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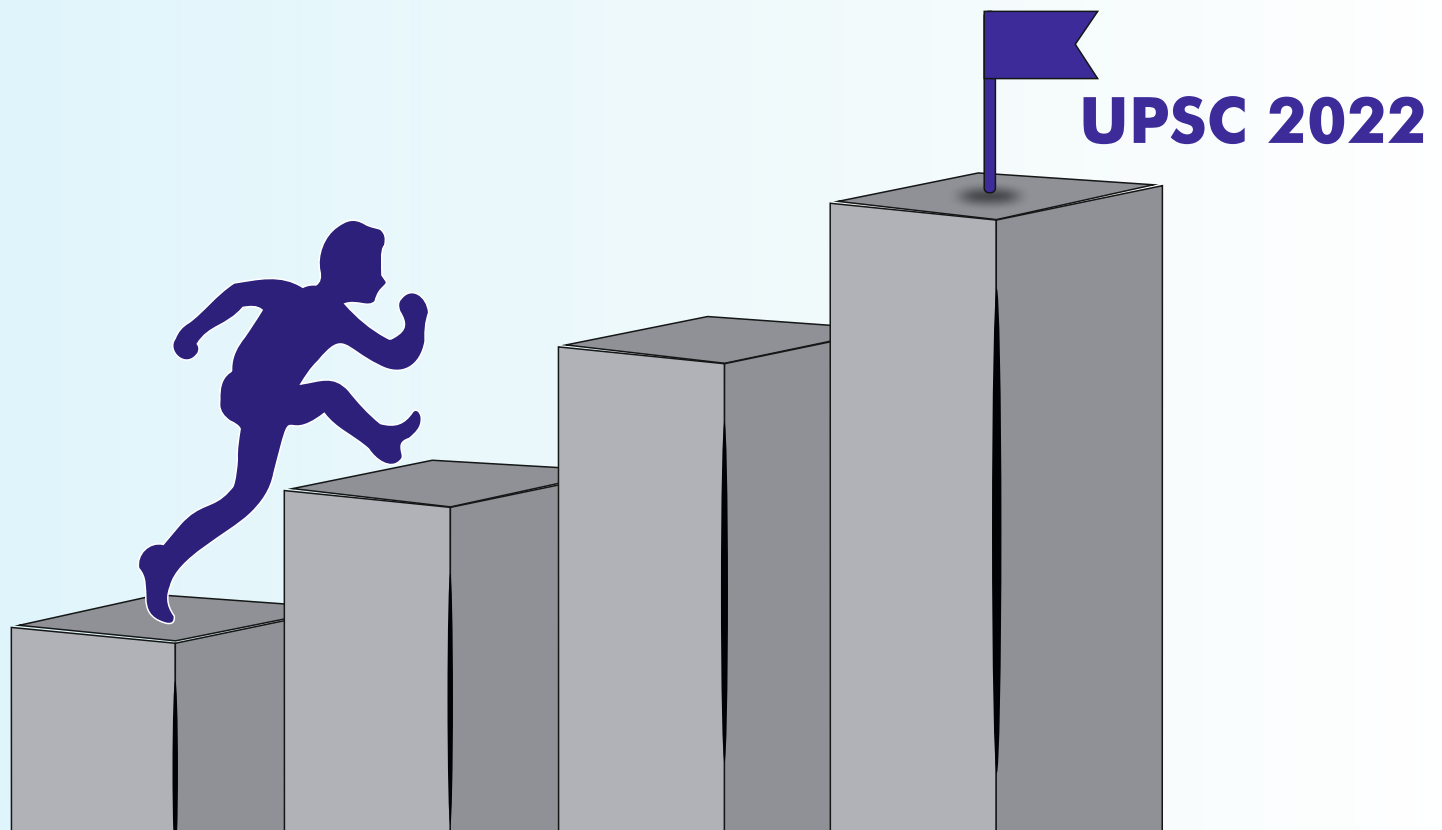
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CURRENT CONNECT

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POLITY

OBC Reservation

Context

- 127th constitution amendment bill, to allow states and union territories to prepare their own list of socially and educationally backward classes.
- Rising demand for reservation by various caste group in states like Rajasthan (Gujjar), Maharashtra (Marathas) and Haryana (Jat).
- Ordinance promulgated by Maharashtra Government to provide 27% reservation to the category of backward classes in local body election.
- Demand for caste-based data in census 202.

Introduction

Reservation in India is a government policy backed by Indian constitution that provides historically disadvantaged people representation in polity, education and employment. It is the process of setting aside a certain percentage of seats (vacancies) in government institutions for the members of backward and under-represented communities.

- Reservation is a form of quota-based affirmative action. Scheduled Castes (SCs), Scheduled Tribes (STs) and Other Backward Classes (OBCs) are the primary beneficiaries of the reservation policies under the Constitution.
- The concept was enshrined in the Constitution to allow the historically deprived classes to come at par with the privileged ones. Initially, the reservation policy was only for 10 years but time and again it has been extended as the discrimination and untouchability still persist in the Indian society.

About OBC reservation

- In the Indian Constitution, OBCs are described as socially and educationally backward classes (SEBC). The list of OBCs is maintained by the Indian Ministry of Social Justice and Empowerment is dynamic, with castes and communities being added or removed depending on social, educational and economic factors.
- President may notify the list of socially and educationally backward classes only for purposes of the central government.
- 127th Amendment Bill enabled states and union territories to prepare their own list of socially and educationally backward classes.

Constitutional Provisions for Other Backward classes

- **Art. 15 (5):** This clause was added in 93rd amendment in 2005 and allows the state to make special provisions for backward classes for admissions in private educational institutions, aided or unaided.
- **Art. 16(4):** This clause allows the state to reserve vacancies in public service for any backward classes of the state that are not adequately represented in the public services.
- **Art. 16(4B):** It allows the state to consider unfilled vacancies reserved for backward classes as a separate class of vacancies not subject to a limit of 50% reservation.
- **Art. 17:** Eradicate untouchability and its practice in any form.
- **Art. 340:** Permits President to appoint a commission to investigate the condition of socially and economically backward classes and table the report in the parliament.

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NCBC (National Commission for Backward Classes)

- It was established under the National Commission for Backward Classes Act, 1993.

> Reservation in educational institution has been provided in Article 15(4)
 > Reservation in posts and services has been provided in Article 16(4), 16(4A) and 16(4B).
 > Article 46 of the Constitution provides that the State shall promote with special care the educational and economic interests of the weaker sections of the society and, of the SCs and STs and shall protect them from social injustice and all forms of exploitation.
 > Article 243D provides reservation of Seats for Scheduled Tribes in Panchayats.
 > Article 330 provides reservation of seats for Scheduled Tribes in the House of the People.
 > Article 332 provides reservation of seats for Scheduled Tribes in Legislative Assemblies of the States.

- The Constitution (One Hundred and Second Amendment) Act, 2018 gave constitutional status to the NCBC, and empowered the President to notify the list of socially and educationally backward classes for any state or union territory for all purposes.

Timeline of Committees constituted under Article 340 for OBCs

- Kaka Kalelkar committee** was the first committee that was appointed in 1953, after Independence to look into the issue of socially and educationally backward classes within the territory of India.
- In 1979, the Central Government appointed the **Mandal Commission** under the chairmanship of B.P. Mandal, to investigate the conditions of the socially and educationally backward classes and suggest measures for their advancement. The commission recommended for reservation of 27% government jobs for the Other Backward Classes (OBCs) so that the total reservation for all ((SCs, STs and OBCs) amounts to 50%.
- In 1990, after 10 years of recommendation of the commission changes were made to introduce **27% reservation for OBCs by the V.P. government**
- In 1991, the **Narasimha Rao Government** introduced two changes:
 - preference to the poorer sections among the OBCs in the 27% quota, i.e., adoption of the economic criteria in granting reservation, and
 - reservation of another 10% of jobs for poorer (economically backward) sections of higher castes who are not covered by any existing schemes of reservation.
- The provision was challenged in court as the reservation criteria was exceeding 50%.
- In 1992, **Indra Sawhney vs Union of India** case, also known as Mandal case, SC thoroughly examined scope and extent of Article 16(4) and the reservation of 27% for backward classes.
 - The court rejected 10% reservation for poorer category in higher caste but upheld the validity of 27% reservation for other backward classes.
 - SC also ruled that the total reservation for backward classes cannot go beyond the 50% mark.
 - The advanced sections among the OBCs (the creamy layer- Economically well) should be excluded from the list of beneficiaries of reservation.
 - Limit should not exceed 50% except in exceptional circumstances and extraordinary situations, this limit can be crossed.
- Central Government enacted **the Central Educational Institutions (Reservation in Admission) Act in 2006**, to provide a quota of 27% for candidates belonging to the other backward classes (OBCs).
- Rohini Committee** was constituted in 2017, under Article 340, to report on sub-categorization of other backward classes. The need for categorization arrived out of a perception that the benefit of 27% reservation for OBCs have been secured by only few affluent communities under the central list of OBCs.

