- The growing prominence of this sector in patenting activity also indicates the priority it attaches to commercially significant technological innovations.
- With an increase in focus of the higher education sector on the development component of R&D, it is also expected that the collaboration between industry and academia will also increase in the area of R&D.

Low score on the Global Innovation Index (GII):

- It is prepared based on the score that each country gets under 80 indicators — industry-academia collaboration is one.
- India's score for this indicator has declined over the last few years, from 47.8 in 2015 to 42.7 in 2021. Consequently, its ranking in the GI declined from 48 to 65 during this period.
- However, improvements in some other indicators have resulted in improvement of India's overall ranking in the GI from 81 in 2015 to 46 in 2021.

Global Innovation Index (GII)

- It ranks the innovation ecosystem performance of economies around the globe each year while highlighting innovation strengths and weaknesses and particular gaps in innovation metrics.
- It is published annually by the World Intellectual Property Organisation (WIPO), in partnership with Cornell University, INSEAD, and other organisations.

Draft of the National Auto Policy 2018:

- It points out that collaboration between the academia and industry in India has been limited to niche research areas having low commercial significance.
- It also admits that innovations in India, originating from collaborative research projects and implemented and commercialised in the automotive space have been scarce. This case is not limited and confined to the automotive sector but is a phenomenon prevalent across most other sectors in India.

Way forward

- As the patent system is a critical aspect of the national innovation ecosystem, there is an urgent need to increase investment in the patent ecosystem which will help in strengthening the innovation capability of India.
- There is also a need for right interventions for the promotion of the quality of patent applications and collaboration between academia and industry.

About Intellectual property rights (IPR)

- They are the rights given to persons over the creations of their minds such as inventions, literary and artistic works, and symbols, names and images used in commerce.
- These special rights usually give the creator an exclusive right over the use of his creation for a certain period of time.
- **Common types of IPRs:** They are patents, geographical indication (GI) tag, copyrights, industrial design, trademarks and trade secrets.
- **Patent:** It is an exclusive set of rights granted for an invention, which may be a process or product that provides a new way of doing something or offers a new technical solution to a problem.
- In India, patents are governed by the Indian Patent Act of 1970.

Awareness in the fields of Space; Achievements of Indians in Science & Technology; Indigenization of Technology and Developing New Technology.

INFLATABLE AERODYNAMIC DECELERATOR: ISRO TESTS SYSTEM TO RECOVER SPENT ROCKET STAGES

Priority: High



Primary Source: The Hindu

Prepp Prelims Booster: Inflatable aerodynamics

Prepp Mains Booster: Awareness in the fields of Space; Achievements of Indians in Science & Technology; Indigenization of Technology and Developing New Technology.

Context:

- Recently, the Indian Space Research Organisation (ISRO) has successfully tested the Inflatable Aerodynamic Decelerator (IAD) technology that could aid cost-effective recovery of spent rocket stages and safely land payloads on other planets.
- The Inflatable Aerodynamic Decelerator (IAD) has successfully undergone the test flight on a Rohini-300 (RH300 Mk II) sounding rocket.

Inflatable Aerodynamic Decelerator (IAD)

- The Inflatable Aerodynamic Decelerator (IAD) is designed, developed and successfully test-flown by ISRO's Vikram Sarabhai Space Centre (VSSC).
- As its name suggests, the IAD serves to decelerate an object plunging down through the atmosphere.
- The IAD is made of Kevlar fabric coated with polychloroprene and is packed into the payload bay of the rocket.
- After the nose-cone of the rocket separated, the IAD inflated, balloon-like, at a height of 84 km using compressed nitrogen stored in a gas bottle.
- The IAD systematically reduces the velocity of the payload through aerodynamic drag.
- Once the IAD fell into the sea, it deflated by firing a deflation pyro valve.

Present Situation:

- At present, during the launch, the spent rocket stages are separated in the process. These spent rockets fell back on to earth and particularly in the Ocean, since most of the launch routes are over ocean or sea.
- These spent rocket stages sink into the ocean bottom and remain there for the rest of their lives.

Significance:

- Once successfully developed, IAD will help to reduce the cost of spent rocket stages. This will reduce the cost of launching the satellites into space.
- According to the ISRO chairman, the IAD technology opens a gateway for cost-effective spent stage recovery, and this technology can also be used in ISRO's future missions to Venus and Mars.

INDIA'S FIRST INTRA-NASAL COVID-19 VACCINE APPROVED

Priority: High



Primary Source: Indian Express

Prepp Prelims Booster: Intra Nasal Vaccine

Prepp Mains Booster: Awareness in the Fields of Biotechnology.

Context:

- Recently, the Drugs Controller General of India (DCGI) gave emergency approval to Bharat Biotech's intranasal COVID-19 vaccine- BBV154 (iNCOVACC).
- This makes it India's first approved needle free nasal vaccine for primary immunisation against COVID-19 in the 18+ age group.
- It has been given approval only for primary immunisation, meaning it can be given to the unimmunised to protect against Covid-19 and not as a booster dose.



What is an intranasal vaccine?

- It is a vaccine administered to a person via the nose and does not require a needle.
- It induces immunity through the inner surface of the nose, which naturally comes in contact with many airborne microbes.

Benefits

- Needle-free administration eliminates issues associated with needle injury and infection risk.
- No need for trained healthcare workers for administration of vaccines.
- Easy to deploy for mass immunisation campaigns.
- Production can be scaled up easily to meet random global demand.
- Higher compliance and suitable for use in children as well as adults.

Drawbacks

- There is very little evidence to back the effectiveness of this route of delivery so far. For example- some nasal flu vaccines have not been successful.
- Despite the theoretical advantages, the intranasal approach for vaccination is largely unproven. This concept has been tested quite extensively in animals, but is still largely untested for humans.

- Even after rollout of the oral polio vaccines, there were some cases, it still caused the disease after the weakened virus in the product mutated.

About Bharat Biotech's intranasal COVID-19 vaccine

- It is ChAd36-SARS-CoV-2 Covid-19 (Chimpanzee Adenovirus Vectors) recombinant nasal vaccine. Its commercial name is BBV154 (iNCOVACC).
- It is developed by Bharat Biotech with technology in-licensed from Washington University-St Louis. Its development was partly funded by the Department of Biotechnology's Covid Suraksha programme.
- It uses a modified chimpanzee adenovirus vector, which cannot replicate in the body, to carry the Covid spike protein to induce immunity.
- It has been designed to not only protect against infection but also reduce transmission of the virus.
- **Working Mechanism:** As it is given nasally, it triggers an immune response in the mucosal membrane. It produces local antibodies in the upper respiratory tract which may provide the potential to reduce infection and transmission.
- **Efficacy:** It was found to be safe, well-tolerated, and immunogenic in a phase III trial of nearly 4000 participants across 14 sites in India. No side effects or adverse reactions were reported from its usage in any of the undertrial patients. It was also found to be safe and effective when used as a booster dose in participants who have received Covaxin or Covishield as their primary vaccine.
- **Benefits:** It can be delivered in a needle-free manner. It will do away with the need for needles and syringes currently required for all the Covid-19 vaccines available.
- It has the double benefit of enabling faster development of variant specific vaccines and easy nasal delivery that enables mass immunization to protect from emerging variants of concern.
- It produces local antibodies in the upper respiratory tract, which may provide the potential to reduce infection and transmission. It is stable at 2-8°C, which makes it easy to store and distribute.

India's COVID-19 Vaccination Status

- According to the Government's CoWIN portal- India so far has administered a total of 213 crore vaccine doses, of which 102 crore are first doses. Nearly 98% of the adult population in India have received at least one dose.
- Currently, Covishield, Covaxin and Corbevax are part of the Government's Covid immunisation drive. Vaccines like Covovax and Sputnik are also available at private centres.

Agriculture, Food Security, Marketing of Agricultural Produce and Issues and Related Constraints; E-technology in the aid of farmers.

GENERAL STUDIES 4

Public/Civil service values and Ethics in Public Administration

CAN CIVIL SERVANTS EXPRESS THEIR VIEWS ON LAW AND GOVERNANCE

Priority: Medium



Primary Source: The Hindu

Prepp Prelims Booster: Ethics

Prepp Mains Booster: Role of civil services in a democracy; GS 4 - Public/Civil service values and Ethics in Public Administration

Context:

- Smita Sabharwal, a senior IAS officer from Telangana, tweeted from her personal account in support of Ms. Bano and inquiring about the Gujarat government's decision to release 11 men convicted of gang-raping Bilkis Bano.
- This sparked a debate about whether she violated the Central Civil Services (Conduct) Rules of 1964 and reignited the discussion about the freedom of civil servants to express their personal opinions on legal and governmental issues.



What are the conduct rules?

- The Conduct Rules clearly define the standards that the Government expects of its employees.
- Rules of conduct apply to a government employee's personal and professional lives.
- An official may receive a warning, disciplinary action, or departmental proceedings if he violates the conduct rules.
- The majority of India's bureaucracy's conduct rules make sure that officers don't reveal sensitive information, criticise the government, or adopt a political stance.
- The **All India Service (Conduct) Rules, 1968** govern employees in the **administrative, police, and forest services**.
- The **Central Civil Service (Conduct) Rules, 1964** govern employees in the Indian Revenue Service, Indian Information Service, Indian Customs & Central Excise Service, Indian Postal Service, Indian Audit & Accounts Service, etc.
- Although they are all essentially similar, some services, like the Indian Railway Service, have their own set of conduct guidelines.
- Some provisions are used more frequently than others due to their ambiguity, even though conduct rules attempt to regulate the behaviour of officers in a variety of contexts (**for example, receiving dowry and drinking in public places are prohibited**).

Rule 3 of AIS Conduct Rules

The AIS Conduct Rules' Rule 3 is the broadest and most ambiguous. Every service member "shall at all times maintain absolute integrity and devotion to duty and shall do nothing which is unbecoming of a member of the service," states Rule 3(1).

- Every officer is required to uphold the following, according to a sub-section of the rule:
- high ethical standards,
- integrity and honesty,
- political neutrality,
- the promotion of the meritocratic principles,
- fairness and impartiality in the performance of duties,
- accountability and transparency,
- responsiveness to the public,
- especially to the weaker sections, and
- Courtesy and good behaviour with the public.

Rule 7 of the AIS Conduct Rules

- No member of the service may criticise any policy or action of the central or state governments on a radio broadcast, in communications over any public media, in any document, in communications to the press, or in any public utterance, in accordance with Rule 7 of the AIS Conduct Rules.
- Additionally, they are forbidden from saying anything "that has the effect of being a negative criticism of any recent or current policy or action of the central government or a state government" or "that is capable of embarrassing the relations between the central government and any state government."
- The central government attempted to include social media too in the ban in 2016.
- Anything "unbecoming" of a civil servant is forbidden

Rule 9 of the Central Civil Services (Conduct) Rules

- No government employee is allowed to "make any statement of fact or opinion which has the effect of an adverse criticism of any current or recent policy or action of the Central Government or a State Government," according to Rule 9 of the Central Civil Services (Conduct) Rules.

How the conduct rules are applied?

- The issue is looked at from the bottom up, the advantages and disadvantages are discussed, the bureaucracy is given a chance to look at all the aspects, write their notes of opposition or support, and then it reaches the political executive.
- The bureaucracy is required to follow and adhere to a policy once it has been decided upon.

Role as civil servant

- The duty of a civil servant is to uphold the rule of law and constitutional principles in letter and spirit.

Dilemma of disagreement vs put a resolution into action

- Everyone in a democracy has the freedom to voice their opinions, to disagree, and to dissent.
- A similar statement could be made about an IAS officer, who might have a right to disagree.

- You must put a resolution into action after it has been approved. You are not being true to yourself if you don't put it into practise. That is a razor's edge, and balancing the two interests is also a challenge.
- The Constitution of this nation guarantees the citizens of this nation the fundamental right to free speech, subject to reasonable limitations in the interest of preserving the state's sovereignty, international relations, health, morality, etc.
- However, when you work for the government, you are bound by certain disciplinary laws.
- Because of this, a government employee is prohibited from joining any political organizations or organizations of a similar nature or from speaking out freely about issues relating to national governance.

Judicial arguments on the issue

- In (**Lipika Paul v. The State Of Tripura**), Tripura High Court Chief Justice Akil Kureshi said that the petitioner is not devoid of her right to free speech as a Government servant, a fundamental right which can only be restricted by a valid law.
- Subject to abiding by the boundaries outlined in the Conduct Rules that applied in Tripura, the petitioner was free to hold her own beliefs and express them however she chose.
- A fundamental right cannot be restricted unless a legislature passes a law that is valid.
- One cannot be prevented from expressing his views merely because he is an employee, the **Kerala High Court ruled in 2018**.

Criticism

- The rules are subjective and vaguely defined.
- It is a guideline, not a statute. The Constitution doesn't mention it.
- The Constitution guarantees the right to free speech, but these Conduct Rules must be followed for an organisation to function, and they are therefore imposed.
- This law dates back to the British era.
- Without a doubt, the British were extremely strict and did not want their officers to criticise the poor leadership.
- However, in a democracy, the right to criticise the government is an inalienable right that cannot be restricted.
- Every institution is subject to democratic norms in a democracy. A public institution is better governed when it receives constructive criticism.

Article 19(1)(a)- right to freedom of speech and expression.

- Article 19(1)(a) states that all citizens have the right to freedom of speech and expression.
- This means that every citizen has the freedom to openly express their thoughts and opinions.
- This includes not just spoken words, but also written words, photographs, videos, banners, and other forms of communication.
- The right to speak includes the right to remain silent.
- This right is solely available to Indian citizens, not to foreign nationals.

- The Supreme Court of India has ruled that sports participation is a form of self-expression and thus a type of freedom of speech.
- This right is not absolute, and it allows the government to enact laws that impose reasonable restrictions in the interests of India's sovereignty and integrity, the state's security, friendly relations with foreign states, public order, decency, and morality, as well as contempt of court, defamation, and incitement to an offence.
- The Right to Information (RTI) is a basic right, according to this interpretation.
- The Supreme Court has also declared that freedom of expression is an intrinsic right that goes hand in hand with the right to life (Article 21). These two rights are not mutually exclusive.
- Commercial and artistic speech and expression are included in this freedom.

Article 33

- The members of the armed forces, paramilitary forces, police forces, intelligence agencies, and analogous forces have their fundamental rights subject to restrictions or abrogation under Article 33 of the Constitution. The purpose of this clause is to guarantee that they carry out their responsibilities properly and that there is discipline among them.
- The purpose of this is to guarantee that they carry out their responsibilities properly and that there is discipline among them.
- Only Parliament has been granted the power to make laws under article 33
- Any such law passed by the parliament cannot be contested in a court on the grounds that it violates a fundamental right.
- As a result, the Army Act from 1950, the Navy Act from 1950, the Air Force Act from 1950, the Police Forces (Restriction of Rights) Act from 1966, the Border Security Force Act, and other laws have been passed by the Parliament.
- These impose limitations on their freedom of speech, right to association, right to membership in political or labour unions, right to press contact, right to attend public gatherings or demonstrations, etc.