Reason for rise in Demand of Reservation

- Agricultural Crisis:** Due to low income in agricultural sector and poor agricultural productivity because of climate change, Jats and Gujjars who were historically involved

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- in agricultural activities have started looking for opportunities outside of farming. But high competition and less job opportunity.
2. **Lack of development in Industrial sector:** Our industrial sector is not developed enough to create opportunity for the population diverting from the farming land and agricultural activities. These populations are unskilled and semiskilled which can easily be accommodated in labour-intensive blue-collar jobs.
 3. **Poor Representation in Government:** Demand for reservation stem from the inability to have equal representation in socio- economic and political status. According to Mandal commission report 52% population in India is socially and educationally backward. But the percentage of reservation is only 27% for OBCs. Parliament representation of OBC group is still stagnant around 20% whereas upper caste has gone up to 44.5%.
 4. **Lack of quality education and skill training:** India has more than 55% of population living rural area where basic necessities like quality education, skill training and job opportunities are not available. To compete with the population of urban India they lack essential skills and training, therefore through the medium of reservation they want to have level playing field with their peers.
 5. **Service sector contributing 55% of GDP constitute only 25% of the total labor force:** Although our service sector is booming right now with ample opportunities of employment, population employed and employable in this sector is very low. Economy and Technology are changing at much greater pace than our ability to generate employable skilled workers. Lion share of GDP is contributed by only 25% of the total population, which has led to increasing discontent among people from other sectors.
 6. **More than 50% of population have less than 20% representation in government jobs**
 - a. **16.51 % in Group-A** central government services.
 - b. **13.38 % in Group-B** central government services.
 - c. **21.25 % in Group-C** (excluding safai karamcharis)
 - d. **17.72 % in Group-C** (safai karamcharis)
 7. **Sub-caste filtration:** Some of the Rohini Committee findings confirms that 97% of all jobs and educational seats have gone to 25% affluent sub-caste of OBCs i.e. only 10 communities of OBCs.
 8. **Wages and Salaries:** Wages in private sector at entry level is very less whereas salaries of government sector are more lucrative and satisfying.
 9. **Privileges:** Demand for reservation also arises from fear of losing hereditary privileges and status. Jats and Marathas communities were at one time dominating groups but due to inability to cope up with the changing demands of the market economy, they have a fear of losing their privileges and status in the society.
 10. **Unemployment:** Employment and Equal representation are the two major factors that influences demand for reservation. Unemployment rate rose to 10.3% in October 2020.

Analysis of Demand of Reservation

<u>Arguments in favour of Reservation</u>	<u>Arguments against Reservation</u>
<ol style="list-style-type: none"> 1. <u>Historical Injustice:</u> Caste based reservation is necessary in India as these people were historically neglected and discriminated. In order to get them at par with the upper caste population of the society, reservation is needed 2. <u>Equitable opportunity:</u> Reservation provides equitable opportunity to create a level playing field where underprivileged people can come at par with people from the privileged section of the society. It provides opportunity for upward social and economic mobility to those who lack basic means to compete. 3. <u>DPSPs:</u> It's states duty to minimize socio-economic injustice and inequality 	<ol style="list-style-type: none"> 1. <u>Focus on creating jobs</u> Increasing the percentage and groups in the list is not the solution for the ever-growing demand for reservation. The roots of the problem lie in unemployability and lack of job opportunities. Growing unemployment rate in recent years have increased the demand for reservation from one after another community. Real solution lies in creating ample job opportunities and not ample reservation seats. 2. <u>Only provides short term solution:</u> Reservation only provides short term solution and doesn't get into root of the problem. Backwardness of community is

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<p>through policies and legislation and reservation policy is one such tool that helps to create equal opportunity for all.</p> <p>4. Empowerment: More empowered people result in more empowered community and consequently stronger economic growth. Underprivileged people cannot contribute in developmental growth of a country. In order to harness the benefit of demographic dividend efficiently we need to provide them extra benefits and support to help them climb up the ladder.</p> <p>5. Representation: Sustainable and inclusive development demands equal representation of every community in social, political and economic structure of the society. Reservation provides means to achieve it.</p> <p>6. There still exist large gaps between various social groups in terms of educational status, especially in higher education. Scheduled castes are the most backward, followed by scheduled tribes (ST) and other backward classes (OBC), National Sample Survey Organization (NSSO) data show. Reservation is necessary to bridge these gaps.</p> <p>7. In a paper published by Delhi school of economics and University of Michigan, it was reported that Indian railways have higher proportion of SC/ST, yet it has not reduced the productivity as the popular belief that reservation reduces productivity. Author have a opinion that greater labor diversity increase efficiency.</p>	<p>the result of lack of quality education, skill development and training. And providing just reservation will lower the quality and standard of workers and personnel we require.</p> <p>3. Political vote bank: Reservation has become a vote bank tool for various politicians to retain and come in power, while the real problem has still not been addressed over years. It prevents leaders from opting to long term viable solution. Thus, it is believed that reservation perpetuates caste and caste system. It is not the solution to the problem, it itself is a problem that needs to be done away with.</p> <p>4. Improving Agricultural sector productivity: Increasing farmers income, rising MSP and providing them tools and mechanism to increase agricultural productivity will be a long-term solution for the people in rural area who are migrating to cities in search of job and demanding reservation when they are not being capable of competing with urban population.</p> <p>5. Reduces Efficiency and productivity: Reservation reduces efficiency and productivity of the labour. Merits gets penalized and mediocre get easy way into the system by exploiting the opportunity provided by the reservation system.</p> <p>6. Penalizes from upper caste: As the reservation grows larger, it becomes a mechanism of exclusion rather than of inclusion. Many upper castes are getting excluded from the necessary benefits they need to have upper economic mobility.</p> <p>7. Unethical: Demanding reservation for affluent communities like Marathas who were at one-point rulers of the region is unethical and will promote people from other communities also to rise in demand for reservation.</p>
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Recent Issues related to Reservation

Maratha Reservation

In 1997, First major Maratha agitation for reservation in government jobs and educational institution was organized In 2014 a proposal was approved to reserve 16% of government jobs and seats in educational institutions for Marathas and 5% for Muslims. In May 2021, Supreme Court held **Maratha reservation law as unconstitutional**

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Jat Agitation

Jats originally belonged to farming communities and now mostly live in Haryana, Punjab, Delhi, Rajasthan and UP. In Haryana, Jats are a politically influential community and constitute nearly 29% of the population.

Various communities like Jats, Jat Sikhs, Rors, Tyagis and Bishnois, **are seeking reservation under the OBC category.** They had been promised that the Economically Backward Category (EBC) quota will be increased from 10% to 20% by the state government.

Ordinance promulgated by Maharashtra Government

to provide 27% reservation to the category of backward classes in local body election. In March 2021, SC laid down the requirement for sufficient data as a precondition to provide reservation to OBC category. Commission was established by the state Government but since the exercise would take time it promulgated ordinance to implement the provision. However SC has put stay on the legislation till further notice as the precondition is yet not fulfilled.

Local reservation in job

Haryana State Employment of Local Candidates Act, 2020 was passed reserving 75% of private sector jobs for people of the state.

Reason

- Rising unemployment
- Curb influx of migrant
- Against selective discrimination by large corporates
- Agrarian distress

Socio-Economic Caste Census (SECC)

- Caste Census is the caste-wise tabulation of population in the census exercise.
- Caste, was last included in the Census of India back in 1931.
- The practice was stopped by the British in 1941 and the post 1947, the government did not revive it.
- While India publishes separate data on Scheduled Castes (SC) and Scheduled Tribes (ST), since the first exercise in independent India in 1951, the Census does not include data on other castes

Way forward

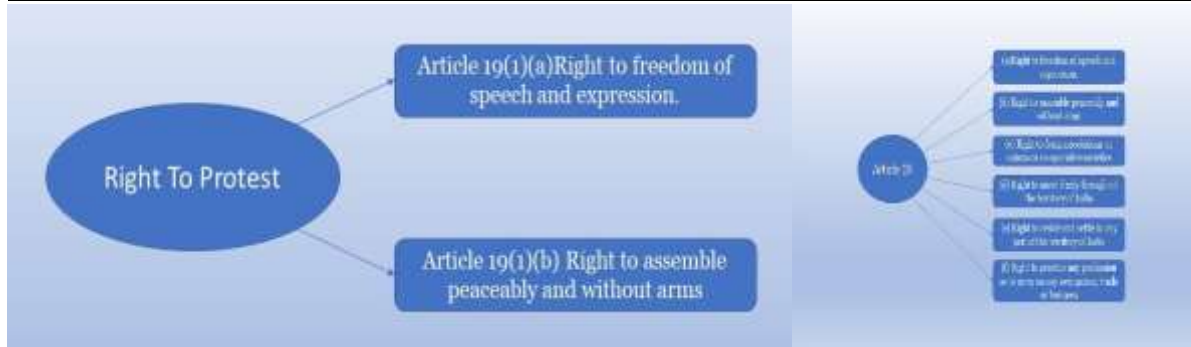
Reservation is a necessary tool for the upward mobility of those who have been deprived from centuries of their basic rights and opportunities. But the demand should come from their inability and not unwillingness. As mentioned by SC in recent judgement, sufficient data is a precondition to provide any new reservation. Accurate and efficient data is needed to tackle this menace of rising demand for reservation. Lack of data diminishes the efforts to design welfare policies and schemes.

Reservation was devised as a tool to solve the problem, it should not be converted into tool to satisfy self interest of people or one particular group. All the steps should be taken with the agenda of inclusive development and welfare of vulnerable sections of the society.

Right to Protest and Freedom of Speech

About

Right to Protest means freedom to protest, assemble and challenge government decision. This right has not been explicitly mentioned in any of the Fundamental right under Part 3 of the constitution. But it can be derived from the two parts of Articles 19



Note: Originally, Article 19 contained seven rights. But, the right to acquire, hold and dispose of property was repealed by the 44th Amendment Act of 1978.

Article 19(1)(a) Right to freedom of speech and expression

It implies that every citizen has **the right to express his views, opinions, belief and convictions freely by word of mouth, writing, printing, picturing or in any other manner.**

According to Supreme Court of India freedom of speech and expression includes the following:

- Right to propagate one’s views as well as views of others.
- Freedom of the press.
- Freedom of commercial advertisements.
- Right against tapping of telephonic conversation.
- Right to telecast, that is, government has no monopoly on electronic media.
- Right against bundh called by a political party or organisation.
- Right to know about government activities.
- Freedom of silence.
- Right against imposition of pre-censorship on a newspaper.
- Right to demonstration or *picketing* but not right to strike

Note: *Right to strike is a legal right, under Sec22(1) of the Industrial Disputes Act, 1957.*

The State can impose **reasonable restrictions** on the exercise of the freedom of speech and expression on the grounds of

- sovereignty and integrity of India,
- security of the state,
- friendly relations with foreign states,
- public order,
- decency or morality
- contempt of court, defamation and
- incitement to an offence

Article 19(1)(b) Right to Freedom of Assembly

Under this article, every citizen has the right to assemble peacefully and without arms. It includes: **right to hold public meetings, demonstrations and take out processions.**

This freedom can be exercised only on public land and the assembly must be peaceful and unarmed.