PRELIMS

Science & Technology

ISRO TESTS HYBRID PROPULSION SYSTEM



Priority: Medium

Primary Source: The Hindu

Prepp Prelims Booster: Hybrid Propulsion System

Why in the news?

- Recently, with the assistance of the Liquid Propulsion Systems Center, the Indian Space Research Organization (ISRO) tested a hybrid motor successfully at the ISRO Propulsion Complex (IPRC), Mahendragiri.
- Liquid oxygen (LOX) served as the oxidizer and Hydroxyl-terminated polybutadiene (HTPB) served as the fuel for the motor, which is different from the traditionally used solid-solid or liquid-liquid combinations by ISRO. It is a hybrid motor that uses both liquid oxidizer and solid fuel.



Significance

- The Vikram Sarabhai Space Centre (VSSC), tested it with assistance from the Liquid Propulsion Systems Centre (LPSC).
- VSSC claims that the hybrid system is more effective, "**greener,**" **and safer to handle** and
- It opens the door for **new propulsion technologies for future missions.**
- While HTPB and LOX are both environmentally friendly, cryogenic LOX is safer to handle.
- Additionally, **unlike traditional solid motors**, hybrid technology enables the **motor to be restarted and throttled.**
- According to the VSSC, using liquids makes it **easier to manage and throttle** the flow rate of LOX.
- According to the VSSC, the technology demonstration **paves the way for hybrid propulsion-based sounding rockets** and provides an interesting setting for research including **vertical landing for spent-stage recovery**. which, with assistance from the Liquid Propulsion Systems Centre, tested it (LPSC).
- **Liquid oxygen as the oxidizer:** Aluminized solid fuel based on Hydroxyl-terminated Polybutadiene (HTPB) and liquid oxygen (LOX) as the oxidizer was employed in the ground-based test for the 30 kN hybrid motor. The test on a 300-mm sounding rocket motor lasted for 15 seconds.
- **Ammonium perchlorate oxidiser:** Ammonium perchlorate is utilised as an oxidizer in conventional HTPB-based solid propellant rocket motors. Oxidizers provide the oxygen required for combustion in rocket engines.

Liquid Propulsion Systems Centre

- The Liquid Propulsion Systems Centre (LPSC) is the primary centre for developing advanced propulsion stages for launch vehicles that go to earth to orbit and for spacecraft that use in-space propulsion systems.
- For ISRO's launch vehicles and satellites, LPSC is tasked with the design, development, and system engineering of high-performance space propulsion systems using Earth-storable and cryogenic propellants.
- The LPSC is also responsible for developing fluid control valves, transducers, propellant management systems, and other essential Liquid Propulsion System components.

Vikram Sarabhai Space Centre (VSSC)

- Vikram Sarabhai Space Centre (VSSC) is the lead Centre of Indian Space Research Organisation (ISRO) under the Department of Space (DOS), Government of India.
- The rocket research and launch vehicle initiatives of ISRO were pioneered by VSSC.
- Additionally, the centre engages in research and development in related fields such as propellants, solid propulsion technology, aerodynamics, aero structural, and aero thermal fields, avionics, polymers, and composites, guidance, control, and simulation, computer and information, mechanical engineering, aerospace mechanisms, vehicle integration, and testing, space ordnance, chemical

This mutated weakened virus was then used for making Lumpi-ProVacInd vaccine.

How is Lumpi-ProVacInd effective compared to other vaccines?

- Currently, goat pox and sheep pox virus vaccines are administered on cattle against LSD, as all the three viruses belong to the same capripoxvirus genus.
- But these vaccines are heterologous vaccines and offer only cross-protection up to 60-70% for cattle against LSD.
- They are also less effective, with just 5-6 months efficacy against LSD. Hence, Lumpi-ProVacInd being a live attenuated vaccine offers better choice against LSD.

LUMPI-PROVACIND: INDIGENOUS VACCINE AGAINST LUMPY SKIN DISEASE

Priority: High



Primary Source: Indian Express

Prepp Prelims Booster: Lumpy Skin disease

Context:

- Recently, Indian Council of Agricultural Research (ICAR) announced that it is commercialising its indigenously-developed Lumpi-ProVacInd vaccine against the lumpy skin disease (LSD) virus within four-five months.
- Agrinnovate India, the commercialisation arm for products and technologies developed by ICAR has issued the expression of interest for this and received interest from three companies.

What is Lumpi-ProVacInd?

- It is a live attenuated homologous vaccine, similar to those used against tuberculosis, measles, mumps and rubella.
- It provides 100% protection against LSD in cattle.
- It is jointly developed by ICAR's National Research Centre on Equines (NRCE) at Hisar, Haryana and the Indian Veterinary Research Institute (IVRI) at Izatnagar, Uttar Pradesh.

Development Process

- It was developed using isolated virus from skin nodule samples from LSD-infected cows.
- This isolated virus was propagated in African green monkey kidney (Vero) cells used in cultures.
- The culturing was done over 50 generations (passages) in a 17 months span. The repeated passages enable mutation of the virus and weaken its virulence or disease-causing ability.
- After the 30th passage, the mutated virus lost its pathogenicity loss but induced the necessary immune response from its host.



What is the Lumpy Skin Disease (LSD)?

- It is a highly infectious viral disease that affects all breeds of cattle and water buffalo. It is **caused** by a **virus** called the **Capripoxvirus** and is genetically related to the **goatpox** and **sheeppox virus family**. It has emerged as a threat to livestock worldwide.
- Origin and Spread:** Historically, LSD disease remained **confined to Africa**, where it was first discovered in 1929.
- But in **recent years**, its geographical spread has expanded beyond the endemic areas. It was **first reported in the Asia and Pacific region in 2019** in North West China, Bangladesh and India.
- Vectors:** LSD is transmitted to cattle and water buffalo mainly through vectors such as blood-feeding insects such as biting flies, mosquitoes, and ticks.
- It can also be spread through direct contact between animals via secretions and excretions such as saliva. Contaminated water and feed can also spread the disease
- LSD is not a zoonotic disease**, meaning it does not spread from animals to humans, and humans cannot get infected with it.
- However, milk produced by LSD disease infected animals is fit for human consumption only after boiling or pasteurisation as these processes will kill the viruses if present in the milk.

- **Symptoms:** Infected animals immediately start losing weight and may have fever and lesions in their mouth, along with a reduced milk yield.
- They may also get affected by circular, firm nodes that look similar to lumps on their hide or skin. These lumps are 2 to 5 cm in diameter. These lumps gradually open up like large and deep wounds.
- Other clinical symptoms include excessive nasal and salivary secretion. Pregnant cows and buffaloes may suffer miscarriage. In some cases, it can also cause death of infected animals.
- **Treatment:** There is no treatment for the LSD virus. Prevention by vaccination is the most effective means of control.
- Secondary infections in the skin of infected animals can be treated with Non-Steroidal Anti-Inflammatories (NSAIDs) and also with antibiotics.
- **Prevention:** It relies on four tactics: Movement Control (quarantine), Vaccination, Slaughter Campaigns and Management Strategies.
- Prevention and eradication by rapid and widespread vaccination campaigns is the most effective means to control spread of the disease.
- Once an animal has recovered from it, it cannot be the source of infection for other animals.
- Disinfection of cattle-sheds must be done to eliminate vectors through application of insecticides and spraying disinfectant chemicals.
- Carcasses of dead diseased animals must be properly disposed through incineration or burning of the bodies at high temperatures.
- **Recent Spread in India:** According to official data, LSD has been reported in 12 states and has infected about 11.21 lakh cattle and caused 49,628 deaths across India

INDIAN-MADE HPV VACCINE THIS YEAR

Priority: High



Primary Source: - The Hindu

Prepp Prelims Booster: HPV Vaccine

Context:

- The Serum Institute of India (SII) Pune recently informed that by the end of 2022 CERVAVAC, the nation's first locally manufactured vaccine against the Human Papilloma Virus (HPV), will be available in the market.
- As per the plan, if mass produced the CERVAVAC vaccine will be included in the Universal Immunisation Programme (UIP) against cervical cancer.

What is CERVAVAC?

- CERVAVAC is India's first indigenously developed vaccine to prevent cervical cancer.
- CERVAVAC is a quadrivalent vaccine, meaning it is effective against at least four variants of cancer-causing Human Papilloma Virus (HPV).
- It is a result of a partnership of DBT's Biotechnology Industry Research Assistance Council (BIRAC), and the Bill and Melinda Gates Foundation that supported Serum's development efforts.

- CERVAVAC was approved by the Drug Controller General of India in July 2022.
- It is likely to cost ₹200-400 a shot and be commercially available later this year.

Cervical Cancer caused by HPV - Statistics



- In India, each year, about 1.25 lakh women are diagnosed with cervical cancer, and over 75,000 die from the disease in India.
- HPV-types 16 or 18 are responsible for over 83% of invasive cervical malignancies in India and 70% of cases worldwide.
- Age and sexual activity both have an impact on HPV transmission.
- A minimum of one HPV type is anticipated to be present in over 75% of sexually active adults.
- The great majority of infections go away on their own.

What is cervical cancer?

- Cervical cancer is a typical sexually transmitted infection.
- This specific type of cancer arises in the cervix, the bottom section of the uterus that connects to the vagina.
- Chronic HPV infection with particular strains is the main cause.
- The majority of cervical cancers are caused by the sexually transmitted disease caused by Human Papilloma Virus (HPV).
- It is the second most prevalent type of cancer and the second leading cause of cancer death among females and cancer patients who are reproductively active in the age group of 15-44 years.

What is Human Papilloma Virus (HPV)?

- The Human Papillomavirus (HPV) family is made up of more than 150 distinct viruses. It usually goes away on its own and is harmless.
- However, other kinds cause papillomas or warts on particular body parts.
- The most common sexually transmitted illness, known as HPV, is carried through skin-to-skin contact.
- HPV and cervical cancer are frequently connected. India has one of the highest rates of HPV-related cancer deaths in the world, with about 67,000 women dying from the disease each year.
- Due to difficulties and concerns about adverse effects with clinical trials for HPV vaccinations offered by private businesses in India, the National Technical Advisory Group on Immunization (NTAGI) had earlier proposed including the HPV immunization in the UIP.

- For India's Universal Immunization Program (UIP), NTAGI acts as an advisory council and provides vaccine recommendations.

What is the relevance of the CERVAVAC vaccine?

- It is the first quadrivalent HPV vaccination (qHPV) produced in India with the goal of preventing cervical cancer in females.
- It is based on VLP (Virus-Like Particles), much like the Hepatitis B vaccine, and works by causing the body to produce antibodies against the HPV virus's L1 protein.
- It is believed to be effective against viral strains of types 6, 11, 16, and 18.
- The immune system's defences against four different antigens, such as four different viruses or other microorganisms, are boosted by a quadrivalent vaccine.
- Given that it has a significant chance of eradicating cervical cancer, it would be advantageous if it were made available at a lower cost as stated by SII than current vaccines and included in national HPV vaccination programmes.

Current status of Cervical cancer treatment caused by HPV?

- In India, there are now two vaccines available: the bivalent vaccine Cervarix from GlaxoSmithKline and the quadrivalent vaccine Gardasil from Merck. However, neither is a part of the government's immunization programme, and both are pricey.
- The government would be permitted to buy vaccinations in large quantities after receiving DGCI approval in order to immunise about 50 million females between the ages of 9 and 14.
- Only when it is administered before the first sex is the vaccine remarkably effective.

What is the Universal Immunization Programme?

- Earlier known as the extended programme of immunisation, the universal immunisation programme (EPI).
- The initiative was called a universal immunisation programme by the Indian government and was formally inaugurated in 1985. (UIP).
- Under the auspices of India's National Health Mission, UIP is a part of the Reproductive and Child Health Program (RCH) (NHM).
- UIP's major goal is to give children, pregnant mothers, and babies several immunizations.
- UIP's original goal was to stop six deadly diseases: tuberculosis, polio, measles, diphtheria, pertussis, and tetanus.
- In the future, the UIP basket was expanded to include vaccines for the following 12 diseases: diphtheria, pertussis, tetanus, oral polio vaccine, diarrhoea, TB, measles, mumps, rubella, hepatitis B, pneumonia, and Japanese encephalitis.

MOXIE-MARS OXYGEN IN-SITU RESOURCE UTILISATION EXPERIMENT

Priority: High



Primary Source: Indian Express

Prepp Prelims Booster: MOXIE

Prepp Mains Booster: Science and Technology- Developments and their Applications, Awareness in the fields of Space

Context:

Recently, NASA's Perseverance rover succeeded in producing oxygen on Mars. It achieved this extraterrestrial scientific feat by using an experimental device called Mars Oxygen In-Situ Resource Utilisation Experiment (MOXIE) fitted on it. It converted carbon dioxide from the Martian atmosphere into pure, breathable oxygen.

How Mars Oxygen In-Situ Resource Utilisation Experiment (MOXIE) works?



- It works by using process electrolysis, which uses extreme heat to separate oxygen atoms from carbon dioxide molecules, which accounts for about 96% of the atmosphere on Mars. Oxygen is only 0.13% in Mars atmosphere, compared to 21% in Earth's atmosphere.
- It takes up carbon dioxide rich air from the Martian atmosphere through a dust-trapping high-efficiency particulate air (HEPA) filter.
- Then this air is compressed using a scroll pump and heated to about 800 degrees Celsius.
- This heated and compressed air is sent through an instrument called solid oxide electrolysis (SOXE) that electrochemically splits the carbon dioxide-rich air into oxygen ions and carbon monoxide.
- The oxygen ions are then isolated and recombined to form breathable molecular oxygen which is measured for quantity and purity and then released harmlessly back into the air, along with carbon monoxide and other atmospheric gases.

Achievements of MOXIE

- Since April 2021 touched down on the Martian surface as part of NASA's Perseverance rover, MOXIE was able to produce oxygen on seven experimental runs.
- It has produced oxygen in a variety of atmospheric conditions, including during the day and night, and through different Martian seasons.
- In each experimental run, it was able to produce a targeted capacity of six grams of oxygen per hour — about the rate of a modest tree on Earth.

Significance of MOXIE

- It represents the first demonstration of “in-situ resource utilisation” i.e. harvesting and using a planet’s materials (in this case, carbon dioxide on Mars) to make resources (such as oxygen) that would otherwise have to be transported from Earth.
- It will make it possible to send a scaled-up version of MOXIE to Mars in future ahead of a human mission, to continuously produce oxygen in enough quantity to sustain humans on Mars and as a fuel for a rocket for returning astronauts back to Earth.

What is Perseverance Rover?

- It was launched as part of NASA's Mars 2020 Mission. It was launched in July 2020 and landed on Martian Surface in February 2021.
- It is the most advanced, most expensive and most sophisticated mobile laboratory ever sent to another planet.
- It is mandated to find signs of ancient life and collect samples of rock and regolith (broken rock and soil) for possible return to Earth.
- It is exploring areas near the targeted site of Jezero Crater to assess the geology and past climate of Mars.
- **Four Science Objectives:** (i) Study Mars Habitability, (ii) Seek signs of Past Microbial Life on Mars, (iii) Collect and Cache Samples and (iv) Prepare for future human missions to Mars.
- **Key Scientific Payloads:** (i) MOXIE: Technology demonstration for producing oxygen from Martian atmospheric carbon dioxide. (ii) Ingenuity helicopter (nicknamed Ginny): Technology demonstration to test the first powered flight on Mars. It created this extraterrestrial history of first powered flight on another planet on April 19, 2021.