However, this provision **does not protect violent, disorderly, riotous assemblies, or one that causes breach of public peace or one that involves arms.**

Also, this right **does not** include the right to strike.

The State can impose **reasonable restrictions** on the exercise of right to assemble on two grounds, namely,

- Sovereignty and integrity of India and
- Public order including the maintenance of traffic in the area concerned

It is under this reasonable restriction that the state imposes Section 144 of CrPC on the pretext of imminent danger to human life or disturbance of the public tranquillity.

Historical Background of Right to Protest

Current Connect

3P's- Prayer, Petition and **Protest**, the method used by the moderate leaders of the Indian National Congress, is historically embedded in Indian society. Indian people fought hard and long to express their views on colonial policies and laws. They staged dharnas, held large public meetings, peaceful protest and demonstration to express their dissent. This historical experience is referred to as the spirit of Indian constitution.

Though the word "protest" is missing from Indian constitution, right to assemble and peaceful demonstration is mentioned in Article 19 (1)(b). Over the years, through many judgements' courts have held that right to peacefully protest is the fundamental right of the citizen.

Issues and challenges with right to protest

Significance of Right to Protest

- Right to protest is an essential element of democracy to voice opinions about government policies and laws
- It ensures people's role as watchdog which increases government accountability and fairness in their decision.
- It is the biggest weapon of people in a democracy against government if they become unresponsive.
- Protesting against injustice is not only a right but also a moral duty of every citizen.



Reasonable restriction on Right to protest

The right to protest should be regarded as one of those rights that helps to reduce conflict in society and should not be carried in a way that undermines others right. Thus, these rights come with reasonable restriction and are not absolute. The limitations are intended to ensure that in the exercise of the right to protest, the rights of others should not be infringed.

Points mentioned by SC during various petition heard on cases of protest

- Public ways and public places cannot be occupied and that too indefinitely
- Protest should be held only at designated places
- The right of the protester has to be **balanced with the right of the commuter and has to co-exist** in mutual respect.
- The right to protest cannot be anytime and everywhere. There may be some spontaneous protests but, in that case, it should not affect right of others.

Recent cases and SC judgement on Right to Protest

- The Supreme Court on hearing the petition in **2020**, upheld the **farmers right to protest**, but made it clear that public road cannot be blocked indefinitely.
- Supreme Court hearing the plea regarding **Shaheen Bagh Protests in 2019**, upheld the right to peaceful protest against the law but also cleared that public ways and public spaces cannot be occupied and that too indefinitely.
- SC on a plea by Gorkha Jan Mukti Morcha leader in **2018** held that public demonstrations resorting to violence, including stone-throwing, are not protected by the fundamental right to free speech and expression or the fundamental right to assemble peacefully.
- In *Ramlila Maidan Incident v. Home Secretary, Union of India & Ors. case (2012)*, the Supreme Court had stated, "Citizens have a fundamental right to assembly and peaceful protest which cannot be taken away by an arbitrary executive or legislative action".

Conclusion

Right to peaceful protest is a knot on a democratic balloon, knots hold the air inside the balloon, in the same way peaceful protest upholds the spirit of democracy in a country. The right to protest, to publicly question and force the government to answer is a soul of democracy.

As mentioned in various judgement of SC, people have fundamental political right to protest but that protest should be peaceful and in manner that doesn't infringe upon others right to

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peaceful existence. Damaging public properties, blocking public ways and places is not the right way to express dissent and voice opinion. Under Article 51A (b) of Part 4A of Indian constitution it is our fundamental duty to cherish and follow the noble ideals that inspired the national struggle for freedom. Protest is the hallmark of free and democratic society but aligning it with the principles of our national leaders is also our fundamental duty. Satyagraha and non-violence should be the basis of all our dissent.

JUDICIARY

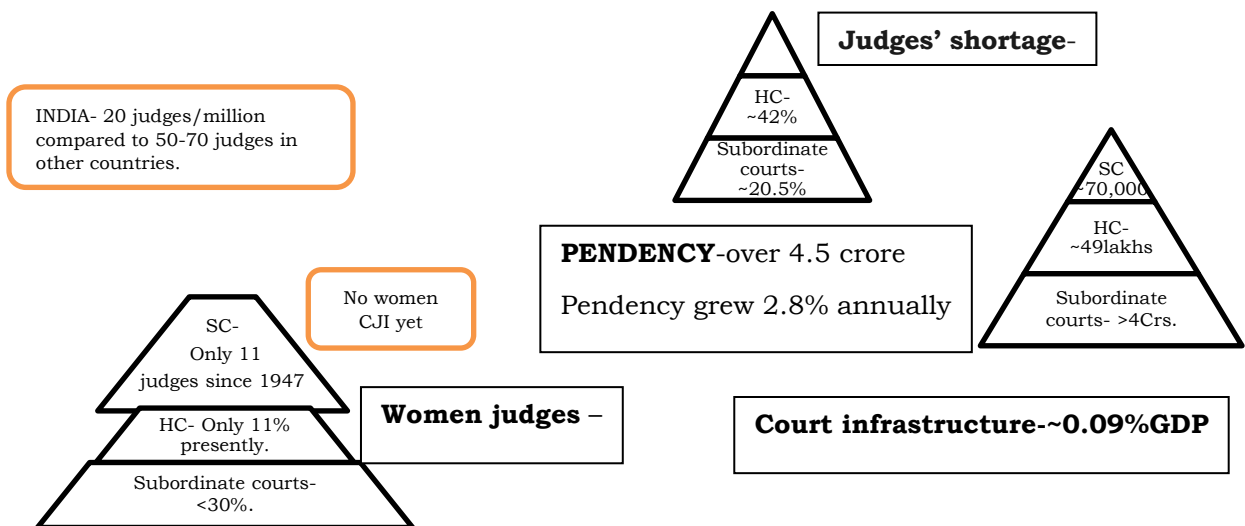
Context

It is central pillar of Indian democracy and one of the Principal organs based on **Doctrine of separation of power.**

Constitutional provisions of the judiciary

Article	Provision	Article	
13	Declare Laws inconsistent with fundamental rights as unconstitutional	142	Enforcement of decrees and orders to do Complete justice
32	Right to constitutional remedies	143	Power of President to consult S.C.
39A	Equal Justice & free legal aid	214	HC for states
50	Separation of judiciary from the executive [DPSP]	226	Power of high courts to issue certain writs
124	Establishment & constitution of SC	227	Superintendence over all courts and tribunal functioning in its territorial jurisdiction
129,215	SC, HC to be Court of record & Contempt power resp.	233	Appointment of district judges
131	Original jurisdiction of S.C	235	Control on subordinate courts
133,134	Appellate jurisdiction	136	Special leave to appeal [PIL origin]

Judge-population ratio-



Current Connect

JURISDICTION OF SC

- Original jurisdiction
- Appellate jurisdiction
- Advisory jurisdiction

Roles played by Judiciary

- **Protector and guarantor** of Fundamental Rights [Art 32 & 226; Art 13]
- Provides **effective Justice**
- **Protector of the Constitution** and keeps **Check and maintain harmonious Balance** with Executive and legislature through Judicial Review, **DOCTRINE OF BASIC STRUCTURE**, Art142.
- **Judicial Activism** during pandemic- Migrant’s welfare, Oxygen availability, Video conferencing.

KEYWORDS

- **Single and Integrated Independent**
- **Due process of law**
- **Principles of Natural Justice**
- 3 tier structures; **3 judge cases**
- Provides **Justice, Upholds Rule of Law, mediates Center-state conflicts, protects citizens' rights and liberties, Protector and guardian of constitution**

COMPARISON OF INDIAN AND OTHER JUDICIAL SYSTEMS

<i>Judiciary</i>	<i>India</i>	<i>USA</i>	<i>UK</i>
Judicial system	Integrated Judiciary	Federal judiciary for federal laws and Sate judiciary for state laws	Gradually evolving towards independent judiciary
Appointment	Collegium system	Confirmation of Senate is required	Judicial appointment commission [primacy to parliament]
Appellate jurisdiction	Constitutional, Civil & criminal matters	Only constitutional cases	Civil and criminal matters
Advisory jurisdiction	Present	Not present	-----
Jury system	Abolished after Nanavati case	Allowed	present
Retirement age	SC-65years; HC-62yrs	lifetime	70 years
Judicial review	Present	Present	No power

Appointment of Judges

Constitutional provision:

- Art124(2)- Appointment of SC judges
- Art217: Appointment of HC judges

Collegium System

Committee of CJI, 4 senior judges of SC take decisions related to appointments& transfer of judges in the SC & HC.

Three-Judge Cases

First Judges Case, 1981- Consultation with CJI doesn’t mean concurrence, it only implies exchange of views.

Second Judges Case, 1993- Consultation with CJI means concurrence. However, CJI needs to consult two senior-most judges. Executive’s recommendations are not binding on collegium.

Current Connect

Third Judges Case, 1998- CJI should consult with four senior-most SC judges to form his opinion

➤ **Issues** in collegium system-

- **Vacancies are not getting fulfilled** causing huge shortages
- **Lack of transparency and accountability**
- **Seniority eclipses Merit**
- Lopsided system of **Checks and Balance**- Judiciary has more say
- **Constituent Assembly rejected the idea** to vest with CJI veto power over appointments.
- **Uncle Judges Syndrome- Nepotism, corruption, and personal patronage are prevalent in the functioning of the collegium system** [Law Commission report]

Steps taken-

- **National Judicial appointment commission** [99th CAA] but court held it unconstitutional as it affects the independence of judiciary.
- **Draft Memorandum of Procedure** for making higher judiciary appointments is still pending due to lack of agreement between Judiciary and Executive.

WOMEN IN JUDICIARY

➤ **Importance of Women in Judiciary**

- **A gender perspective will benefit society**
- **Democratisation of Judiciary- More inclusive and representative** thereby enhancing court's legitimacy & public trust
- **To ensure Gender Justice, Right of women, for Just Rule of Law & Enhancing quality of justice** [Gender sensitivity in Judgements]
- To get rid of **Misogynistic Judgment;**
- **SDG 5 and SDG 16 goals - gender equality and women's representation in public institutions**
- **Solutions:**
- **Greater representation of women.** Present CJI voiced in support of 50% representation to the women in Judiciary.
- **Mandatory training on gender sensitisation,** so that they **do not pass orders objectifying women** in such cases.
- **Society must give up its strict gender roles and stereotype.**

Virtual Courts/e-Courts project:

- Aimed at **eliminating the presence of litigants or lawyers in the court & adjudication of the cases online.**
- SC under **Art 142** directed all courts to use video conferencing for judicial proceeding in the backdrop of COVID crisis.
- It requires ICT enabled infrastructure.

E-Courts Project Based on “National Policy and Action Plan for Implementation of Information and Communication Technology (ICT) in the Indian Judiciary-2005”. Monitored and funded by the Department of Justice for the **District Courts.**

Advantages:

- Affordable & accessible Justice
- Faster Delivery of Justice
- Improve Transparency
- Integration of Judiciary

Challenges:

- **Operational Difficulties-** Disconnections, resonance of voices
- **Cyber threat**
- **Infrastructural issues.**
- **Lack of trained staff**

Current Connect

Need for reforms in Judiciary

- High Pendency of cases and Delayed justice- Justice delayed is Justice denied
- Slow Judicial Appointment-Lacuna in collegium system [Uncle judges syndrome]
- Women representation is miniscule especially in higher judiciary
- Judicial overreach
- Inaccessibility and high litigation cost; Poor court Infrastructure
- “Luxurious litigation” [Resourceful parties attempt to frustrate the judicial process and delay it by filing numerous proceedings across the judicial system]
- Contempt of court
- Opaqueness in Transfer of Judges
- Recusal of Judges
- Lack of accountability and Transparency in appointments, transfer, Conduct of judges, allocation of cases to a bench, virtually outside RTI, Judicial overreach
- Role of technology is less.

REFORMING CRIMINAL JUSTICE SYSTEM

<p>➤ Govt to bring in a standalone legislation on the bail act, limiting the discretionary powers of courts in grant of bail</p>	<p>ministry's crime and criminal tracking network and system (CCTNS)</p>
<p>➤ In favour of implementing 'restorative justice' model, a concept where a victim gets a role even before the investigation is initiated and may negotiate and settle the dispute</p>	<p>➤ Integration of CCTNS with e-courts & e-prisons to help release large number of under-trials</p>
<p>➤ SC judge Madan B Lokur-headed panel working on integrating the criminal justice system with the home</p>	<p>➤ Govt has asked law commission to submit report on reforming criminal justice system</p>
<p>➤ Law ministry keen to implement entire Malimath committee report on reforms in the criminal justice system</p>	



Reforms taken

- **Legal Information Management and Briefing System (LIMBS)** to make the legal data available at one single point and streamline the procedure of litigation matters
- **Draft Memorandum of Procedure (MOP)** for making higher judiciary appointments based on Seniority and merit
- **e-court project; Video conferencing** of court proceedings
- **SC vs. Subhash Chandra Agrawal** case- CJI is declared as a public authority under the RTI act.
- Artificial intelligence based **SUPACE portal** to assist judges with legal research.

Some recommendations

- **Economic survey 2018-19** - 100% case clearance to prevent further accumulation; Establish Indian tribunal and court services like US, UK.
- **120th Law commission:** appoint **Ad-hoc judges** (Article 128 and Article 224A); Separate supreme courts function into the court of appeal and constitutional court, Increase the number of working days
- **Three-pronged approach** [by Justice Ramana] - Improving judicial infrastructure through the use of e-platforms and setting up of more courts; Disputes settlement at the pre-litigation stage through counselling; Strengthening the existing Alternative Dispute Resolution (ADR) mechanism
- Adhere to **Mulgaonkar principles for contempt cases.**
- **Exercise self-restraint to uphold doctrine of separation of power.**
- **Code of conduct for judges; create All India Judicial service; Judicial impact assessment**
- **Independent judicial Lokpal** for complaint against judges.

IMPORTANT CASES

CASE	Judgement	CASE	Judgement
Kesavananda Bharati v. State of Kerala (1973)	' basic structure ' doctrine as a check on Parliament's unlimited power to amend constitution	I R Coelho or 9 th schedule case (2007)	Upheld Judicial Review power including laws in 9 th schedule
Maneka Gandhi v. Union of India (1978)	'Due process of Law' & expanding the meaning of 'Right to life'	Aruna Shanbaug v. Union of India (2011)	upheld passive euthanasia as constitutional
Indra Sawhney v. Union of India (1992)	Constitutionality of reservations [capped the reservation quota at 50%.]	Lily Thomas v. Union of India (2013)	Struck down Section 8(4) of the RPA, 1951 as unconstitutional
Vishaka v. State of Rajasthan (1997)	prevent sexual harassment at the workplace & set out a guideline	Puttaswamy vs. Union of India (2017)	Fundamental Right to Privacy is intrinsic to life and liberty under Article 21. Also gave Proportionality test [3]
Union of India v. Assn. for Democratic Reforms case (2002)	Freedom of ' <u>speech and expression</u> ' comprises not only the right to express, publish and propagate information, its circulation but also to receive information.	Navtej Singh Johar vs. Union of India (2018)	Decriminalised homosexuality by striking off parts of IPC Section 377

CONTEMPT OF COURT

Offence of showing disrespect to the dignity or lower the authority of a court or to interfere with the due course of justice. Recently, SC held that **its power to punish for contempt under Article 129 is a constitutional power, which cannot be abridged or taken away even by legislative enactment**

Objectives - **To protect the administration of justice from undue attack and consequently the interests of the public.**

Constitutional provisions:

Art19 (2); Art129 [SC] & 215[HC]; Art 142(2); Section 10 of Contempt of Courts Act of 1971

Contempt of Courts Act, 1971

Sanyal Committee recommended:

2 types of contempt-

- **Civil** - wilful disobedience to any judgment, decree or order etc.
- **Criminal**- Publication of any matter or the doing of any act which tends to scandalise or lower the authority of the court, or tends to interfere with any judicial proceeding, or obstruct the administration of justice
- **Exceptions**- Innocent publication, Fair and accurate reporting of judicial proceedings, Fair and reasonable criticism, defence of truth [2006 Amendment]
- **United Kingdom** had abolished the offence in its contempt laws [offence of scandalising].
- Law Commission recommended against whether the definition of contempt in the Act should be restricted to civil contempt.

Argument against COC

- **Restrains Freedom** of speech and expression
- Violating **Doctrine of Over breadth**
- **Violates Principle of Natural Justice**

Current Connect

- **Wide scope of contempt- criminal contempt definition is very broad causing arbitrariness**
- **Mulgaonkar principle**

All India Judicial Services

To check persisting vacancies in judiciary and pendency of cases.

Constitutional provision:

- The 42nd CAA amended Article 312(1) empowering Parliament to make laws for the creation of AIJS.
- Chief justices conference & Law commissions have favoured it many times.

Advantages of AIJS:

- **Address Judges to Population Ratio &** bridge the underlying gap in judicial vacancies. [50 judges/million population- Law Commission recommended].
- **Higher Representation of Marginalized & deprived sections of Society**
- **Attract Talent Pool & more professional judges**-improve the quality of justice
- Address issues like **corruption and nepotism** in the lower judiciary.

Challenges:

- **Dichotomy between Articles 233 and 312:** As per Article 233, recruitment to subordinate judiciary is the prerogative of the State. Therefore, many states and high courts have opposed the idea [idea is against federalism].
- **Language Barrier**
- May hamper the career opportunities of state judicial service officers
- Dilution of Administrative Control of High Court over the subordinate judiciary [might affect judiciary's independence].
- Might increase costs of training judges- local laws, practices and customs vary widely across States.

Two “parallel systems” of justice

One for the rich and the other for the poor.

Egg: A “grave error” and a failure to “protect the sanctity of justice” by MP HC who granted bail to the husband of a legislator in MP.

SC observation:

India cannot have two parallel legal systems, one for the rich and the resourceful and those who wield political power and influence, and the other for the people without resources and capabilities to obtain justice. It affects the **legitimacy of the law**.

Independence of judiciary is independence of every judge and this independence must begin by protecting the district judiciary which acts as the first line of defense for people. The colonial mindset meted out to the district judiciary must change

The case **pointed to a larger malaise of application of political pressure on trial judges [because of lack of infrastructure and protection given].**

Independence of the Judiciary:

- Article 50; Security of Tenure-Articles 124 and 217
- The salaries and allowances of the judges are fixed and are not subject to vote of the legislature.
- Powers and Jurisdiction of Supreme Court: Parliament can only increase it & cannot curtail them.
- No discussion of Judges conducts in the legislature
- Court's power to punish for their contempt.

REPEAL OF OBSOLETE LAWS

Why?

- A **huge number of obsolete Acts** remains despite losing their relevance and utility.
- **Archaic**- not in sync with present society & democratic values
- **social, economic and legal conditions have changed**
- Many **redundant ‘anti-terror’ legislation & preventive detention** laws remain.

Current Connect

- **Obsolete concepts** like ‘adultery’ and ‘sex against the order of nature’ remains.

Some Archaic Laws like Prevention of Seditious Meetings Act, 1911, Preventive Detention Act, 1950.

Why Should Archaic Laws be repealed?