Other Mars Missions

- Till now six countries- United States, Russia, China, the European Union, India and United Arab Emirates (UAE) have successfully reached the Martian orbit.
- **United States (NASA Missions):** Viking spacecraft, Odyssey spacecraft, Curiosity rover, Insight, Reconnaissance Orbiter, MAVEN and Phoenix.
- **European Union (EU):** Mars Express, ExoMars Trace Gas Orbiter (along with Russia), Beagle 2.
- **India:** Mangalyaan-It was India's first interplanetary mission. It made India the first nation in the world to reach Martian orbit its maiden attempt
- **UAE:** Hope Mission
- **China:** Tianwen-1
- **Russia:** Fobos-Grunt

SYNTHETIC MOUSE EMBRYOS CREATED USING STEM CELLS



Priority: Low

Primary Source: Indian Express

Prepp Prelims Booster: Biotechnology

Prepp Mains Booster: Science and Technology, Awareness in the field of Biotechnology.

Context:

Recently, Scientists have developed synthetic mouse embryos from stem cells without a dad's sperm or a mom's egg. These lab-created embryos mirror natural mouse embryos upto 8 days after fertilisation, containing the same body structures, including beating heart. This development will lay the foundation for creating synthetic embryos for research in future.

What are Stem cells?

- A cell is the building block of our body. It is the smallest structural and functional unit of the body. Stem cells are one of them.
- Stem cells are the body's raw materials i.e. cells from which all other cells with specialised functions are generated.
- They have the capability to develop into wide-ranging types of cells in the human body, from muscle cells to brain cells.
- No other cell in the body has the natural ability to generate new cell types like stem cells. These cells are present in both plants and animals.
- Stem cells have two unique properties- Split to form similar cells and develop into different specialised cells that perform a distinct function.

Two main properties of stem cells are

- **Self-renewal:** The stem cells undergo cell divisions to form other stem cells and thus maintain their population. The dividing cell is called the parent cell and the resulting new cells are called daughter cells.
- **Potency:** The stem cells have different capacities to differentiate into mature cells i.e. potency.

What are different types of stems?

Classification based on formation at different times of human lives

- **Embryonic stem cells (ESCs):** They are vital for the differentiation and development of the embryo. They derived from the blastocyst stage of the embryo. The blastocyst is a pre-implantation stage that is formed 4 to 5 days after fertilisation.
- They are found in the blastocysts' inner cell mass and are pluripotent in nature. They are also harvested from umbilical cord blood, amniotic fluid, amniotic sac and the placenta.
- **Adult stem cells (ASCs):** They are also known as somatic stem cells. They are found in both adult and juvenile animals, unlike embryonic stem cells. They have the ability to differentiate into any cell of the organ from which they originate. They are sourced from blood, adipose tissue (fat) and bone marrow.
- **Induced pluripotent stem cells (iPSCs):** They are derived from somatic cells. They are pluripotent stem cells generated by

introducing 'reprogramming factors' called Yamanaka factors into mature cells.

Classification based ability to develop into different specialised cells

- **Totipotent stem cells:** They can transform into all kinds of cells in the human body.
- **Pluripotent stem cells:** They can transform themselves into any type of cell in the human body except those kinds that are required to support and develop a foetus in the womb. iPSCs and ESCs are pluripotent stem cells.
- **Multipotent Stem Cells:** They can give rise to only a few distinct types of cells.

Applications of stem cells in the medical field

- The human body uses the adult stem cells as a part of its repair system to heal injuries and damages. It is also used to replenish the tissues.
- So, stem Cells have emerged at the core of the new field of medicine which is known as Regenerative Medicine.
- They have the potential to reduce the need for organ transplants and other related surgeries. They could also be used to regenerate organs.
- **Stem cell therapy:** It is a major application of stem cells. It is the use of stem cells in medicine to treat or prevent a disease or medical condition or regenerate damaged tissues.
- This therapy can be allogeneic (donor donates stem cells to the patient) or autologous (in this case patient gets stem cells from his/her own body).
- Mesenchymal stem cell therapy was used to repair the lungs of a baby in 2019.
- **Bone marrow transplantation:** It is the most widely used type of stem cell therapy. It is used for treating cancers of the blood or bone marrow, like leukaemia.
- **Treatment of diseases:** Stem cell based therapies are being explored as an option for the treatment of cardiovascular diseases, cancers, diabetes and neurodegenerative diseases like Alzheimer and Parkinson.
- **Research of Genetic Disease:** Stem cells are now widely used in research to find the causes of genetic defects, the mechanism behind cancers and various diseases, etc.
- **Development of new drugs:** Stem cells are also being used for testing the safety and efficacy of new drugs. For this ability of stem cells such as formation of new blood vessels, cell differentiation and multiplication and also inhibition of inflammatory response are used. For example, stem cell based drug CAsTem was reportedly successful in curing COVID-19 in animal experiments.

CANCER-FIGHTING VIRUSES CAN BOOST BODY'S IMMUNE RESPONSE

Priority: Medium



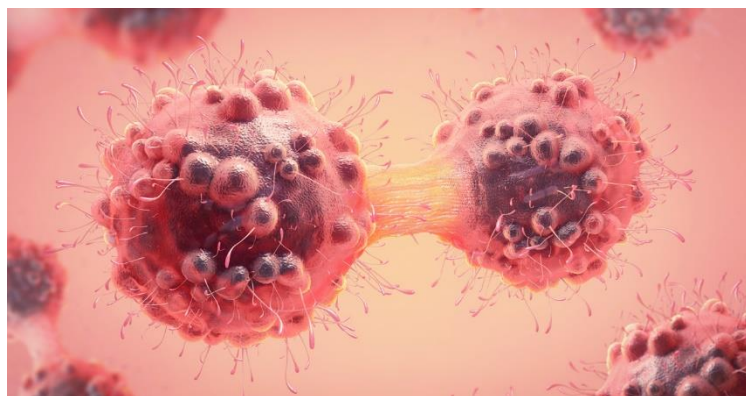
Primary Source: The Indian Express

Prepp Prelims Booster: Cancer-fighting viruses

Prepp Mains Booster: Awareness in the fields of IT, Space, Computers, Robotics, Nano-technology, Bio-technology.

Context:

According to a recently published new study, the body's immune capacity against cancer i.e. to recognise and destroy cancerous cells can be boosted by using Oncolytic Viruses. This will help the body fight back against cancer and boost the immune system to tackle the disease better.



What is Cancer?

- It is a generic term for a large group of diseases that may affect any part of the body. One of its defining features is the rapid creation of abnormal cells that grow beyond their usual boundaries.
- These abnormal cells invade adjoining parts of the body and spread to other organs. This process is known as metastasis. The widespread metastasis is the primary cause of cancer and death related to it.

What causes cancer?

- Cancer is caused by transformation of normal cells into tumorous cells in a multi-stage process.
- This process generally progresses from a precancerous lesion to a malignant tumour.
- These multi-stage changes are caused by abnormal interactions between a person's genetic factors.

Cancer Burden

- It is a leading cause of death worldwide and accounted for nearly 10 million deaths in 2021.
- The most common cancers were: Breast (2.26 million cases), Lung (2.21 million cases), Colon and rectum (1.93 million cases), Prostate (1.41 million cases), skin/non-melanoma (1.20 million cases) and stomach (1.09 million cases).

What observations were made in this study?

- Oncolytic viruses (OVs) are a class of viruses that selectively target and kill cancer cells without touching normal ones.
- The latest study found that these viruses enhance the body's immune system ability to recognise and terminate cancer cells.
- It focused on the virus known as myxoma (MYXV) and it found that T-cells infected with myxoma virus can lead to a type of cancer cell death not previously observed.
- It claims to uncover an unexpected synergy between T-cells and MYXV to bolster solid tumour cell *autosis* that reinforces clearance of tumour. Autosis is a form of cell destruction that is useful against tumours, which are seen as treatment-resistant.
- MYXV can target and kill cancer cells directly, but using MYXV-equipped T-cells destroy cancerous cells in the vicinity of those targeted. This process is called bystander killing.
- Thus, this study shows that immunotherapy combined with virotherapy holds potential to seek and destroy *cold tumours* that fly under the immune system's radar.

Why is there a need for such study?

- Cold tumours are kind of cancerous tumours that do not trigger a strong immune response.
- They tend to be surrounded by cells that are able to suppress the immune response and keep T cells (a type of immune cell) from attacking the tumour cells and killing them.
- They usually do not respond to immunotherapy. Most cancers of the ovary, prostate, breast, pancreas, and brain (glioblastoma) are considered cold tumours.

LIGHT ON THE DARK MATTER: JAMES WEBB TELESCOPE, THE MOST POWERFUL SPACE TELESCOPE

Priority: High



Primary Source: The Indian Express

Prepp Prelims Booster: James webb Telescope

Prepp Mains Booster: Awareness in the fields of Space.

Context:

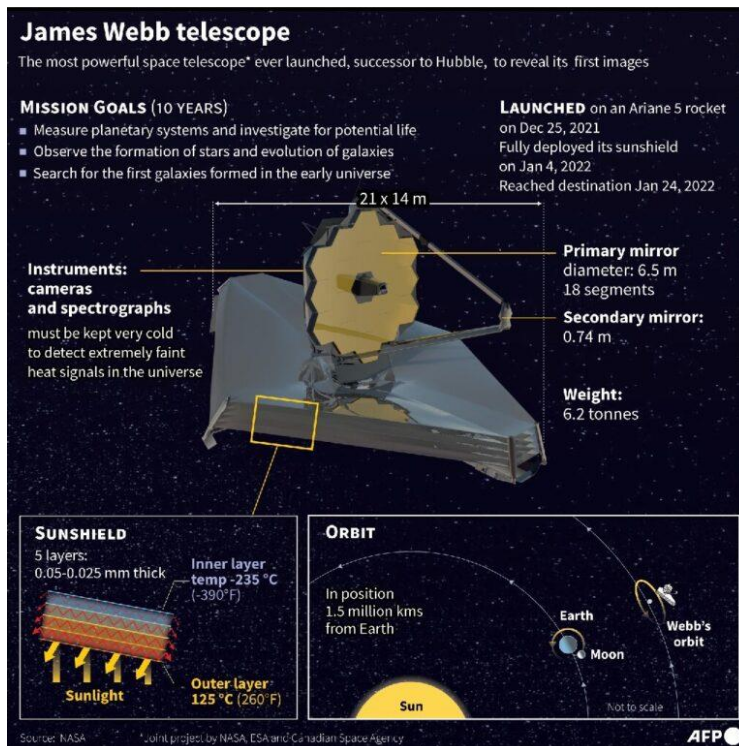
The James Webb Space Telescope was launched into orbit in 2021 to study the cosmos. The Hubble Space Telescope has been succeeded by it. The scholars have analysed the potential of James Webb Space Telescope's potential to decipher the findings of the universe.

What is the James Webb Space Telescope?

- It is the National Aeronautics and Space Administration's (NASA) most powerful infrared telescope.
- It is also regarded as the successor of the Hubble Telescope, which was launched into low Earth orbit in 1990.
- It has taken 30 years and \$10bn to develop, and is being described as one of the grand scientific endeavors of the 21st Century.
- NASA, the European Space Agency (ESA), and the Canadian Space Agency collaborated to build this telescope.
- Unlike Hubble, it observes in near-infrared light, which greatly increases its capacity to see obscured stars and galaxies.

- In an effort to find the components of life, it will also search for atmospheres similar to Earth's and indicators of vital substances including methane, water, oxygen, carbon dioxide, and complex organic molecules.

Where it is placed and what is the Current Status of the James Webb Space Telescope?



- In contrast to the Hubble Space Telescope, the James Webb Space Telescope will orbit the Sun 1.5 million kilometers (1 million miles) from the Earth at a location known as the **second Lagrange point, or L2**.
- It was launched in December 2021 and is now in the Sun-Earth L2 Lagrange point.
- **Lagrange Point 2:** It is one of the five locations on the orbital plane of the Earth-Sun system. The Joseph-Louis Lagrange points, which can be found in every revolving two-body system, including the Earth and Sun, show where the gravitational forces of the two major masses cancel each other out.

Mission of JWST

- Look for early star and galaxy formation during the first few hundred million years following the Big Bang.
- Identify the evolution of galaxies.
- Watch the evolution of stars, from their earliest phases to the emergence of planetary systems.
- Analyze the physical and chemical characteristics of planetary systems, including our own solar system, and look into the existence of life elsewhere.
- Understanding Cosmos Mysteries Find out why, less than a minute after the Big Bang, the cosmos expanded so quickly.

- **Investigate the Universe's Dark Age:** The Dark Ages is the time before gravity produced the first stars and galaxies that eventually began to emit the first light.
- **Search for indications of life on exoplanets:** Because of its huge mirror and excellent Infrared Spectrograph equipment, JWST can do it with considerably more precision.

What is the telescope's purpose?

- Almost anything in the sky will be visible with the telescope.
- To see the light originating from the very first stars to shine in the Universe, however, is its main goal.
- About 100–200 million years after the Big Bang, or a little more than 13.5 billion years ago, it is thought that these pioneer stars began to shine.
- These star clusters will be identified by the James Webb telescope.

Significance

- Many mysteries about the cosmos, especially those pertaining to the early period of the first few hundred million years following the Big Bang and the formation of stars and galaxies, are anticipated to be revealed.
- The James Webb telescope has been referred to as the "telescope that ate astronomy" by some.
- It is thought to reflect the universe's Dark Ages in the past.

Conclusion

In conclusion, the majority of the cosmos is unknown. Over the course of its existence, we expect that the James Webb telescope will offer us a powerful window that will enable us to shed some light on some of the universe's many mysteries and help us understand them a little bit better.

Conservation, Environmental Pollution and Degradation

HUNDREDS OF WHALES STRANDED ON TASMANIA'S WEST COAST

Priority: Medium



Primary Source: Indian Express

Prepp Prelims Booster: Biodiversity

Why in the News?

- Recently, a pod of about 230 pilot whales stranded on a sand bank and a beach off the west coast of Tasmania, an island off the southern coast of mainland Australia.
- The incidence of mass whale strandings is not unique to Tasmania. Moreover, the exact cause of this mass stranding is still unknown.
- The largest mass whale stranding in Tasmanian history had occurred in September 2020 when more than 380 pilot whales had stranded off the west coast.

What are Stranding Events?

- It refers to the phenomenon of Cetaceans (aquatic mammals like dolphins and whales) stranding themselves on beaches. It is also called beaching.
- The Cetaceans strand themselves on beaches either singularly or in groups. The individual strandings are mostly attributed to injury or sickness. But it is not clear why exactly whales beach themselves in groups.
- There are around 2,000 strandings each year worldwide, with most resulting in the death of the stranded animal.
- To protect these stranded animals, scientists and workers drag them away from the shore and guide them back into the deep water.