- They could be invoked suddenly against unsuspecting and otherwise law-abiding citizens.
- For good governance

Steps Taken:

- **1,800 obsolete laws repealed** recently
- **Ramanujam Committee** to identify central government laws to be repealed
- **Repealing and Amending Bill** is pending in Parliament.
- **100 Laws Repeal Project** by the Centre for Civil Society (CCS)
- **P.C. Jain Commission** recommended the withdrawal of much legislation.

Challenges:

- Ramanujam Committee and the Law Commission identified ~ 150 old statutes that could only be repealed by states. [Lackadaisical approach of states]
- **Absence of System** of desuetude in India- statutes, similar legislation or legal principles lapse and become unenforceable with lapse of time or non-enforcement.

A Permanent Commission for periodic review of laws to identify obsolete laws is needed.

Law commission of India

Executive body established by an order of Central Government, **work for legal reforms-** to **recommend** revision and updating of existing laws for making **reforms therein and enacting new legislations on a reference** made to it by the Central Government **or suo-moto**. It works as an **advisory body** to the Ministry of Law and Justice.

22nd Law Commission [The first after independence-1955] for a fixed three-year term.

Some imp. Recommendations:

- **Abolition of the death penalty** for all crimes except terrorism-related offences and waging war against the state.
- Suggested **simultaneous** Lok Sabha and state assembly **elections**.

Achievements:

The **Indian Code of Civil Procedure, the Indian Contract Act, the Indian Evidence Act, the Transfer of Property Act**. Etc. are result of the first four Law Commissions.

Functions:

- Undertakes **research in law and review of existing laws** in India for making reforms therein and enacting new legislations& bringing **reforms in the justice delivery systems**
- **Review/Repeal of obsolete laws.**
- Examines the Laws which affect the poor and carries out **post-audit for socio-economic legislations.**
- It **suggests suitable measures for quick redressal of citizens’ grievances** in the field of law and takes all necessary steps to make the poor benefit out of the legal process.

Lok Adalat (People’s Court)

- Lok Adalats disposed of 52,46,415 cases between 2016 to 2020[NALSA]
- Average number of cases disposed of per NLA since 2017 has gone up even when the number of NLAs organised each year has reduced, pointing that the system is certainly efficient
- Performance of the e NLA was less efficient than physical National Lok Adalats organised in 2017, 2018, and 2019.

Based on Gandhian principles; an alternative dispute resolution mechanism where cases or disputes **pending in a court or which are at pre-litigation stage** are settled in an amicable manner.

Current Connect

Statutory body under the **Legal Services Authorities Act, 1987**[National LSA, State LSA, District LSA]

Objective- to provide **free and competent legal services** to weaker sections of the society” and to “**organize Lok Adalats** to ensure justice on the **basis of equal opportunity**”

Reason for establishment:

- **Alternate dispute resolution**-Settlement outside the courts.
- **Equal justice and free legal aid-Article 39A-** to poor and underprivileged-ensuring justice are not denied due to economic or other disabilities.
- **Procedural flexibility &Speedy trial-** no strict application of procedural laws.
- **Reducing litigation& pendency-** It can even take cases that are in pre litigation stage.
- **Economically affordable; finality of awards,** as no further appeal is allowed

Role of Lok Adalats:

It can hear **both civil and criminal cases**. **E.g.:** Motor-accident claims, disputes related to public-utility services, cases related to dishonor of cheques, and land, labor and matrimonial disputes (except divorce) are usually taken up by Lok Adalats

Limitations of Lok Adalats:

- Concern that in the **endeavour for speedy disposal of cases, it undermines the idea of justice.**
- **Large breaks between sitting** breaks the continuity of the deliberations.
- **Lack of confidentiality:** Its proceedings are held in open court.
- **Forced injustice:** Many times victims are forced to settle at lower compensation, mostly imposed on the poor.
- **Needs consent of both the parties**

e-Lok Adalats were held at both the national and state levels to tackle the challenges posed by COVID-19 pandemic

The Lok Adalat Movement can be successful **when the people participate on voluntary basis in the functioning** of Lok Adalat.

Gram Nyayalayas:

Gram Nyayalayas are **mobile village courts** in India established under **Gram Nyayalayas Act, 2008** for **speedy and easy access to justice system in the rural areas**.

Aimed at providing inexpensive justice to people in rural areas at their doorsteps. It's an important part of **judicial reform to reduce arrears**.

Recently SC directed the states, which are yet to come out with notifications for establishing 'Gram Nyayalayas', to do so within four weeks [Only 208 'Gram Nyayalayas' are functioning in the country as against 5000targeted]

Role of gram nyayalaya in dispute resolution:

- A **mobile court** and exercises the powers of **both criminal and Civil Courts**.
- It has **jurisdiction over an area as specified** by State Government in consultation with the respective High Court
- The Gram Nyayalaya is supposed to **try to settle the disputes through conciliation** as far as possible.
- To avoid delay in its execution, the **Gram Nyayalaya can follow summary procedure** for its execution.
- The Gram Nyayalaya is **not bound by the rules of evidence** but is **guided by the principles of natural justice** and subject to any rule made by the High Court.

Mediation is increasingly becoming popular as people begin to observe the benefits of settling outside of court. Gram Nyayalayas can follow **special procedures** in civil matters, in a manner it deems **just and reasonable in the interest of justice**.

DEMOCRACY & TYPES OF GOVERNMENT

DEMOCRACY

It is the system of government based on the **belief in freedom & equality** between the people in which the power flows from **the 'will' of the people**. Democracy **is not just procedural-** elections, voting and the majority rule, but also **Substantive** i.e. Debates, discussion and

Current Connect

deliberation, raising voice, dissent, choice etc. It is a whole **way of life**. It is the freedom from hunger, humiliation and violence. It is the principle against any form of human or non-human indignity.

Facts & Reports

- **Democracy Report 2021- India “has almost lost its status as a democracy”**. It ranked India below Sierra Leone, Hungary.
- **India** has dropped to two places on the **World Press Freedom Index, 2020** - ranked 142nd/180 countries.
- India has been classified as an “**electoral autocracy**” worse than Nepal & Bangladesh in **Autocratisation Goes Viral report**.
- US watchdog downgraded India’s status to “**partly free**” in its ‘**Freedom in the World 2021’ report**. It concluded- **decline in global democracy over the last 15 years**.
- Declining confidence in democracy and considerable increase in citizens’ frustrations with government corruption and incompetence. **Young people are the least satisfied with democracy**

Democide (Death of Democracy) & its causes

A. Failure of the Government:

- **Curtailement** of citizen’s Liberty, Equality and poor Justice.
- **Lack of Decentralization of power**- Concentration of power in few hands.
- Ineffective Redistribution
- Crony capitalism, Corruption, Criminalization of politics.
- **Decline in deliberation**- Earlier, Deliberation and Democracy was not DE hyphenated. It was the part of Democracy.
- **Majoritarian syndrome**
- **Delay** in decision making e.g. arriving at consensus on Climate Agenda in UNFCCC
- **Overreach** of Executive and the Judiciary
- Lack of accountability of the Executive [**Tyranny of the Executives**]

B. Lack of people’s participation through ‘public reasoning’, informed debate, outbreaks of uncontrolled violence, Civil wars etc.

E.g. The military coup against the elected governments of Egypt (2013), Thailand (2014), Myanmar coup and Tunisia (2021), Libyan civil war, Syrian Civil war, South-eastern Nigeria.

C. Recent protests due to Government’s policies- COVID 19 anti-lockdown protest in New Zealand, United Kingdom, US, Germany; George Floyd protests in USA; Bulgarian protests against Government; Thai pro-democracy protests for reform in the Thai Constitution and the monarchy[Most of the protestors are students and young people without any leader]; Indian farmers protest against Farm amendment acts; Hong Kong protest against communist China; Afghanistan – after USA withdrew; China’s aggressiveness in Taiwan & the recent air space incursion; Riots and looting in South Africa that have left more than 70 people dead.

D. Weak Institutions: When the judiciary becomes vulnerable to cynicism, political meddling and state capture, threat to democracy emerges.

E. Weak Social fabric due to deepening social cleavages- Discrimination, Inequality, Ethnicity, Racism etc.

F. Unavailability of Basic Amenities, Poverty, chronic violence, famine

G. Demagogue leaders

SOLUTIONS

- **Voice over choice, Voice to the voiceless, Debate over voting,**
 - **Follow Popular Sovereignty and Constitutionalism in letter & spirit.**
 - **Constitutional Morality:** It specifies norms for institutions to survive and an expectation of behavior that will meet not just the text but the soul of the Constitution. It also makes the governing institutions and representatives accountable.
 - **Good Governance**
 - **Voices Should be Heard:** Dissent acts as safety valve[SC]
 - **Appropriate Checks on Executive Powers**
 - **Need For Strong Opposition**

Current Connect

- **Social Equality:** Efficient redistributive public welfare policies will reduce Inequality.
- **Inclusive growth**

Democracy allows for course corrections by allowing to rectify mistakes E.g. **Indian PM apologizing to Sikh community for atrocities** in the mid-1980s, **Japanese PM apologizing for atrocities in Manchuria and South Korea during world war.**

Amid the Covid-19 pandemic, **authoritarian leaders tried to control reporting by arresting journalists.**

Areas of Concern in India Highlighted by various reports

- Passage of the Religiously Discriminatory **Citizenship (Amendment) Act, 2019 (CAA)**
- National Register of Citizens (NRC)
- Disinformation and Incitement of Violence
- Misuse of Unlawful Activities Prevention Act (UAPA), Sedition charges and other statutes
- Delhi Riots, 2020
- Anti-Conversion Laws
- **FCRA (Foreign Contribution Regulation Act)** was amended further restrict and regulate NGOs
- Religious Freedom in Jammu and Kashmir & the shutdown of the internet for nearly 18 months -the longest-ever shutdown in any democracy.

SOCIAL MEDIA & DEMOCRACY

Although social media deepens the democracy, it also tends to weaken the democracy.

Deepens democracy:

- **Democratization of Speech and Expression:** It helps in **political socialization and political mobilization** without any geographical barrier.
- **Gives voice to the voiceless, diverse opinions.**
- Social media has led to the emergence of **citizen-led governance**
 - creates awareness to millions, helps to be united for any social cause
 - It is emerging as the **fifth estate of democracy.**
- **Instrument to bring Behavioral Change-** campaigns such as **Swacch Bharat Abhiyan, Fit India Movement.**
- **Ease of communication between People and the Representatives-**Direct communication to connect citizens.

Weakens Democracy

- **Widening Social cleavages:** hate speech and hatred, sexual exploitation, Divisive content etc.
- **Misinformation & Disinformation-** Fake news, Paid news, Propagandizing, Polarization etc. Lack of educated people aggravates the ill effects by blindly forwarding it and not checking the facts of the information which is being circulated.
- **Anonymity**
- **Formation of Information Cocoons:** social media, due to its technological capacity has enabled self-sorting and personalization of information one perceives which leads to group polarization.
- **Cyber bullying, Trolling-** labeling and trolling of rational voices or dissent as “anti-national.”

ENFORCED DISSAPPEARANCE

Occurs when a **person is secretly abducted or imprisoned** by a state or state supported organization and its **refusal to acknowledge the person's fate and whereabouts**, with the intent of **placing the victim outside the protection of the law.**

E.g.: Myanmar, China [Uyghur], Pakistan etc.

AUTHORITARIANISM

Apolitical system that concentrates power in the hands of a leader or a few elites that is not constitutionally responsible to the people. It's a principle of blind submission to authority, as opposed to individual freedom of thought and action. Some Features:

Current Connect

- Limited political pluralism with restrictions on the legislature, political parties and interest groups.
- Political legitimacy based upon appeals to emotion and identification of the regime as a necessary evil to combat "easily recognizable societal problems, such as underdevelopment or insurgency."
- Minimal political mobilization and suppression of anti-regime activities.
- Ill-defined executive powers, often vague and shifting.

E.g. China, North Korea, Iran, Thailand

Authoritarianism primarily differs from totalitarianism in that social and economic institutions exist that are not under the government's control.

TOTALIARISM

It is the extreme version of authoritarianism. It is a political system that exercises **total control** and regulates private as well as public life, **no freedom or Liberty, no fundamental Rights**, prohibits all opposition parties, **violence and intimidation as main tools and no political freedom**. It **controls all aspects of social life**, including the economy, the education system, arts, science and morals of citizens through the use of an elaborate ideology.

It can also **mobilize the whole population** in pursuit of its goals. **Propaganda** is broadcast by state-controlled mass media. Egg: Germany under Hitler, Italy under Mussolini.

CENTRE STATE RELATION

Context

Harmonious relations between the Centre and the States are critical for the stability, security and economic development of the country.

CENTRE STATE RELATIONS DURING COVID-19

COVID-19 pandemic increased the friction between Centre-State relations.

Various aspects:

Legislative- Impinging on States domain:

- **Recent farm laws** like the Farmer's Produce Trade and Commerce Act were opposed as it impinges on the state autonomy. However few states like Punjab have protested against it.
- In the 7th schedule, Agriculture [entry 14] and markets and fairs [entry 28] of the **state list**. However, entry 42 of Union list empowers the Centre to regulate **interstate trade and commerce**. Further, trade and commerce within the state is placed in entry 26 of the state list which is subject to the provisions of the entry 33 of the concurrent list, under which Centre can make laws that would override the laws of the state. Consequentially, **Centre is empowered to make laws to regulate both inter and intra state trade**.
- **Government of National Capital Territory of Delhi (Amendment) act**.

Political-

- **Overuse of Disaster Management Act During Covid 19-** centre's **non-consultative decision making with States** in imposing the lockdown [led to logistical and migrant labourers' crisis]; powers to give orders with respect to state subjects like healthcare, law and order; Vaccine pricing & distribution; Lakshadweep's new regulation etc.
- Centre's **"one size fits all" approach** by issuing homogeneous set of guidelines to states under Disaster Management Act, 2005 (DM Act)
- **Politicisation of various institutes** including IT, ED & CBI- **Maharashtra denies General Consent to CBI, 3rd state to do so after West Bengal and Rajasthan**.

FISCAL FEDERALISM

- **Forcing states to implement reforms to get increased borrowing limit**. For e.g.: only 0.5% out of 2% of the increased borrowing limit was unconditional for the state governments.
- **GST dues & GST compensation issue** coupled with lack of power with the states to charge additional tax weakened the economic capabilities of the state governments.

Current Connect

- **Terms of Reference of 15TH Finance commission** was decided without consulting States.
- **Improper institutional mechanism to devolve funds directly to the 3rd tier** i.e., Panchayati Raj institutions.
- **Higher share of cess and surcharge**- from 2.3% [1980] to 15% [2019-20] as a percentage of gross tax revenue of states, causing reduced sharing of taxes with States.

Centrally Sponsored Schemes- States finds them restrictive in their operational and financial autonomy. E.g.: PM JAY, PM KISAN etc.

Lack of Co-operative Federalism resulted in pandemic mismanagement, e.g.: many patients in Delhi hospitals lost their lives for the lack of oxygen.

GOVT. OF NATIONAL CAPITAL TERRITORY (AMENDMENT) ACT

The **69th amendment act** introduced **Articles 239 AA and 239 BB**- created UT of Delhi with a legislative assembly having all powers except 3-**Land, public order& police** in NCT of Delhi. This amendment gives **primacy to the Lieutenant Governor** over the elected government.

Issues in LG and Delhi government relations

The major point of contention is the **Article 239AA (4)** which seem to give primacy to LG. Using this, LG on many occasions has subverted the decision of the Delhi government.

Key provisions:

The term **“government”** referred to in any law made by the Legislative Assembly **will imply Lieutenant Governor**.

- **Rules of Procedure of the Assembly** -rules made by the Delhi assembly must be in consistent with the Rules of Procedure and Conduct of Business in the **Lok Sabha**.
- **Gives discretionary powers to the L-G even in matters where the Legislative Assembly of Delhi is empowered to make laws.**
- **LG’s opinion** must be taken before implementing COM’s decisions.
- The **Bill prohibits the Legislative Assembly from making any rule** to enable itself or its committees to: (i) **consider the matters of day-to-day administration** of the NCT of Delhi and (ii) **conduct any inquiry** in relation to administrative decisions

Union Government’s Stand:

- It is in **accordance with the Supreme Court’s 2018 ruling**.
- It will **enhance public accountability and ease out technical ambiguities** related to everyday administration.
- This will **increase administrative efficiency of Delhi and will ensure better relationship between the executive and the legislator**.

Impact:

- **Undermines democracy**
- It will greatly **reduce the efficiency and timeliness** of the Delhi government
- **Against federalism** – Act may lead to centralization of power
- **Not in harmony with the Supreme Court verdict of 2018**
- **LG is not obliged to give his opinion within a time limit**- L-G may politically exploit these.
- **Setback for Delhi’s quest for statehood**.
- **Creates ambiguity over accountability**- as the elected government will lack sufficient powers to implement its manifesto

Govt. of NCT of Delhi Vs Union of India case, 2018

- LG has no independent decision-making powers
- **LG was bound by the aid and advice of Council of Ministers except the matters pertaining to police, public order and land.**
- **Justice DY Chandrachud**- “In a democratic form of government, the real power must subsist in the elected arms of the state”.

Current Connect

The **principle of subsidiary** demands that central government may take some cues from global trends and cede more powers to the city government in capital territory.

ARTICLE 370

President revoked the special status granted to Jammu and Kashmir under Article 370 by issuing Constitution (Application to Jammu and Kashmir) Order, 2019 under Article 370(1).

Implications of the order:

- **J&K will no longer have separate constitution, flag & anthem**
- **Single citizenship** instead of dual citizenship.
- **All Parliamentary laws will now be applicable** to J & K including the Right to Information Act
- **IPC** will replace the Ranbir Penal Code.
- **Article 35 A** [special rights and privileges to the permanent residents] stands null and void.

Need for revoking the special status

- **Art 370 was a Temporary & transition provision**
- **Democratic deficit**- Progressive laws such as Right to Information Act, Right to Education were not applicable to J & K
- **Lack of accountability, Transparency & Mal governance**
- **International events** – like the resurgence of the Taliban in Afghanistan and rapprochement of US and Pakistan called for sorting out issues in J&K.
- **Alienation of people of Ladakh.**

Positives of revoking special status:

- **Mainstreaming of the people of J & K and Ladakh** with the rest of India by bringing uniformity in laws and policies and schemes.
- **Strengthening of democratic principles**
- **Inclusive development & Economic Growth**
- **Decline in insurgency**- according to reports recruitment of terrorist in the region has fallen by 42%

Issues associated with revoking of special status:

- **Constitutional Issue** – SC to review the decision
- **Special status** was revoked without bringing a constitutional amendment
- **Issue of federalism** – This is the first case in India where a state has been
- Degraded to the status of Union Territory.
- **No concurrence of state assembly:** SC in **SBI Vs Zaffar Ullah Nehru** held that Article 370 cannot be repealed without the concurrence of the Constituent Assembly of Jammu and Kashmir.
- Kashmiriyat, Insaniyat and Jamhooriyat. i.e. Inclusive culture of Kashmir, humanitarianism and democracy is the solution for Kashmir.

Reforms Suggested:

First Administrative Reforms Commission:

- Person having long experience in public life and administration should be appointed as Governor.

Sarkaria Commission

- **Article 356** (President's rule) should be used as a last resort.
- The **Centre should consult the states before making a law on the subject of the Concurrent List.**
- The **Chief Minister of the concerned state should be consulted** in the appointment of the Governor.
- The **Governor's term of five years in a state should not be disrupted** except for extremely compelling reasons.

M M Punchhi Commission:

- **Greater flexibility** should be given to states on subjects mentioned in the state list and transferred items in the concurrent list.