What are the reasons for mass strandings of Whales?

- Mass strandings are thought to be caused by a variety of variables. But it is believed that behavioural factors play a significant role.
- They may be caused by a combination of physical (weather, tides, currents, coastline) and biological (predators, feeding, echolocation disruption, and disease) circumstances.
- **Prey Hunting:** Whales might be drawn to land by prey-rich currents. Some whales follow schooling fish or other prey into shallow waters, which causes them to become disoriented, as a result they get stranded.



- **Geographic factors:** Further, the shape of the beach and the coastline could also have a role to play.
- **Stress:** The instinctual behaviour that causes whales to seek safety on land is when they are under stress. It is deeply rooted in subcortical regions of their brain. It is one of the hypothesised causes of their stranding.
- **Man made noise pollution:** The sonar signals and other man-made loud underwater noises may contribute to beaching events.
- **Changes or abnormalities in the earth's magnetic field:** It is believed that abnormalities caused by changes in the earth's magnetic field may be interfering with a whale's biological navigation that causes loss of its sense of direction.
- **La Nina or El Nino:** The whales may approach the coast more closely than usual during La Nina or El Nino, which can cause fluctuations in water temperature and result in strandings.

- **Climate change:** It could also have an impact too as changes in the environment, water temperature, or prey habitats could throw the whales off.

About Pilot whales

- They are cetaceans (aquatic order of mammals comprising the whales, the dolphins, and the porpoises) belonging to the genus *Globicephala*.
- They are among the largest of the oceanic dolphins, exceeded in size only by the orca. They and other large members of the dolphin family are also known as blackfish.
- **Two extant species of Pilot whales:** They are the Long-finned pilot whale (*Globicephala melas*) and the Short-finned pilot whale (*Globicephala macrorhynchus*). The two species are not readily distinguishable at sea, but they are distinguished by analysis of their skulls.
- **Habitat:** Both species of Pilot whales range nearly worldwide. But long-finned pilot whales live in colder waters and short-finned pilot whales live in tropical and subtropical waters.
- **Social Animals:** Pilot whales are highly social and remain with their birth pod throughout their lifetime.
- **Conservation status:** Both these species of Pilot whales-short-finned and long-finned pilot whales have been categorized Least Concerned.

- It is the only extant species of the family *Dugongidae* and its closest living relatives are the manatees.



- It is the only existing species of herbivorous mammal that lives exclusively in the sea.
- It plays an important part of the marine ecosystem and indicator of general health of the marine ecosystem. Its depletion will have adverse effects all the way up the marine food chain.
- **Characteristic features:** Dugongs are usually three metres long and weigh around 400 kg. They have an expanded head and an upper lip that resembles a trunk.
- They have two nostrils and no dorsal fin, unlike dolphins and other cetaceans. It feeds mainly on seagrass and other aquatic vegetation found in the area.
- They are long-lived animals with a low reproductive rate, a long generation time. Female dugongs do not have their first calf until they are at least 10 years old and can be up to 17 years old.
- Like all other marine mammals, they come to the surface to breathe.
- They are social animals, they are usually solitary or found in pairs. They are shy and do not approach humans.
- **Distribution and Habitat:** Globally, they are found in shallow tropical waters throughout the Indo-Pacific area.
- In India, they are only found in the Gulf of Mannar, Palk Bay, Gulf of Kutch and Andaman and Nicobar Islands. It is the state animal of Andaman and Nicobar.

Threats

- Human activities such as the destruction and modification of habitat, illegal fishing activities, vessel strikes, pollution, unsustainable hunting or poaching and unplanned tourism are the main threats to dugongs.
- **Habitat Destruction:** They mainly graze on seagrass and the degradation of their seagrass habitats due to ocean floor trawling is one of the most important factors behind decreasing dugong populations in many parts of the world.
- **Vessel strikes:** They have also been reported to suffer as a result of gill-net entanglement and drowning.
- **Poaching and hunting:** Dugongs are hunted for their meat over a wrong impression of medicinal properties.
- **Slow breeders:** They are slow breeders and their population does not grow more than 5% per year. Because of this, it takes a long time for their population even after conservation efforts.

DUGONG: FIRST LARGE VERTEBRATE TO GO FUNCTIONALLY EXTINCT IN CHINA

Priority: High



Primary Source: Indian Express

Prepp Prelims Booster: Dugong

Prepp Mains Booster: Conservation, Environmental Pollution and Degradation

Context:

According to recently published study, Dugong (Sea Cow) became the first large vertebrate to go functionally extinct from the coastal waters of China. It was as a result of a rapid population collapse of Dugong starting from the mid-1970s.

What is Functional Extinction of Dugongs?

The functional extinction of Dugongs in China means that, even if some Dugongs are alive off China's coast, their numbers are too small to maintain a viable population.

What are Dugongs?

- Dugong is a species of sea cow found throughout the warm latitudes of the Indian and western Pacific Oceans.
- Its name sea cow refers to the fact that they graze on seagrass, which forms meadows in sheltered coastal waters.

Conservation Status:

- **IUCN Red List status:** Vulnerable
- **Wild (Life) Protection Act, 1972:** listed in Schedule I. This bans killing and purchase of dugong meat.
- **Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES):** listed in Appendix I.
- **Convention on the Conservation of Migratory Species of Wild Animals (CMS):** listed in Appendix I.

Conservation Efforts in India

- **Species Recovery Programme:** Dugong is one of the 16 terrestrial and 7 aquatic identified species under this program. This programme aims to save critically endangered species/ecosystems to ensure their protection outside Protected Areas, across the wider landscape/seascape.
- **Seagrass ecosystems in India:** They are classified as Ecologically Sensitive Areas under the Coastal Regulation Zone Act, 1986.
- **Task Force for Conservation of Dugongs:** It was constituted by the Ministry of Environment, Forests and Climate Change (MoEFCC) to conserve and manage the declining populations of Dugongs in India. It was mandated to look into the entire gamut of issues related to the conservation of dugongs and implementation of the 'UNEP/CMS Dugong MoU' in India. It had recommended a Conservation and Management Plan for Dugongs (Dugong dugon) and their habitats in India.
- **Dugong and SeaGrass Conservation Project:** It was launched in 2016 by Global Economic Facility (GEF) and UNEP for eight nations in the Indo-Pacific excluding India to conserve and manage the declining populations of dugong in India.
- **Dugong conservation reserve:** In 2022, Tamil Nadu Government established India's first dugong conservation reserve in the Gulf of Mannar and the adjacent Palk Bay on the southeast coast of India.

WHAT IS 'ZOMBIE ICE', AND HOW HAS IT THREATENED TO RAISE GLOBAL SEA LEVELS BY OVER 10 INCHES

Priority: Medium



Primary Source: Indian Express

Prepp Prelims Booster: Zombie Ice

Context:

- A recent study published in Nature Climate Change said that melting the Greenland ice sheet will inevitably result in an increase in global sea levels of at least 10.6 inches in sea level, regardless of the climate action the world chooses to take at this time. This is because of the "zombie ice".
- In this study, researchers calculated for the first time the minimum ice loss in Greenland and the resulting rise in the global sea level.



What is Zombie Ice?

- Zombie ice, also known as dead or doomed ice, is ice that is still a part of the parent ice sheet but is not gaining new snow.
- These ice sheets are "committed" to melting, which will raise the sea level. This is due to the already-occurring **warming**.
- According to the research, an equilibrium state exists where snowfall from the **Greenland ice cap's higher elevations** flows down to refuel and thicken glacier edges.
- According to this, there has been less replenishment and more melting over the past few decades.
- Even if the world's temperature remains stable at its current level, scientists predict that **3.3% of Greenland's total ice volume will melt**.

What are the possible effects of sea level rise in India?

- According to the **State of the Global Climate in 2021 report from the World Meteorological Organization (WMO)**, which was published on May 18, 2022, sea levels along nearly the entire **Indian coast are rising faster than the global average**.
- Not all areas of the world's oceans are experiencing the same rise in sea levels. Southwest of the Indian Ocean, where it is 2.5 mm/year faster than the global average, is where sea levels are rising the fastest.

Causes

- **Melting of ice:** The rapid melting of ice from the ice sheets in the Arctic and Antarctic is the main cause of the rise in sea levels.
- **El Nino:** Water becomes less dense as it warms up and expands due to the absence of nutrients that are dependent on cold water.
- This less dense, expanded water causes the sea level to rise. In some ocean regions, the height of the ocean's surface may increase by 6 to 13 inches during an El Nino.
- **Local factors:** Local variations in ocean salinity and heat content dominate regional patterns of sea level change.

Consequences

- **Affect livelihood:** The millions of people who live along the Indian coastline could suffer severe repercussions from such a sea level rise.
- **Erosion and subsidence of coasts:** While gradual erosion of the coastline, subsidence, and inundation of deltas are long-term concerns for people who live near the sea, the combined impact of tropical cyclones and sea-level rise is of more immediate concern.

- Images from the Landsat satellite, operated by the National Aeronautics and Space Administration, show that sea levels have been rising in the Sunderbans delta for the past 20 years at a rate of 30 mm per year, with a 12% loss in the shoreline.
- **Intensify coastal flooding:** For instance, when a tropical cyclone strikes, the storm surge, combined with more precipitation, sea level rise, and high tides, may intensify the flooding that results, making it more challenging to control.
- **Destroy productivity of soil:** Storm surges and tides cause long-term damage, including a decline in the quality of the soil, by bringing salty water into homes and agricultural fields.
- **Migration:** This is more than six times the average level for the world, and it has already resulted in the eviction of about 1.5 million residents of the delta.

Conclusion

- The rise in sea levels and intense cyclones will make places like the Sunderbans uninhabitable, leading to a massive inland migration of people and a string of other socio-economic issues if global warming is not kept below the 1.5°C mark as agreed to by countries under the Paris Agreement.

IARI: NEW VIRUS BEHIND MYSTERY DWARFING OF RICE

Priority: Medium



Primary Source: Indian Express

Prepp Prelims Booster: Rice Black-Streaked Dwarf Virus disease' (SRBSDV)

Prepp Mains Booster: Environmental Conservation, Environmental Pollution and Degradation.

Context:

- In Punjab and Haryana, a strange disease has struck the rice crop, causing the "dwarfing" in the rice plant.
- The mystery disease has been recognised by the IARI experts as 'Southern Rice Black-Streaked Dwarf Virus disease' (SRBSDV), named after Southern China, where it was first discovered in 2001.

What are the findings of IARI scientists?

- The Indian Agricultural Research Institute (IARI) has confirmed that the mysterious disease resulting in "dwarfing" of rice plants has been caused by the Southern Rice Black-Streaked Dwarf Virus (SRBSDV).
- The virus is spread by the white-backed plant hopper(WBPH), an insect pest, which injects it while sucking the sap from mostly young plants.
- The presence of the virus was detected both in the infected plants and the body of the vector insect, whose RNA was isolated. But the virus was not found in the seeds collected from the infected plants.

What is Rice Dwarfing?

- Rice dwarf disease is characterised by plant stunting and the formation of white chlorotic spots on the leaves.
- The height of the stunted plants was reduced from half to three-quarters of the height of the normal plants.
- These plants are simple to remove because of their shallow roots.



- Nearly all of the cultivated types in the farmers' fields contained these plants.
- Plant dwarfing was often observed at 10% to 25%, but in rare cases, it exceeded 40%.
- Regardless of variety, the incidence of stunting was more evident in paddy crops that were sown early.

What is Southern rice black-streaked dwarf virus SRBSDV?

- The Southern Rice Black-Streaked Dwarf Virus (SRBSDV) is a unique species in the genus Fijivirus. It is a non-enveloped icosahedral virus with a genome made up of 10 double-stranded RNA segments (family Reoviridae).
- A virus known as an icosahedral virus is made up of identical subunits that combine to form equilateral triangles that are then stacked symmetrically.
- White-Backed Plant Hopper (WBPH) uses persistent circulative and propagative methods to spread the SRBSDV.
- Due to the virus's ability to spread more effectively in nymphs of WBPH than in adults, SRBSDV not only affects rice but also several weed species.
- WBPH's ability to migrate with typhoons and powerful convection winds may allow for the long-distance spread of this virus.

How to prevent the spread of the viruses?

- Farmers should periodically check their crop for the existence of WBPH because there is no cure for the viral disease. A few plants should also be gently tilted and tapped 2-3 times at the base every week.
- Insecticides can be applied toward the base of the plants if WBPH nymphs or adults are observed floating on water.
 - The insecticides used can include Pexalon 10 SC (triflumezopyrim) @ 94 ml/acre or Osheen/Token 20 SG (dinotefuran) @ 80 g/acre or Chess 50 WG (pymetrozine) @ 120 g/acre.
- Since stunting was found to be more prevalent in early transplanted crops, farmers are advised to abide by the Punjab Agricultural University's recommended transplanting dates. It would not only aid in the control of viral diseases but also water conservation.

GLOBAL ALLIANCE FOR INDUSTRY DECARBONISATION

Priority: High



Primary Source: Indian Express

Prepp Prelims Booster: Global Alliance for Industry Decarbonisation

Context:

Recently, International Renewable Energy Agency (IRENA), co-founding partner Siemens Energy, and 13 companies including Tata Steel and Jindal Steel Works from India launched Global Alliance for Industry Decarbonization.



Why is there a need for such a global alliance?

- Around 25% of global GDP is produced by the industrial sector, but it also emits around 28% of Green House Gases (GHG) emissions.
- There is an urgent need to slash greenhouse gas emissions to tackle climate change. The industrial sector is the second largest emitter and requires rapid decarbonisation.

What is the Global Alliance for Industry Decarbonisation?

- It aims to accelerate net-zero ambitions and decarbonisation of industrial value chains in pursuit of 2015 Paris Agreement climate goals.
- It was formed under the Bali Declaration adopted during IRENA's Investment Forum on Energy Transitions held in Bali, Indonesia.
- **Objectives:** It is intended to provide a platform for industry to exchange and collaborate to contribute towards the achievement of countries' net zero goals.
- It will strengthen dialogue and coordinate action by industrial stakeholders from across the public and private sectors.
- **Organisational Agency:** IRENA will coordinate the activities of it. It will be co-chaired by Siemens Energy, which was a major driver for its creation.
- **Founding members:** It includes IRENA, Siemens Energy Enel Green Power, TAQA Arabia, Eni, Technip Energies, EDF Renewables, JSW (India), Tata Steel (India), Sable Chemicals, Tatanga Energy, Roland Berger, Repsol, Equinor and TAQA.

- **First meeting:** It is planned to take place at COP27 in Sharm El Sheikh, Egypt in November 2022.

Significance

- It will help to achieve country-specific net-zero goals faster, encourage action for decarbonizing industrial value chains, and enhance understanding of renewables-based solutions and their adoption by industry.
- It will enable participation of leading industries for decarbonization and unlock business opportunities for them from green industrialization through renewables and other transition-related technologies like green hydrogen
- It highlights the importance of collaboration in developing global strategies and sharing best practices to cut industry emissions.
- It will serve as an exchange forum for industry, technology, and knowledge partners for accelerating the process of decarbonization.