Current Connect

- **The scope of discretionary powers** given to Governors under **Article 163** has to be narrowly construed.
- **Hung assembly:** In case of hung assembly certain guidelines should be followed to appoint the Chief Minister, e.g.: A party or combination of parties with widest support in Legislative assembly should be called to form the government, a pre poll alliance or coalition should be treated as one party etc.
- **Finance Commission** should be made a permanent body with membership changing every five years.
- There should **equality of seats to states in the Rajya Sabha**.

Constitutional provisions:

Articles	Provisions	Articles	Provisions
248	Residuary power of parliament	263	Provision of inter-state Council
249	Powers of Parliament to legislate on matters of state list in national interest	269A	GST on supplies in course of inter-statetrade
252	Powers of Parliament to legislate for 2 or more states	279A	GST Council
254	Inconsistency between laws made by Parliament & state legislature	280	Finance commission

SC judgements

- **S R Bommai Vs Union of India (1994)**- President can dismiss a state government only when President's rule is approved by both the houses of the Parliament & **Imposition of President's rule is subject to judicial review. FEDERALISM IS PART OF "BASIC STRUCTURE"**.
- **Kuldip Nair Vs Union of India (2003)**- The SC held that the Indian Federalism is one of a kind in nature and is custom fitted as per the particular needs of the nation
- **Sat Pal v State of Punjab and others**- Constitution of India is more Quasi-federal than federal or unitary
- **Rameshwar Oraon Vs State of Bihar and others (1995)**: Supreme court said that it is mandatory for state governments to act according to the directions issued by the Central government.

SIXTH SCHEDULE

Arunachal Pradesh assembly unanimously passed a resolution for the entire state to be included in the Sixth Schedule **to protect and safeguard the customary rights of tribal people regarding ownership and transfer of land and forest products** of the state.

Arunachal Pradesh- **Article 371(H)**- state governor has special responsibility with respect to law and order in the state and in the discharge of his functions in relation thereto.

Sixth schedule:

- Provides power to tribal communities to administer the tribal areas in **Assam, Meghalaya, Tripura and Mizoram** under the provision of **article 244(2) and 275(1)**.
- **Article 244** provides special system of administration for 'scheduled areas' and 'tribal areas'
- **Article 275** -statutory grants to be charged on Consolidated Fund of India.

Advantages of inclusion in 6th schedule Sixth schedule benefits in **democratic devolution of powers, preserve and promote the distinct culture of the region, protect agrarian rights including rights on land and enhance transfer of funds** for speedy development.

- **Legislative Power**- Autonomous District Councils are empowered to make legislative laws with due approval from the governor. Acts passed by Parliament and state legislatures may or may not be levied in these regions unless the President and the governor gives her or his approval.
- **Judicial powers**- councils can constitute village courts within their jurisdiction to hear trial of cases involving the tribes.

Current Connect

- **Regulatory power**- The district council can establish, construct or manage primary schools, dispensaries, markets, roads etc in the district. It can also make regulations for the control of money lending and trading by non-tribal.
- **Tax revenue collection**- councils are empowered to assess and collect land revenue and to impose certain specified taxes. They can also receive grants-in-aids from the Consolidated Fund of India.

Issues with Sixth Schedule

- **No Decentralization of powers and administration**- Eg: Bodo Territorial Area districts.
- **Legislative power of state over councils**- The laws made by the councils require the assent of governor without any time limits which delays the legislations. Also, whenever there is a conflict of interest between the District Councils and the state legislature, the latter would prevail.
- **Conflict in discretionary powers of governor**- conflict is there on requirement of consultation of governor with council of ministers.
- **Financial dependency** on their respective state governments for funds or from the Centre. There is **no State Finance Commission for recommending ways to devolve funds** to District Councils and Regional Councils.
- **Lack of development**- due to no panchayats or parishad at people level, they have no power and money which non-6th schedule areas have for implementation of various schemes like MGNREGA etc.
- **Corruption** is rampant
- **Lack of codification of customary law.**
- **Lack of skilled professionals'** results in ad-hoc planning of development projects.

PARLIAMENT & STATE LEGISLATURES

Reasons for adopting parliamentary form

- **Familiarity with the System** because of British rule
- **Preference to More Responsibility than stability** as pointed out by **Dr. B R Ambedkar**. British system gives more responsibility than stability as compared to American system
- **Need to Avoid Legislative—Executive Conflicts** which is bound to occur in Presidential system of USA.
- **Nature of Indian Society:** Diverse & plural; greater scope to give representation to various section, interest & region in the Govt.

Delegated legislation/executive legislation/ subordinate legislation

The Parliament makes laws in a skeleton form and authorises the Executive to make detailed rules and regulations within the framework of the parent law. Such rules and regulations are placed before the Parliament for its examination.

FEATURES

- Collective Responsibility [Art 75]-bedrock principle of Parliamentary government.
- Nominal and Real Executives
- Majority Party Rule
- Dual Membership-Ministers are members of both-legislature & executive.
- Leadership of the Prime Minister
- Dissolution of the Lower House
- Secrecy

The Budget

Based on the principle of annuity-If the granted money is not spent by the end of the financial year, then the balance expires and returns to the Consolidated Fund of India ['rule of lapse']. It facilitates effective financial control by the Parliament as no reserve funds can be built without its authorisation.

Important Articles - Parliament & State legislatures	Provisions
Article 74, Article 163	There shall be a Council of Ministers headed by the PM/CM to aid and advice the president/Governor.

Current Connect

Article 75, Article 164(2)	Ministers are collectively responsible to parliament/State legislature
Article 79 & Article 168	There shall be a Parliament/Leg. for the Union/State
Article 80	Strength of Rajya Sabha
Article 85 & Article 174	President/Governor from time-to-time summons/prorogue each house of the parliament/Legislature
Article 169	The legislative council can be created and abolished by the parliament if the state assembly passes a resolution with a special majority to do so.
Article 102 & Article 191	Disqualification of members from either house can be on the ground of holding the office of profit, unsound mind, discharged insolvent, and on losing citizenship.
Art 105 & Art 194	Powers, Privileges etc of Houses of parliament/State legislature & of the members & committees.
Article 368	Powers and procedure to amend constitution.

Features of the American presidential system

- (a) **Doctrine of separation of powers.**
- (b) **The American President is both the head of the State and the head of government.**
- (c) The President governs with the help of a cabinet or a smaller body called '**Kitchen Cabinet**' [advisory body]. They are **responsible only to him, and can be removed by him any time.**
- (d) The President and his secretaries are **not responsible to the Congress.** They **neither possess membership in the Congress nor attend its sessions.**
- (e) The **President cannot dissolve the House of Representatives**—the lower house.

DISTINCTION BETWEEN INDIAN AND BRITISH MODELS	
INDIAN	BRITISH
Republican system	Monarchical system
Parliament is not supreme- limited & restricted powers	Doctrine of sovereignty of Parliament
Prime minister may be a member of either house	Prime minister should be a member of the Lower House
No legal responsibility of the minister	Legal responsibility of the minister
NO shadow cabinet	'Shadow cabinet' formed by the opposition party to balance the ruling cabinet
Non-MP can also be appointed as minister for maximum six months.	Usually, the members of Parliament alone are appointed as ministers

Parliamentary System		Presidential System
Features	Dual executive , Majority party rule, Collective responsibility , Double membership, Leadership of prime minister, Dissolution of Lower House , Fusion of powers	Single executive , President and legislators elected separately for a fixed term, Non-responsibility , Single membership, Domination of president, No dissolution of the Lower House , Separation of powers

Current Connect

Merits	Harmony between legislature and executive, Responsible government, prevents despotism [executive authority is vested in COM and not in a single person] Wide representation	Stable government, Definiteness in policies, Based on separation of powers, Government by experts
Demerits	Unstable government, No continuity of policies, Against separation of powers, Government by amateurs, Dictatorship of the cabinet if ruling party enjoys absolute majority	Conflict between legislature and executive, Non-responsible government, May lead to autocracy, Narrow representation

DIFFERENCE BETWEEN THE PARLIAMENTARY AND PRESIDENTIAL FORM OF GOVERNMENT

DECLINE OF PARLIAMENT

- **The decline in the number of sittings**
- **Discipline and decorum:** Eg: Kerala MLAs vandalism in the legislature in 2015, Pegasus project; abrogation of Art 370 showed us lack of discipline;
- **Declining quality of parliamentary debates:** Parliamentary discussion is less on national and important issues & more on local issues & politically motivated. Eg: Discussion for the acts of comedians and actors, Debates over tweets

- **Inadequate Discussion:** no/least discussion and by **voice vote eg:** Farm bills[in RS]

Decline in the number of sittings			Lok Sabha term	Bills referred to Committees
Term-LS	Sittings	Average days/year	16 th	27%
1 st	677	130-125	15 th	71%
15 th	357	70-65	14 th	60%
16 th	226	66 days		

- **Falling productivity of RS.**

- **Reduced Scrutiny by Parliamentary Committees-** Eg: none of the 13 bills passed recently was referred to any parliamentary committee; Government of NCT of Delhi (Amendment) Bill, 2021; Insurance (Amendment) Bill, 2021. It's a sign of abdication of parliament's duty to scrutinise Bills, rather than efficiency

- **Legislation through Ordinances-**unnecessary overuse. Eg: "Indian Medical Council (Amendment) Ordinance", The Aadhaar and Other laws (Amendment) 2019.
- **Parliamentary Privileges not yet codified**
- **Discussion for Union Budget:** The Lok Sabha had listed the budget of just five Ministries for detailed discussion and discussed only three. Moreover, 76% of the total Budget was approved without any discussion.
- **Absence of the Deputy Speaker of current Lok Sabha**
- **The low representation of women:** 14% [17th Lok Sabha] compared to U.S. [32%]. This is the highest no. of women MPs since 1952.