What is Decarbonisation?

- It refers to the process of reducing carbon dioxide (CO₂) emissions resulting from human activity in the atmosphere. It plays a very important role in limiting global warming.
- Industrial decarbonization aims at phasing out atmospheric GHG emissions from all aspects of industry without compromising the industrial sector's vital contributions to national economic competitiveness and prosperity.

About International Renewable Energy Agency (IRENA)

- It is an intergovernmental organisation that supports countries in their transition to a sustainable energy future.
- It was officially founded in January 2009 in Bonn, Germany. It is headquartered in Abu Dhabi, United Arab Emirates.
- **Members:** Currently it has 164 members including India.
- **Functions:** It serves as the principal platform for international cooperation and a repository of policy, technology, resource and financial knowledge on renewable energy.
- It promotes the widespread adoption and sustainable use of all forms of renewable energy, including bioenergy, hydropower, geothermal, ocean, solar and wind energy in the pursuit of sustainable development, energy security, energy access and low-carbon economic growth and prosperity.

HOW IS THE CHIEF JUSTICE OF INDIA APPOINTED?

Priority: High



Primary Source: Indian Express

Prepp Prelims Booster: Indian Constitution: Chief Justice of India

Context:

- Recently, Justice Uday Umesh Lalit was appointed as the 49th Chief Justice of India. At the Rashtrapati Bhavan, Justice Uday

Umesh Lalit took the oath of office in front of President Droupadi Murmu to become the 49th Chief Justice of India.

- He will be the second Chief Justice of India to be chosen from the bar without first holding the position of a high court judge.



What is the eligibility criteria for Chief Justice of India?

- In addition to being an Indian citizen, the candidate must meet the following requirements:
 - have served as a judge of a High Court for at least five years, or of two or more such Courts in succession;
 - have served as an advocate of a High Court for at least ten years; or
 - be, in the President's opinion, a distinguished jurist.

Who appoints the CJI?

- According to Clause 2 of **Article 124** of the Indian Constitution, **the President** appoints the **Chief Justice of India and the other Supreme Court judges**.
- According to Article 124, the President may "deem necessary" to appoint a judge of the Supreme Court **"after consultation" with other judges**.
- The President should **contact the CJI, Governor, and Chief Justice of the High Court in question, according to Article 217**, which addresses the appointment of High Court judges.
- Additionally, CJIs serve until the age of 65, whereas High Court justices leave their positions at the age of 62.

What is the procedure followed for recommending and appointing judges?

- The appointment of judges is done using the more than 20-year-old **collegium system**, which consists of the **five senior-most Supreme Court and High Court judges**.
- From the candidates initially nominated by the collegium, the Intelligence Bureau (IB) occasionally conducts a background investigation.
- Although the government may also object, **the collegium's will typically takes precedence**.
- The term **"collegium" is not mentioned in the constitution**, which only speaks of consultation by the President.
- This manner of appointment has frequently been contested in court due to the ambiguity of the word "consult," which has resulted in decisions like the **First Judges Case**, when it was determined that the President can reject the CJI's proposal if there are "cogent reasons."

- This indicated that the President or administration would have more influence over appointment decisions.
- This changed as a result of subsequent lawsuits and rulings.
- As a result of the **"Third Justices Case,"** the Supreme Court established rules for nominations and transfers, giving rise to the current collegium structure in which decisions must be made by a majority of the five seniormost judges.
- Because of this, it has become widely accepted in recent years that the judiciary's independence from the administrative branch should be protected when making nominations.
- Typically, the court's senior judge (in terms of years of service) is suggested as the chief justice's successor. Former Prime Minister Indira Gandhi famously broke with this tradition when she chose Justice AN Ray above his seniority as CJI in 1973.
- **Seniority** is to be the standard according to the government's **Memorandum of Procedure for Appointing Supreme Court Judges**.
- It states that in order to appoint the following **Chief Justice of India, the Union Minister of Law, Justice, and Corporate Affairs requests the advice of the outgoing CJI**.
- After the collegium's recommendations are finalized and received from the CJI, the Law Minister will put up the recommendation to the Prime Minister who will advise the President on the matter of appointment.

Chief Justice of India

- The CJI and the other Supreme Court judges are appointed by the President of India.
- In terms of the CJI, the outgoing CJI recommends his successor.
- In practice, it has been strictly by seniority since the 1970s supersession issue.

Judges of the Supreme Court

- The proposal was initiated by the CJI for the other Supreme Court judges.
- The CJI consults with the rest of the Collegium members, as well as the court's senior-most judge from the High Court to which the recommended person belongs.
- Consultees must record their opinions in writing, which should be kept in the file.
- The recommendation is sent by the Collegium to the Law Minister, who then forwards it to the Prime Minister, who advises the President.

For High Court Chief Justices

- The High Court Chief Justice is appointed in accordance with the policy of having Chief Justices from outside the respective states.
- The decision on the elevation is made by the Collegium.
- A Collegium of the CJI and two senior-most judges recommend High Court judges.
- The proposal, on the other hand, is led by the outgoing Chief Justice of the High Court concerned, in consultation with two senior-most colleagues.
- The recommendation is forwarded to the Chief Minister, who urges the Governor to the proposal to the Union Law Minister.

Why is the collegium system criticized?

Lack of transparency: The lack of openness in the collegium system is its fundamental drawback.

Nepotism: Nepotism may be prevalent, as indicated by the 230rd report of the Law Commission of India, which was submitted in 2009.

- The report stated: "Sometimes it appears that this high office (HC Judge) is patronised.
- A person has a better chance of advancement if a close relative or well-wisher is or has previously served as a judge in the higher courts, a senior advocate, or a political higher-up.
- **Noncompetent:** Such a person does not necessarily need to be competent because occasionally even less competent individuals are admitted.

What is a Memorandum of Procedure?

- The Memorandum of Procedure (MoP) is the playbook agreed upon by the government and the judiciary on the appointment of judges and it is a crucial document as the Collegium system of appointing judges is a judicial innovation that is not mandated through legislation or text of the Constitution.
- Three Supreme Court decisions—the First Judges Case (1981), Second Judges Case (1993), and Third Judges Case (1998)—have evolved into the MoP, which now serves as the benchmark for appointing judges.
- But after the Supreme Court overturned the constitutional amendment that established the National Judicial Appointments Commission (NJAC), which intended to alter the appointment process, the MoP was renegotiated in 2016.

What is the procedure for the removal of CJI?

- According to the constitution, "A Judge of the Supreme Court shall not be removed from his office except by an order of the President passed after an address by each House of Parliament supported by a majority of the total membership of that House and by a majority of not less than two-thirds of the members of that House present and voting."
- The address must be presented to the President during the same session and must be based on either proven misbehavior or incapacity.

Collegium system

The Collegium system refers to the system of appointing and removing judges that have emerged as a result of Supreme Court decisions rather than an Act of Parliament or a provision of the Constitution.

Memorandum of Procedure (MoP)

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- But after the Supreme Court overturned the constitutional amendment that established the National Judicial Appointments Commission (NJAC), which intended to alter the appointment process, the MoP was renegotiated in 2016.

National Judicial Appointments Commission Act, 2014:

- The Narendra Modi administration passed the NJAC Act, 2014 to set rules for how the NJAC recommends candidates for appointment as Chief Justice of India, other Supreme Court judges, Chief Justices, and judges of High Courts, as well as for their transfers.
- The Supreme Court, however, declared in October 2015 that the Constitutional amendment creating the NJAC was unconstitutional.

Military Exercises

VAJRA PRAHAR: INDIA-US JOINT EXERCISE

Priority: Low



Primary Source: PIB

Prepp Prelims Booster: Military Exercises

Context:

Recently, the 13th edition of the India-United States (US) joint Special Forces exercise Vajra Prahar 2022 culminated at Bakloh, Himachal Pradesh. Successful culmination of this edition of exercise is significant in terms of security challenges faced by both nations in the backdrop of the current global situation.



What is Vajra Prahar exercise?

- Vajra Prahar is an annual military exercise hosted alternatively between Special Forces India and the United States (US).
- Special Forces are the units of a country's armed forces that undertake covert, counterterrorist, and other specialised operations.

Vajra Prahar 2022

- **Objective:** It provided an opportunity for the Special Forces from both countries to train in Special Operations, Air Borne Operations and Counter Terrorism operations in a joint environment under United Nations Charter.

It was conducted in two phases

- **First phase:** It involved combat conditioning and tactical level special missions training exercises.
- **Second phase:** It included 48 hours of validation of training received by both contingents in the first phase.

Significance

- It is significant in terms of security challenges faced by both Nations in the backdrop of the current global situation.
- It further strengthened the traditional bond of friendship between the special forces of both nations as well as improved bilateral defence cooperation between both countries.

What are other exercises between India and the US?

- **Exercise Tiger Triumph:** It is a bilateral tri-service amphibious military exercise involving the armed forces of India and US. It is the first tri-service military exercise between the two countries. It is conducted under the defence agreement signed between both countries in 2018.
- **Cope India:** It is an international air force exercise between the Indian Air Force and the United States Air Force conducted on and over Indian soil.
- **Yudha Abhyas:** It is an annual bilateral military exercise between India and US.
- **Malabar Exercise:** It is a quadrilateral naval exercise of India, Japan, US and Australia.

India-US Defence Ties

- In recent times, India-US bilateral relations have developed into a "global strategic partnership", based on shared democratic values and increasing convergence of interests on bilateral, regional and global issues.
- Today, bilateral cooperation between both countries is broad-based and multi-sectoral, covering trade and investment, education, science and technology, defence and security, cyber security, high-technology, civil nuclear energy, space technology and applications, clean energy, environment, agriculture and health.
- Defence relationship has emerged as a major pillar of strategic partnership of both countries with intensification in defence trade, joint exercises, personnel exchanges, and cooperation in maritime security and counter-piracy.
- India's defence-related acquisitions from the US are worth more than US\$ 15 billion.
- The India-US Defence Technology and Trade Initiative (DTTI) is aimed at promoting co-development and coproduction efforts in the defence sector.

- In 2016, the US had recognised India as a "Major Defence Partner", which commits the US to facilitate technology sharing with India to a level commensurate with that of its closest allies and partners
- In 2018, the US had elevated to Tier I of the Strategic Trade Authorization (STA) licence exception, it had contributed towards facilitating interaction in advanced and sensitive technologies
- Both countries have signed four foundational defence agreements that cover areas of Logistics exchange, Military Information, compatibility, and security between them
- **General Security of Military Information Agreement (GSOMIA):** It was the first of the foundational agreements signed in 2002. It facilitated sharing military intelligence between India and the US.
- **Logistics Exchange Memorandum of Agreement (LEMOA):** It was signed in 2016. It provides the framework for sharing military logistics.
- **Communications Compatibility and Security Agreement (COMCASA):** it was signed in 2018. It enables both countries to share and secure communications exchange during training exercises and operations. It enables the US to supply India with its proprietary encrypted communications equipment and systems. This allows them to conduct secure peacetime and wartime communications between high-level military leaders.
- **Basic Exchange Cooperation Agreement (BECA):** It was signed in 2020. It helps India to get real-time access to US geospatial intelligence to enhance the accuracy of automated systems and weapons like missiles and armed drones.

The Defence Cooperation between India and US happens on the following cooperation mechanisms as well:

- Defence Policy Group
- Military Cooperation Group
- Defence Technology and Trade Initiative (DTTI) and its Joint Working Groups
- Executive Steering Groups for Army and Navy;
- Airforce, Defence Procurement and Production Group, Senior Technology Security Group, and the Joint Technical Group.

Important Indices

INDIA RANKS 132 IN HDI AS THE COUNTRY'S SCORE DROPS

Priority: Medium



Primary Source: The Hindu, Indian Express

Prepp Prelims Booster: HDI

Context:

- In line with a global decline in HDI scores following the Covid-19 pandemic, India's ranking on the index dropped from 130 in 2020 to 132 in 2021, according to the Human Development Report 2021-22, which was released on September 9th.
- The study from the United Nations Development Programme (UNDP) states that India's HDI rating for 2021 was 0.633, which was lower than the 0.732 global average. India saw a decrease in

its HDI rating (0.642) in 2020 compared to the pre-Covid level in 2019 (0.645).

What is the Human Development Index (HDI)?

- The **Human Development Index (HDI)** measures the level and changes in quality of life by combining indicators of life expectancy, education or access to knowledge, and income or standard of living.
- Mahbub ul Haq and Amartya Sen**, two renowned economists from Pakistan and India, created the Human Development Index.
- It was created as a **complement to the gross domestic product** because it emphasises the importance of human development in the growth process.

Dimensions of human development

- Long and Healthy Life:** Life expectancy at birth is used to calculate the dimension of a long and healthy life. The life expectancy at birth is a statistical measure of how long an average person is expected to live based on demographic factors such as birth year and current age.
- Education:** The HDI's second dimension is education. The **expected years of schooling** and the **mean years of schooling** are the education indicators.
- According to the United Nations, the average maximum number of years of schooling is **18 years**, while the mean maximum number of years of schooling is **15 years**.
- Standard of Living:** Gross **national income (GNI) per capita** is commonly used to assess the standard of living. The GNP measures the total domestic and foreign output generated by a country's residents.

What is the reason behind the global fall?

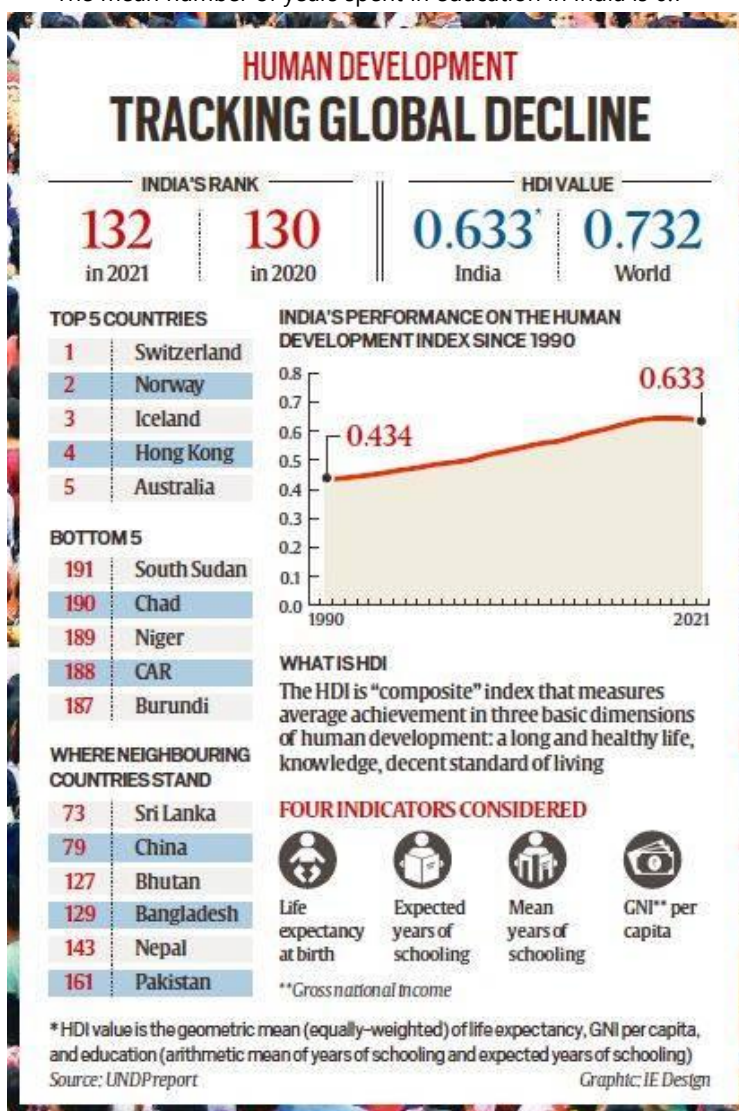
- Nine out of ten nations have seen a decline in their human development performance globally as a result of several crises like:
 - COVID-19,
 - the Ukraine conflict, and
 - environmental issues,
- Recent is showing that human progress has stagnated for the first time in 32 years.
- The rankings of countries throughout different years are not comparable.
- The recent reduction in the HDI has been mostly attributed to a global decline in **life expectancy**, which fell from 72.8 years in 2019 to 71.4 years in 2021.
- Additionally, the COVID-19 pandemic has made **gender disparity** worse, which rose 6.7% globally.
- The report points out that support for polarisation has grown worldwide as a result of the uncertainty brought on by numerous global crises, which is bad for human rights and democratic freedom.

What is the reason behind India's fall?

Like global trends, in India's case, the drop in HDI from 0.645 in 2018 to 0.633 in 2021 can be attributed to:

- Falling life expectancy at birth — 70.7 years to 67.2 years.**

- The mean number of years spent in education in India is 6.7



years, while the expected number is 11.9 years. The GNI per person stands at \$6,590.

Gender inequality

- However, after gender inequality worsened between 2019 and 2020, India's Gender Inequality Index value in the most recent report showed a **little improvement compared to the 2020 index** (0.490 vs 0.493). (0.486 vs 0.493).
- The index evaluates three areas of accomplishment disparity between men and women: **the labour market, empowerment, and reproductive health**.

India lagged behind the global norms in 2021 for each of these four metrics:

- Life expectancy (71.4 years),
- Expected years of schooling (12.8 years),
- Mean years of schooling (8.6 years), and
- Gross national income per capita (2017 PPP\$) of \$16,752.

Measures:

- Promoting universal health coverage to its Citizens.
- Access to affordable and timely health care.

- Implementation of the National Nutrition Mission in letter and Spirit.
- Adherence to the principles of good governance.
- Placing more emphasis on research and development in order to establish creative policies and programs to address new developmental difficulties.
- Adapting public programs to women's needs can encourage more women to enter and stay in the workforce.
- If India is to achieve its goal of becoming a superpower, it must invest to alleviate the weight of social and economic disadvantage on the poor.

Important Economic Terms

WHAT IS WINDFALL TAX AND WHY ARE COUNTRIES IMPOSING IT ON THE ENERGY SECTOR RIGHT NOW?



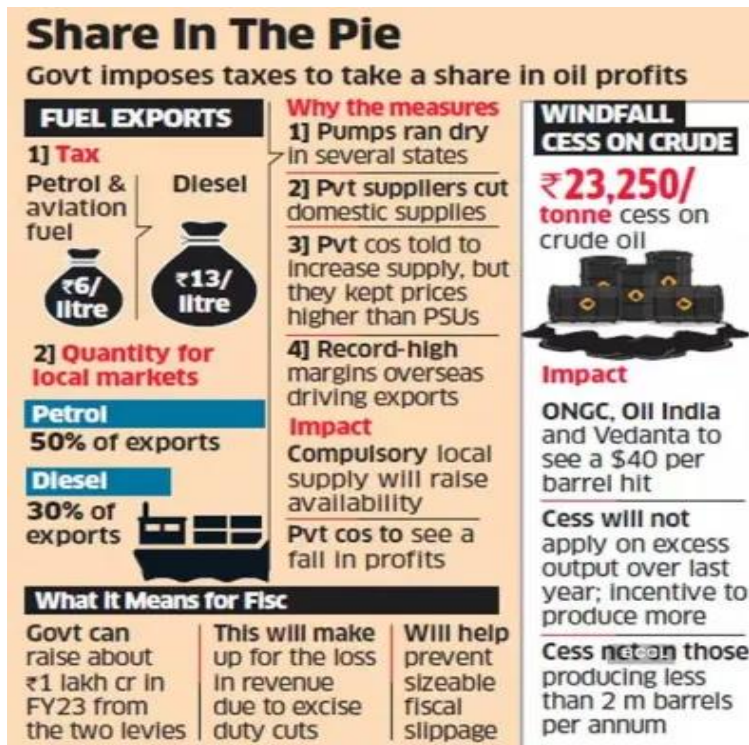
Priority: Medium

Primary Source: The Hindu

Prepp Prelims Booster: Windfall tax

Context:

Recently, Nirmala Sitharaman, finance minister, defended the windfall tax levied by the Union Government against domestic producers of crude oil. She argued that the adoption of the windfall tax was necessary to control the extraordinary profits some oil refineries were making.



Background

- On July 1, the central government imposed a windfall profit tax on domestic crude oil producers in the amount of Rs 23,250 per tonne.
- This was subsequently revised every two weeks, a total of four times.

- Analysts think that Reliance Industries Ltd. and Rosneft-backed Nayara Energy were the main targets of the windfall tax in India.
- According to the Government Authorities, these businesses were profiting handsomely by exporting significant quantities of fuel produced from cheap Russian oil at the expense of the domestic market.
- Following the Ukraine war, India began importing inexpensive Russian oil while keeping the interests of the country in mind.

What is the Windfall Tax?

- Windfall taxes are intended to tax any income a business or company makes as a result of an unforeseeable, external event, such the increase in energy prices brought on by the conflict in the Ukraine and Russia.
- A windfall is an undeserved, unforeseen increase in revenue that results from neither additional labour nor expense, according to the United States Congressional Research Service.
- These are gains that can't be directly linked to something the company actively did, like an investment plan or a corporate development.
- Governments often impose a windfall tax, sometimes known as a one-time tax, retroactively in addition to the regular rates of tax on such earnings.

What are the reasons for introducing windfall tax in India?

- Redistribution of unforeseen profits when producers gain from high prices at the expense of consumers,
- To support social welfare programmes,
- As a mechanism for the Center to reduce the nation's expanding trade deficit.
- As an additional source of revenue for the government.

Why have nations suddenly started imposing windfall taxes?

- The cost of oil, gas, and coal has increased significantly since the end of last year and in the first two quarters of this year, although lately declining.
- The rise is the result of a number of factors, including an imbalance between energy supply and demand during the post-COVID-19 economic recovery, which has been exacerbated by Russia's war in Ukraine.
- Energy companies made enormous and record profits as a result of the growing prices, but households in both developed and developing nations faced high gas and electricity prices.
 - For instance, the combined profits of Saudi Aramco, Shell, Exxon Mobil, Total Energies, BP, and Chevron Corp. increased from \$45.09 billion to \$107.64 billion in the second quarter of 2022.
- Many experts have referred to these gains as windfall profits as they were partially the result of outside change, which has led to imposition of Windfall Tax by many nations.

What are the Multilateral institutions supporting Windfall Tax?

- Organizations like the IMF, UN, and Organization for Economic Co-operation and Development (OECD) supported the efforts to enact windfall taxes.

- Recently, the Head of the U.N. asked all governments to impose taxes on these exorbitant earnings and utilise the proceeds to aid the most vulnerable citizens during these trying times.
- He argued that the fact that the biggest energy firms made a combined total of close to \$100 billion in profits during the first quarter of the year was unjust.

What are the Challenges in enacting such taxes?

Brings in market uncertainty

- Windfall taxes can cause market confusion about future taxes because they are applied retroactively and frequently influenced by unanticipated events.
- Future investments in connected sectors may be impacted by this.

Populist in nature

- Many commentators think that these taxes are populist and short-term politically advantageous.
- The IMF advisory letter also stated that given their accelerated (rapid) and political nature, taxes enacted in reaction to price increases may have design issues.

Reward for Risk taken by Companies

- Businesses contend that the money they made was a reward for the industry's willingness to take a risk in order to supply the consumer with the petroleum product at a cheap rate.

Poses the question of who should be taxed.

- Another question is whether taxes should be levied solely on large corporations that make up the majority of high-priced sales or also on smaller corporations.
- This raises the issue of whether producers that make less than a specific amount of revenue or profit should be exempt.

SOCIAL STOCK EXCHANGE

Priority: High



Primary Source: Indian Express

Prepp Prelims Booster: Social Stock Exchange

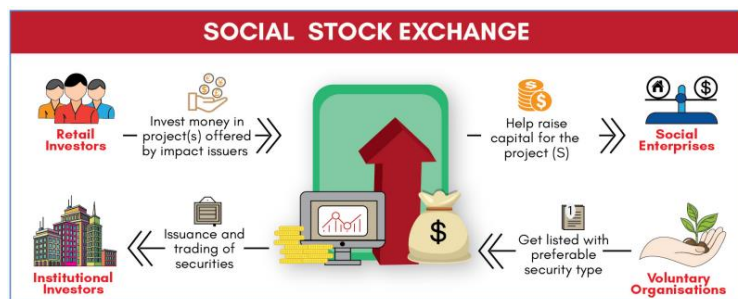
Context:

- Recently, Securities and Exchange Board of India (SEBI) shared the framework for Social Stock Exchange (SSE), which will allow the listing of social enterprises (SE) or non-profit organisations (NPOs). It will allow SEs and NPOs with an additional avenue to raise funds.
- This framework comes after the SEBI had notified rules for SSEs to provide social enterprises (SE) with an additional avenue to raise funds.



What are Social Stock Exchanges (SSEs)?

- They are regulated funding platforms like bourse or stock exchanges for For-Profit Social Enterprises (FPEs) and not-for-profit organisations (NPO) such as social enterprise, voluntary and welfare organisations with a social purpose to raise funds.
- It allows the listing of FPEs and NPOs on stock exchanges, providing them with an alternative fund-raising structure.
- The fund-raising under SSEs is proposed through several instruments such as social venture funds, zero-coupon-zero-principal bonds and mutual funds.
- Some of the most prominent SSEs are:** Canada (Social Venture Connexion), UK (Social Stock Exchange), Singapore (Impact Investment Exchange), South Africa (South African Social Investment Exchange).



Benefits of SSEs

- It brings together social organisations (FPEs and NPOs) and impact investors, especially institutional investors whereby the latter can buy stakes in the form of bonds from listed organisations.
- It helps in unlocking large pools of social capital and encourages blended finance structures, so that conventional capital can partner with social capital.
- It provides a mechanism to preserve the social and environmental mission of the organisations.
- It provides investors opportunities to mitigate socio-economic problems through investments that also have the potential to produce financial returns.

Background

- The proposal to set up SSEs was first floated during the 2019 Union Budget. In September 2019, SEBI constituted a working group (WG) to lay out the modalities for creating an SSE.
- WG submitted its report in June, 2020. Following this SEBI had set up the Technical Group (TG) in September 2020 for further advice and clarity on recommendations made by the WG.

What is the need of SSE?

- India is home to more than 2 million social enterprises (non-profits, for-profits), more than double the number of schools and 250 times the number of government hospitals. It means one NPO for 400 Indians.
- But the present avenues through which the social sector (FPEs and NPO) receive funding include Corporate Social Responsibility (CSR), impact investing, philanthropic and Government grants etc are limited.
- **Improved market access:** SSE will facilitate a meeting ground between social sector (NPOs and FPEs and) and investors with inbuilt regulation and will ensure larger visibility of investor and investees.
- **Synergy between investor and investee for Social Cause:** SSEs will allow investors and investees with similar visions and missions to connect seamlessly on a single platform.
- **Transparency and accountability:** It will help to install stringent background checks for investors due to rigorous due-diligence and performance metrics followed by SSE.
- **Performance- based Philanthropy:** SSE will help to closely monitor performance of the social enterprises listed on it, resulting in better implementation of social projects.
- **Reduce burden on government:** SSE will help to leverage private sector participation in some key social areas, facilitating collaborative approach with government in achieving the developmental goals.

Key Highlights of the SEBI Framework for SSE

- The social enterprises (SEs) eligible to participate in the SSE will be entities—non-profit organisations (NPOs) and for-profit social enterprises—having social intent and impact as their primary goal.
- NPOs interested in getting listed on SSEs should be registered as a charitable entity, and the registration certificate must be valid for the next 12 months.
- They must be registered in India as a "charitable trust registered under the public trust statute of the relevant state" or under the Indian Trusts Act, 1882 or the Societies Registration Act, 1860 or incorporated as a company under Section 8 of the Companies Act, 2013
- NPOs should have a "minimum of three years" to get registered on SSEs and they are required to declare whether they are owned by the government or held privately.
- They should have a valid 80G registration under the Income Tax Act. Their minimum spending in the last fiscal should be Rs 50 lakh, and a minimum funding of Rs 10 lakh in the past financial year.

- SSEs will be mandated to collect information about NPO's vision, strategy, details of key management personnel, financial statements for the last 3 years, and the risks that the NPO sees to its work.
- Corporate foundations, professional or trade associations, political or religious organisations or activities, infrastructure and housing companies, except affordable housing, will not be eligible to be identified as a social enterprise.

Way Forward

- The listing of the NPOs on the social stock exchange needs careful planning. There is a need to have an extensive and cautious approach in terms of its accreditation, valuation and monitoring.
- There is a need to learn from the other countries especially the UK where SSE acts more as a directory connecting social enterprises with potential investors and Canada's online platform which also allows retail investors to invest in funds or companies with social impact.

Important Government Schemes

DELAY IN GOVT.'S FLAGSHIP PMAY-G SCHEME TO INVITE PENALTY

Priority: Medium



Primary Source: The Hindu

Prepp Prelims Booster: PMAY-G

Context:

- The Union Ministry of Rural Development has introduced a set of penalties that the State governments will have to incur for any further delays in completing the government's Pradhan Mantri Awas Yojana (Gramin).
- Assam, West Bengal, Chhattisgarh, and Odisha are the top four states that are significantly behind schedule.
- Due to the COVID-19 pandemic, the program's original deadline of March 2022 was extended by an additional two years, until March 2024.



Reason behind this step

- This is the first time, since the scheme started in April 2016, that the Union Government has introduced a penalty clause.
- The order is to **ensure that the States pay more attention** to the program.

- Because of the pandemic, the deadline for 2022 has been pushed to March 2024 to complete all the pending houses.
- The government has set a goal of 2.95 crore homes under the scheme. This number was determined from the Socio-Economic Caste Survey, 2011.
- According to data held by the Union Ministry of Rural Development, 2.02 crore homes have been built as of August 2022.

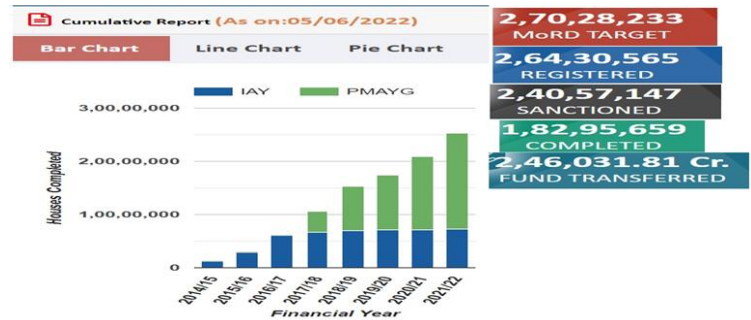
Penalties:

- Six punishment clauses were listed in a circular that the Ministry delivered to all States on September 13.
- The State government will be fined Rs.10 per house for the first month of delay and ₹20 per house for each subsequent month of if sanction of the house is delayed.
- Similarly, the State governments would be required to pay 10 per house every week of delay if the first instalment payable to the beneficiary is delayed by more than seven days from the date of sanction.

What is Pradhan Mantri Awas Yojana-Gramin?

- **Launch:** With effect from April 1, 2016, the old rural housing scheme Indira Awaas Yojana (IAY) was renamed Pradhan Mantri Awas Yojana-Gramin (PMAY-G) in order to fulfil the goal of "Housing for All" by 2022.
- **Ministry:** Ministry of Rural development.
- **Objective:** By the end of March 2022, all rural families who are homeless or living in kutcha or dilapidated dwellings would have received a pucca house with basic facilities.
- To provide support in the form of a full grant to rural people living below the poverty line (BPL) in the construction of housing units and the upgrading of existing unserviceable kutcha homes.
- **Eligibility:** SC/STs, released bonded laborers, and non-SC/ST categories, widows or next-of-kin of defense personnel killed in action, ex-servicemen and retired paramilitary forces members, disabled people, and minorities are among the beneficiaries.
- **Criteria for selecting Beneficiaries:** Through a three-stage validation process that included the 2011 Socio-Economic Caste Census, Gram Sabha, and geo-tagging.
- **Cost Sharing:** The cost of unit support is split 60:40 between the federal and state governments in plain areas, and 90:10 in hilly and North Eastern states.
- **Features:**
 - With a sanitary kitchen area, the minimum dwelling size has been increased to 25 square meters (from 20 square metres).
 - In plain states, the unit support has been enhanced from Rs. 70,000 to Rs. 1.20 lakh, while in hilly states, it has been increased from Rs. 75,000 to Rs. 1.30 lakh.
 - Convergence with the Swachh Bharat Mission-Gramin (SBM-G), MGNREGS, or any other dedicated source of financing will be used to fund the construction of toilets.
 - Convergence for piped drinking water, electricity, and LPG gas connections, among other things, will be sought by several government programmers.

Achievements of PMAY-G:



ONE IN 6 MSME LOAN ACCOUNTS UNDER ECLG SCHEME TURNS NPA

Priority: Medium



Primary Source: Indian Express

Prepp Prelims Booster: ECLG Scheme

Why in the News?

- Recently in response to RTI from National Credit Guarantee Trustee Company Ltd (NCGTC), it was found that one in every six loans disbursed under Emergency Credit Line Guarantee Scheme (ECLG Scheme) launched as part of the Covid-19 relief package in May 2020 have turned into Non-Performing Assets (NPA) in just 27 months.
- It is an indication of the continuing distress in the Micro Small and Medium Enterprises (MSME) sector. The loan defaults were mainly in the lower end of the loan bands (up to Rs 20 lakh). In the bigger loans, the NPAs numbers are still lower for now.



What is the NPA status under ECLG Scheme?

- The loans under ECLG Scheme were categorised as NPAs after they remained unpaid even 3 months after the 2-year moratorium.
- Total NPAs or bad loans as of August 2022 stood at Rs 11,893.06 crore of the total loan amount disbursed Rs. 2,81,375 crore till August 2022.

Reasons for NPAs in ECLG Scheme:

- The current NPA categorisation norms state that if even one loan account of a customer turns bad, all loan accounts will be categorised as NPAs, even if other accounts continue to be serviced.
- Some accounts may have turned NPAs even before the mandatory 3-month period due to non-payment of other loans, indicating that the company or individual was not able to service loans due to financial stress.
- The number of loan accounts that have turned bad are high though the quantum of bad loans is low in value terms.

What is the Emergency Credit Line Guarantee Scheme (ECLG Scheme)?

- It was launched as part of the Aatmanirbhar Bharat Abhiyan package announced in May 2020 to mitigate the distress caused by COVID19 Pandemic-induced lockdown, by providing credit to different sectors, especially Micro, Small and Medium Enterprises (MSMEs).
- **Objective:** To provide fully guaranteed and collateral free additional credit to MSMEs, MUDRA borrowers and individual loans, business enterprises for business purposes to the extent of 20% of their credit outstanding as on 29th February, 2020.
- **Eligibility:** Borrowers with credit outstanding up to Rs. 50 crore as of end of February 2020, and with an annual turnover of up to Rs. 250 crore are eligible under the Scheme.
- **Features of the Scheme:** 100% guarantee coverage was provided by the National Credit Guarantee Trustee Company, whereas Banks and Non Banking Financial Companies (NBFCs) provide loans.
- Tenor of loans was provided for four years, including a moratorium of one year on principal repayment. Interest rate under it was capped at 9.25% for Banks and Financial Institutions (FIs) and 14% for NBFCs.
- Its scope was widened in August, 2020 by doubling the upper ceiling of loans outstanding and including certain loans given to professionals like doctors, lawyers and chartered accountants for business purposes under its ambit.
- **Government Guarantee:** Loans under the ECLG Scheme carry a government guarantee and 75% of the total loan amount is immediately paid to the banks by the Government in case of loan accounts turning bad. The rest after the bank fails to recover the loan amount.
- In normal course, banks have to provide 15% of the outstanding in the first year of a secured loan turning bad. In case of unsecured turning bad, banks have to provide 25% of the loan outstanding

Significance of the ECLG Scheme

- It provided credit to the MSME sector at a low cost, thereby enabling them to meet their operational liabilities and restart their businesses and recover early.
- According to the State Bank of India Report (2022), ECLG Scheme was crucial in keeping MSMEs afloat. It saved an estimated 13.5 lakh MSME accounts, 1.5 crore jobs and prevented an estimated

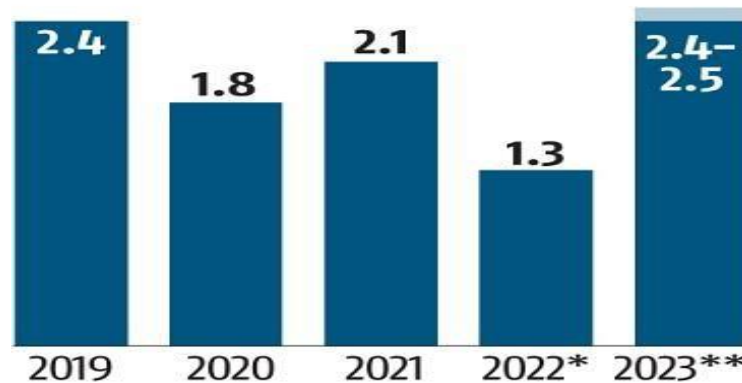
14% of outstanding MSME loans amounting to Rs 1.8 lakh crore turning bad.

- Of the 13.5 lakh MSMEs accounts saved, 48% belonged to the micro enterprises category, 46% to the small enterprises category, and the remaining 6% to the medium enterprises category.

Importance of MSME Sector

TB CASES IN INDIA

Cases in mn



* Till date ** expected

Sources: India TB Report, Central TB Division, MoHFW

- **Provides Resilience:** It forms the core backbone of the Indian economy. It serves as a bulwark for the Indian economy, providing it strength and resilience to tolerate global economic shocks and adversities.
- **Contribution to GDP:** It contributes to India's 6.11% of the manufacturing GDP and 33.4% of India's manufacturing output. It also accounts for 24.63% of India's services GDP.
- **Percentage of Exports & generation of Employment:** It also constitutes around 45% of the overall exports from India and provides employment to around 120 million people.

What is National Credit Guarantee Trustee Company Ltd?

- It is a private limited company incorporated in 2014 under the Companies Act, 1956. It was established by the Department of Financial Services, Ministry of Finance.
- It is a wholly owned company of the Central Government to act as a common trustee company for multiple credit guarantee funds.
- The purpose of credit guarantee funds is to share the lending risk of the lenders and in turn, facilitate access to finance for the prospective borrowers.

NI-KSHAY MITRA INITIATIVE

Priority: Medium



Primary Source: The The Hindu

Prepp Prelims Booster: Ni-kshay initiative

Context:

- The "adopt a TB-patient" (Ni-kshay Mitra) project of the Union Health Ministry, which was launched on September 9th, has enrolled 1,78,443 TB patients and 1,667 Ni-kshay Mitras (donors) as of 11th September.
- The Pradhan Mantri TB-Mukt Bharat Abhiyaan, which aims to eradicate tuberculosis in India by 2025, introduced the initiative to cover the crucial "community" component.

What is Ni-kshay Mitra initiative?

- The Ni-kshay Mitra initiative ensures **additional diagnostic, dietary, and vocational support for those undergoing TB treatment**, and encouraged elected officials, corporations, non-profit organizations, and individuals to come forward as donors to aid the patients in finishing their journey to recovery.

Features

- The State and the district administration would assist the donors in prioritizing the districts and in giving advice on the crucial gap analysis and district-specific needs.
- The support provided to the patients under this initiative is in addition to the free diagnostics, free drugs, and the Ni-kshay Poshan Yojana provided by the National TB Elimination Programme (NTEP) to all the patients notified from both the public and the private sector.
- The donors would provide additional support to all the on-treatment TB patients who had given consent for support, in the selected health facilities, blocks, urban wards, districts and States.
- Only individual donors can choose the patients from a given health facility, While others have to choose the entire geographical unit (blocks, urban wards, districts and States)".
- The additional assistance that may be provided by the donors to on-treatment TB patients who had given consent for support shall include nutritional support, additional investigations, vocational support and additional nutritional supplements.
- The **minimum period of commitment** for providing the support to the TB patient **will be one year**.

Need:

- **Increasing community involvement:** The Ni-kshay 2.0 portal would help by increasing community involvement in reaching India's pledge to eradicate TB by 2025 and utilising Corporate Social Responsibility (CSR) opportunities.
- This will **improve the treatment outcomes** for TB patients.
- **Bridging the gaps and addressing the social determinants:** The community and the institutions in society could play a crucial role in bridging the gaps and addressing the social determinants, thereby supporting the national aim, even though the government's efforts are producing notable outcomes.
- **Engage the community:** The Ministry was implementing community support for TB patients through the Pradhan Mantri TB Mukt Bharat Abhiyaan in order to effectively engage the community in the fight to eradicate TB in India.
- **Compliment government's efforts:** The donors include cooperative societies, corporations, elected representatives, individuals, institutions, non-governmental organisations, political parties, and partners willing to adopt health facilities (for individual donors) and urban wards, blocks, districts, and States

for accelerating the response against TB to complement the government's efforts in coordination with the district administration.

About The National Tuberculosis Elimination Programme (NTEP)

- By 2025, five years before the Sustainable Development Goals, the **National Tuberculosis Elimination Programme (NTEP)**, formerly known as the Revised National Tuberculosis Control Programme (RNTCP), **seeks to strategically eliminate India's TB burden**.
- To underscore the government of India's goal of eradicating TB in India by 2025, the RNTCP was rebranded as the National TB Elimination Program (NTEP) in 2020.
- It is in charge of implementing the five-year National Strategic Plans for TB Elimination of the Government of India.
- The National Strategic Plan for TB Elimination was started with the objective of **eliminating TB by 2025**.
- With a focus on addressing TB patients seeking care from private providers and undiagnosed TB in high-risk communities, this multifaceted strategy aims to identify all TB patients.
- India effectively closed the gaps between the projected number of cases and those that were previously recorded on the Ni-kshay portal by notifying 21 lakh TB cases in 2021.
- Numerous progressive policies have been put into place, including crucial programmes like the **Ni-kshay Poshan Yojana (NPY)**, which assisted in meeting the nutritional needs of TB patients, particularly the underserved.
- Over 65 lakh persons have received TB treatment nationwide since 2018 with an estimated 1,707 crore being paid out.
- 32% of all TB patients have received notification from the private sector as a result of the domestic setup and **JEET initiative's** rollout of Patient Provider Support Agencies (PPSA) throughout 250 districts.
- **Building on Universal Drug Susceptibility Testing (UDST) for all diagnosed TB** cases the programme has added 3,760 NAAT machines across the country till 2021 ensuring that patients are diagnosed with drug-resistant TB at the very outset and are put on correct treatment plans on a timely basis.
- By December 2022, more than 1,50,000 **Ayushman Bharat - Health and Wellness Centers** will be operational, enabling decentralised primary healthcare, including TB care, at the community level.
- The program also started developing community engagement initiatives including a **Jan Andolan against TB**.
- In order to reach out to the underprivileged and marginalised and assist patients in receiving care, the organisation has chosen more than 12,000 TB champions.

Way Forward

- With 26 lakh new cases and 4 lakh annual deaths from the disease, India has the greatest burden of tuberculosis (TB) in the world.
- The cost of TB in terms of lost lives, income, and working days is also significant. The age group of society that is most economically productive is typically affected by TB, which results in a large loss of working days.

- This action intends to increase public awareness of tuberculosis, and the community's support of the treatment cascade will also assist to lessen the stigma.

CABINET APPROVES ADDITION OF FOUR TRIBES TO ST LIST

Priority: Medium

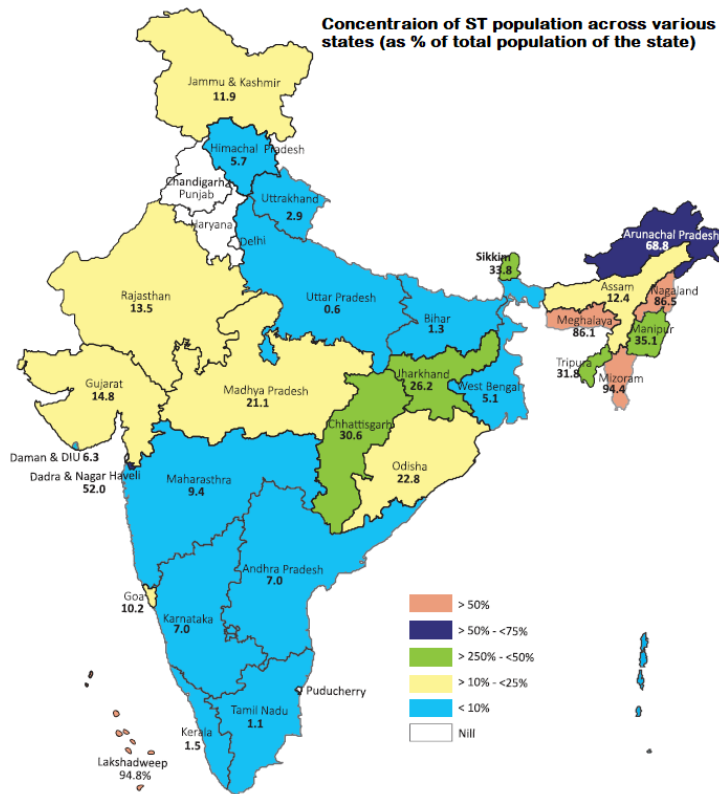


Primary Source: The Hindu

Prepp Prelims Booster: Constitution (Scheduled Tribes) Order (Amendment) Bill 2022

Context:

- As part of the Constitution (Scheduled Tribes) Order (Amendment) Bill 2022, the Union cabinet chaired by the Prime Minister approved the inclusion of a number of communities to the list of Schedule Tribes in four states.
- Members of the communities now included in the updated list of Scheduled Tribes of (the states) will also be able to receive



benefits intended for STs.

What are the tribes added to the list?

- The communities that were added to the list included the **Hatti tribe in Himachal Pradesh's Trans-Giri region**,
- the **Narikoravan and Kurivikkaran hill tribes in Tamil Nadu**, and the **Binjhia tribe in Chhattisgarh**.
- A request to move the Gond community, which resides in 13 districts of Uttar Pradesh, from the Scheduled Caste list to the ST list was also approved by the Cabinet.
- These five Gond community subgroups are Dhuria, Nayak, Ojha, Pathari, and Rajgond.
- The inclusion of the Hatti community would benefit around 1.6 lakh people of this area-specific tribe in Himachal Pradesh.

- In order to prevent the exclusion of beneficiaries due to variances in their spelling and pronunciation, the Cabinet also approved the insertion of synonyms for 11 Chhattisgarh tribes and one tribe in Karnataka.
- The Kadu Kuruba tribe in Karnataka has been given official status as "Betta-Kuruba" by the Cabinet. For tribes like the Bharia (variations added include Bhumia and Bhuyian), Gadhwa (Gadwa), Dhanwar (Dhanawar, Dhanuwar), Nagesia (Nagasia, Kisan), and Pondh, the Cabinet approved synonyms in Chhattisgarh (Pond).

Benefits:

- National Fellowships, Post-Matric Scholarships, Hostels for ST Boys and Girls, and other significant programs.
- Concessional Loans by National Scheduled Tribes Finance and Development Corporation
- In accordance with government policy, they will also be eligible for the advantages of reservations in services and admittance to educational institutions.

Who are Schedule Tribes?

- Article 342 of the Indian Constitution defines "Scheduled Tribes" as the "tribes or tribal communities or parts of or groups within tribal communities which the President of India may specify by public notification.
- Over 104 million tribal people live in India. Spread across 705 tribes, they account for 8.6% of the country's population.

Distribution of the tribal population in India

- Broadly the STs inhabit two distinct geographical areas – Central India and the North-Eastern Area. Central India includes Madhya Pradesh (14.69%), Chhattisgarh (7.5%), Jharkhand (8.29%), Andhra Pradesh (5.7%), Maharashtra (10.08%), Orissa (9.2%), Gujarat (8.55%), and Rajasthan (8.86%), more than half of the Scheduled Tribe population resides.
- The North East is another region it includes Assam, Nagaland, Mizoram, Manipur, Meghalaya, Tripura, Sikkim and Arunachal Pradesh.
- More than two-thirds of the ST population is concentrated only in the seven States of the country, viz. Madhya Pradesh, Maharashtra, Orissa, Gujarat, Rajasthan, Jharkhand and Chhattisgarh. There is no ST population in 3 States (Delhi NCR, Punjab, and Haryana) and 2 UTs (Puducherry and Chandigarh), as no Scheduled Tribe is notified.

Criteria for specification of a community as a Scheduled Tribe

- While the requirements for designating a community as a Scheduled Tribe are not explicitly stated in the Constitution.
- Article 342's reference to "tribes or tribal communities or portion of or groups within tribes or tribal communities" must be interpreted in light of their historical background of backwardness.
- The characteristics that set Scheduled Tribe groups in our nation apart from other communities are their primitiveness, physical isolation, shyness, and social, educational, and economic backwardness as a result of these factors.

- The definitions of tribal Communities used in the 1931 Census are taken into consideration.
- These facts serve as the foundation for Article 342(1)'s requirement to designate certain tribes or tribal communities—or portions thereof—as Scheduled Tribes in connection to the relevant State or Union Territory, as the case may be.
- A community that has been designated as a Scheduled Tribe in one State need not also be so in another State, as the list of Scheduled Tribes is State/UT specific.
- The Presidential notifications under Clause 1 of Article 342 of the Constitution are issued as the Constitution Orders.

These principles, which serve as the framework for developing tribal policy, are as follows:

1. **Non-imposition:** Panchsheel promotes non-imposition through promoting self-government.
2. It states that tribal **forest and land rights** must be safeguarded.
3. It also supports tribal **participation in governance** and development.
4. It also requires that programmes and administrative rules aimed towards Tribal beneficiaries be **as simple as possible**.
5. Finally, it necessitates that Tribal development standards be based on life-quality measures, with the goal of striking a balance between **isolationism and integration**. This is based on a dual approach of integration and development.

INDIRA GANDHI URBAN EMPLOYMENT GUARANTEE SCHEME

Priority: High



Primary Source: The Hindu

Prepp Prelims Booster: Urban employment Guarantee scheme

Context:

- Recently, Rajasthan Government launched Indira Gandhi Urban Employment Guarantee Scheme with the objective of providing economic support to the poor and needy families living in the cities through work provided on demand for 100 days in a year.
- It is touted as the country's biggest scheme to give guaranteed jobs to the people residing in cities, on the lines of the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) for villagers started by the Central Government in 2006.

Why is there a need for such a scheme?

- **Urban Employment distress:** The demand for a job guarantee scheme in the cities is increasing because of the growing distress among the urban poor, higher unemployment rates in comparison with rural areas, the persistently high inflation and the prevalence of low-wage and poor quality informal work in urban areas.
- Moreover, as against the rural unemployment being mostly seasonal, unemployed people in the cities face problems throughout the year.

- **Urban-Rural Divide:** The labour force participation rate's gap between the rural and urban areas is widening, and there are very few schemes, including the payment of unemployment allowance to meet the needs of urban poor.
- **Informal Economy:** Majority of India's urban workforce is employed in the informal sector- which is characterised by inadequate earnings, low productivity and difficult conditions of work that undermine the basic rights of workers. Further, the COVID-19 pandemic induced lockdown had exposed the state of vulnerable employment in urban low-end informal jobs.
- **Rural Centric Schemes:** Most of the existing employment schemes prioritise rural unemployment and poverty like MGNREGA.

About Indira Gandhi Urban Employment Guarantee Scheme

- **Objective:** Providing economic support to the poor and needy families living in the cities through work to be provided on demand for 100 days in a year.
- **Eligibility:** Those in the age group of 18 to 60 years residing within the limits of urban local bodies (ULBs) are eligible to demand and get employment in the identified segments.
- There is no income limit, though the poor and destitute people, especially those who lost their livelihood during the pandemic, will be given preference.
- **Budgetary provision:** State Government has allocated Rs. 800 crore for the scheme for the year 2022-23.
- **Implementing Agency:** The State government's Department of Local Bodies will be responsible for the implementation of this scheme.
- **Implementation Framework:** The work permitted under the scheme will be approved and executed through committees at the State, district and local body levels. At least 50 persons in each ward of ULBs will be given employment.
- The cost of material and the payment for the labour for work of general nature will be in the ratio of 25:75. This distribution will vary for special work which needs technical expertise.
- The State government will also reward the municipal bodies doing good work under the scheme.
- **Categories of tasks:** The tasks to be carried out under the scheme have been clubbed mainly under eight heads. They are:
 1. **Environment protection:** It will involve tree plantation at public places, maintenance of parks and watering plants on footpaths and dividers.
 2. **Water conservation:** Under it, tasks may be allotted for cleanliness and improvement of ponds, lakes and stepwells, construction, repair and cleaning of rain water harvesting structures and restoration of water sources.
 3. **Other categories:** Heritage conservation, hoardings and banners, removal of encroachments and illegal boards, stopping defacement of property and service-related works.
 4. Eligible people will also get work such as collecting garbage from door to door and segregating it and catching stray animals.
 5. Apart from all these categories, the State government can add new tasks or amend the ones already included in the list.

- **Convergence with other schemes:** As part of convergence, the people engaged under the employment guarantee scheme can be employed elsewhere in other schemes, already having a material component, which require the labour.
- **Wages to be paid:** Under this scheme, wages of Rs.259 a day will be paid to unskilled labourers and Rs. 283 a day to skilled labourers. The supervisors or 'mates' on top of the labourers will get Rs. 271 a day.

Similar schemes of other States

- Ayyankali Urban Employment Guarantee Scheme in Kerala.
- Urban Wage Employment Initiative under UNNATI in Odisha.
- Mukhya Mantri Shramik Yojana in Jharkhand.
- Mukhya Mantri Yuva Swabhiman Yojana in Madhya Pradesh.

Way Forward

- This scheme will give urban residents the right to work and ensure the right to life guaranteed under Article 21 of the Constitution.
- It will help to reduce distress among the urban population. It is viewed as a major step to address the plight of urban poor, which had not received much attention earlier.
- It may turn out to be a game changer for the people who lost their jobs in the pandemic and are struggling to make ends meet amid high inflation.
- Its ultimate test of its success will be to ensure that it improves the wage rate in the labour market, which was one of the major contributions of MGNREGA.
- It will improve public infrastructure and services, spur entrepreneurship, and build the skills of workers in small towns.
- It will not only help to improve the incomes of workers but also have multiplier effects on the economy. It will boost local demand and create a shared sense of public goods.

PAREKH: NEW REGULATOR FOR BRINGING UNIFORMITY IN ALL BOARD EXAMS

Priority: Medium



Primary Source: Indian Express

Prepp Prelims Booster: Government Schemes

Context:

The Union Government is planning to set up a new regulator PARAKH (Performance Assessment, Review and Analysis of Knowledge for Holistic Development) for bringing 'uniformity' in all board exams. It was envisaged in National Education Policy (NEP) 2020.

What is PARAKH?

- It is a proposed regulator tasked with holding periodic learning outcome tests like the National Achievement Survey (NAS) and State Achievement Surveys.

- It will serve as a national single-window source for all assessment-related information and expertise, with a mandate to support learning assessment in all forms, both nationally and internationally.
- It will act as a constituent unit of the National Council of Educational Research and Training (NCERT).

Objectives of PARAKH

- **Uniform Norms and Guidelines:** It will set uniform norms, standards and guidelines for student assessment and evaluation for all recognised school boards of India.
- **Enhance Assessment Pattern:** It will encourage and help school boards across the country to shift their assessment patterns towards meeting the skill requirements of the 21st century.
- **Reduce disparity in evaluation:** It will bring uniformity across the state and central boards which currently follow different standards of evaluation, leading to wide disparities in scores.
- **Improving Learning Outcomes:** This will help to put an end to the emphasis on rote learning and improve higher order thinking skills among students as envisaged by the National Education Policy (NEP), 2020.

Significance

- **Innovative evaluation:** It will develop and implement "technical standards for the design, conduct, analysis and reporting" of tests at all levels of school education.
- **Remove disparity in college admission:** By bringing uniformity, it will help to tackle the problem of some state board students being at a disadvantage during college admissions as compared to their peers in CBSE schools.
- **Encourage innovative learning:** It will help reduce the fear among students by improving higher order thinking skills.

Way Forward

- PARAKH will help to create a level playing field and reduce the disparity among various state boards. It will facilitate an inclusive, participatory and holistic approach to the education sector by adopting best practices.
- It is a progressive shift towards a more scientific approach to education. It will help to cater to the learning ability of the child at early stages of cognitive development as well as social and physical awareness.

PLACES IN NEWS

MOHENJO DARO FACES THREAT FROM PAKISTAN'S MONSTER MONSOON

- Recently, Pakistan's Department of Archaeology warned that heavy rainfall in the Sindh province caused by the Monster Monsoon has threatened the World Heritage status of Mohenjo Daro, one of the largest of Indus Valley Civilization sites.

- Following this, experts have warned that Mohenjo-daro might be removed from UNESCO's world heritage list, if urgent attention towards its conservation and restoration is not given.



US WARSHIP SAILS THROUGH TAIWAN STRAIT

- Two U.S. Navy warships sailed through the Taiwan Strait for the first time since House Speaker Nancy Pelosi's visit to island sparked tensions between Washington and Beijing.
- "Guided-missile cruisers USS Antietam and USS Chancellorsville are conducting a routine Taiwan Strait transit August 28 (local time) through waters where high seas freedoms of navigation and overflight apply in accordance with international law," the U.S. 7th Fleet said in a statement. "The ship's transit through the Taiwan Strait demonstrates the United States' commitment to a free and open Indo-Pacific."



FALKLAND ISLANDS

- A British official claimed that there was "no ambiguity" about the United Kingdom's sovereignty over the southern Atlantic Ocean islands, days after India backed Argentina's efforts to reopen international talks on the island chain's territorial dispute.

KYRGYZSTAN-TAJIKISTAN BORDER CONFLICT ESCALATES WITH USE OF HEAVY WEAPONRY

- Recently, Tajikistan and Kyrgyzstan accused one other of deploying heavy weaponry such as mortars and tanks in an escalating border war killing and injuring people on both sides.

- Kyrgyzstan has accused that Tajikistan soldiers opened fire on



several of its outposts in a disputed mountainous border area, using tanks, armoured personnel vehicles, and mortars.

- Tajikistan, for its part, has accused Kyrgyz forces of bombarding an outpost and seven villages in the same area.
- The disputed border area of the both countries is known for its jigsaw-puzzle political and ethnic geography. It also had witnessed similar skirmishes last year, almost leading to war between both countries.



SOLOMON ISLANDS

- The Solomon Islands has suspended visits from all foreign Navies, citing a need to review approval procedures.



EASTERN ECONOMIC FORUM (EEF)

- Russia hosted the seventh Eastern Economic Forum (EEF) at Vladivostok from September 5 to 8, 2022.
- The four-day forum is a platform for entrepreneurs to expand their businesses into Russia's Far East (RFE) region. Almost 2,729 investment projects are being planned in this region.



UYGHUR RIGHTS ABUSES: UN ACCUSES CHINA OF COMMITTING 'CRIMES AGAINST HUMANITY'

Following an inquiry into claims of mistreatment against Uyghur Muslims and other ethnic minorities in Xinjiang province, the United Nations recently has accused China of serious human rights violations.



HUNDREDS OF WHALES STRANDED ON TASMANIA'S WEST COAST

- Recently, a pod of about 230 pilot whales stranded on a sand bank and a beach off the west coast of Tasmania, an island off the southern coast of mainland Australia.
- The incidence of mass whale strandings is not unique to Tasmania. Moreover, the exact cause of this mass stranding is still unknown.

- The largest mass whale stranding in Tasmanian history had occurred in September 2020 when more than 380 pilot whales had stranded off the west coast.