Implications –

- **Legislative gap** causing other organs to intervene, violating doctrine of Separation of Powers.
- **Less productivity**
- **Declining trust in the democratic process**
- **Hampered Checks & Balance-** Holding executive accountable requires its effective functioning.
- **Burden on exchequer & Lost opportunity cost-**eg: 1 session costs ~ Rs 2 crore

MULTIFUNCTIONAL ROLE OF PARLIAMENT	
Legislative Powers and Functions	Parliament is the legislative organ - making laws on Union list & concurrent list, policies. With regard to Concurrent List, Parliament has overriding powers. Parliament can also make laws on the State list subjects under the five abnormal circumstances -Rajya Sabha passes resolution, National emergency, Joint request of states, to give effect to international agreements, conventions or during President's rule in State.
Executive Powers and Functions	Ensuring Collective responsibility of COM through instruments like No confidence motion, censure motion, question hour, etc. Check the activities of the Executive through its committees- committee on government assurance, committee on subordinate legislation, committee on petitions, etc.
Judicial Powers and Functions	Enquire committees, impeachment of president, removal of judges of high court, Supreme Court, CAG, CEC and breach of its privileges.
Financial Powers and Functions	Budgetary control & post-budgetary control. Parliament authorization is needed by Executive to withdraw or use any money from Consolidated Fund of India. No tax can be levied except by authority of law. Public accounts committee, estimates committee and committee on public undertakings also scrutinize the government expenditure & financial performance.
Constituent Powers and Functions	Powers to amend the Constitution- Simple majority, Special majority or by special majority with consent of half states. The constituent power is subject to the 'basic structure' [Kesavananda Bharati case (1973)]
Electoral Powers and Functions	The elections of President and Vice President, speaker & deputy speaker & deputy chairman of the houses and heads of other parliamentary committees
Other powers and functions	highest deliberative body, discusses various issues of national and international significance; approves all the three types of emergencies; create or abolish the state legislative councils; can increase or decrease the area, alter the boundaries and change the names of states; regulate the organisation and jurisdiction of the Supreme Court and high courts

RAJYA SABHA

Rajya Sabha [Bicameral legislature]- It started from **Montagu-Chelmsford reforms.**

FALLING PRODUCTIVITY-

Rajya Sabha's "**Report to the people**" highlights the **below-par execution of the Upper House and the need to hold legislatures responsible. Highlights -**

- 16thLS - **Rajya Sabha passed less than one Bill in two sittings.**
- The **legislative output of the Rajya Sabha is declining**-In 2009-2014, it cleared 188 Bills and in 2004-09 it cleared 251 Bills.
- Since 2014, the **Upper House lost 40% of its allotted time due to disruptions.**

Relevance of Rajya Sabha

- **Permanent House:** provides stability.
- **Safety Valve of India's Federal Polity-** Representation of States- spirit of federalism, act as a safety valve within the legislature itself, easing federal tensions
- **Revisionary house-** Checks against populist & hasty decisions
- **Sharing the legislative responsibility-** Scrutinize bills intensely. Eg: Aadhaar bill 2019,
- **Representation to Experts**
- **Smaller body-** allows better discussions of key bills.

Current Connect

Reasons for low productivity

- **Political Tussle** between the government and the opposition
- **Platform to further their political agenda** than to debate and improve legislation
- **Lack of consensus** on many issues including the topics to be discussed and debated and the government is not taking the opposition in confidence.
- **Criminalization of politics**- ~24% of the sitting Rajya Sabha members have declared criminal cases against themselves
- **Backdoor entry for the unelected**
- **Low participation of nominated members**
- **Indirect Veto of LS**: Government often passes bill through Money Bill route which cannot be rejected by Rajya Sabha. Eg: Aadhaar and Other Laws (Amendment) Act 2019

Way forward

- Stricter Rules of Procedure and code of conduct to deal with the disruption.
- Legislative Measures: Parliament (Enhancement of Productivity) Bill, 2017 seeks to decide the minimum number of days (100 days for Rajya Sabha).
- Amending the Anti-Defection Law
- Citizen's charter of parliament.

Parliaments in Europe and Australia- if the bill is rejected twice in the Upper House, a joint sitting is held, where the bills are passed by an absolute majority.

Rajya Sabha vs Lok Sabha

Equal Status with LS	Unequal Status with LS	Special Powers of RS
<ul style="list-style-type: none"> • Introduction and passage of ordinary bills, Constitutional amendment bills and financial bills involving expenditure from the Consolidated Fund of India. • Election and impeachment of the president. • Election and removal of the Vice-President <p>Note: Rajya Sabha alone can initiate the removal of the vice president.</p>	<p>Money Bill – Can be introduced only in the Lok Sabha. RS cannot amend or reject a Money Bill. The Lok Sabha can either accept or reject all or any of their commendations. The final power to decide whether a particular bill is a Money Bill or not is vested in Speaker.</p> <p>COM collective responsibility to LS in particular.</p>	<p>Art 249- It can authorise the Parliament to make a Law on a subject enumerated in the State List</p> <p>Art 312- It can authorise the Parliament to create new All-India Services</p> <p>Art 352- endorse Emergency for a limited period when the Lok Sabha remains dissolved</p>

Rajya Sabha versus Senate		
Provisions	Indian system- Rajya Sabha	USA-Senate [Strongest]
States representation	According to population	Equal. 2 from each state
Finance & appropriation bill	No power to reject money bill. It Can be passed without RS consent.	Must also be passed by Senate separately
Joint sessions	To resolve deadlock. Chaired by speaker	Only for ceremonial purpose. No voting. Chaired by President.
Appointment	No power to appoint judges, Ambassadors etc. Collegium system for judges	President appoints with the advice and consent of Senate.

Current Connect

Foreign policy	Ratified by Cabinet.	It must ratify the treaties negotiated by President.
Impeachment	Either house can bring charge & other house investigates	Lower house bring charges. Senate investigates and removes.

Suggested Reforms

- Fixing minimum number of sittings: 120 [Lok Sabha], 100 [Rajya Sabha]- recommended by the National Commission to Review the Working of the Constitution
- Need amendment in laws like Anti defection law, role of speaker, Representation of people act etc.
- Codifying Parliamentary Privileges:
- Fix accountability of the unruly members.
- Departmental Committees and Improving Accountability: Restoring the balance between Parliament's legislative and deliberative functions and its role as a representational body (National Commission to Review the Working of the Constitution)
- Improving information supply: Members of the Parliament must remain up to date with the latest information regarding developments in all areas of parliamentary concern (National Commission to Review the Working of the Constitution)
- Reducing expenditure
- Strict code of conduct-(National Commission to Review the Working of the Constitution)
- Training of Members
- LEGISLATIVE IMPACT ASSESSMENT: Planning Legislation and improving it

Virtual meetings: Our parliamentary rules do not require physical meet- leveraging technology.

State Legislature- Art 168 to 212

Issues faced by state legislature

1. **Disruption and violation of decorum:** Eg: Kerala MLAs destroying property [2015], climbing on speakers dais as seen in Karnataka
2. **Reduction in time for deliberation and Assembly sittings** -Eg: the Haryana[average of 12sittings]and Kerala [48].
3. Poor **Legislative productivity**- average number of bills passed -19/year and it is as low as 10 for North Eastern States.
4. **Scrutiny of budget:** Most of the states do not enjoy time like parliament on budgets

2nd ARC - Legislative Council must work as representatives of the Panchayati Raj Institutions and the Constitution may be suitably amended to give the required powers to the council to work for strengthening the local governance

Utility of Legislative councils- Art169

- a) **Checks and balances**- checks the hasty, defective, careless, and ill-considered legislation
- b) **Platform to experts, Facilitates Expert opinion**& appraisal of legislation

Criticism-

- a) **Plays Unnecessary and obstructive Role**
- b) **Not an adequate check as** Powers of the Legislative Councils are restricted
- c) **Backdoor entry of defeated members**
- d) **Burden on state budget**

PARLIAMENTARY PRIVILEGES-Art105, 194

These are special rights, immunities, and exemptions enjoyed by the member of Parliament& state legislatures, their committees, individually and collectively, for independent& effective functioning. **Taken from British constitution**

Current Connect

Types -

Collective privileges	Individual privileges
<ul style="list-style-type: none"> Right to publish its reports, debates, and proceedings and Right to prohibit others from publishing the same Can exclude strangers from its proceedings and hold secret sittings Can make rules to regulate its own procedure and the conduct of its business 	<ul style="list-style-type: none"> They cannot be arrested in a civil case during the session of Parliament and 40 days before the beginning and 40 days after the end of a session Can punish members as well as outsiders for breach of its privileges Freedom of speech in Parliament Exempted from jury service.

Importance of privileges:

- To Perform their functions without fear & External interference
- For the protection of its members & to defend its own authority and dignity

Issues -

- Considering 3 sessions/ year **their immunity crosses more than 365 days**
- Powers to codify the privileges were left on wisdom of parliament,**
- Increased misuse:** In 2017, the Karnataka assembly Speaker ordered the imprisonment of two journalists for a year.
- Invades on constitutionalism:** legislators themselves decide what their privileges are, what constitutes their breach, and what punishment is to be given.
- Against rule of law-**The absolute freedom of speech places them above the citizens who have qualified freedom.
- Undermines equality**
- Immunity from the court's review**
- Global experience:** British Parliament has become liberal from its tradition of treating criticism as infringe to parliamentary privileges. The **U.S House of Representatives** has been working **without any penal powers** and **Australia has also codified the privileges**

Supreme court on privileges:

- **PV Narsimha Rao v. State case-** 'it is true that a house can hold a member accepting a bribe for voting guilty of its contempt, but the house has very limited penal powers.
- Hearing **Kerala's case**, SC held that **there can be no parliamentary immunity for vandalism. Parliamentary Privileges are Not Gateways of Immunity. Vandalism and destruction inside the House are not essential for exercising legislative function**

Way forward:

- Codification would enhance its accountability & be tested with constitutionalism.
- Justice M.N. Venkatachaliah commission had also recommended that privileges should be defined and delimited for the free and independent functioning of the legislatures. Holding freedom of speech subject to legislative privileges is not in tune with modern notions of human rights. **The balance between fundamental rights and parliamentary privilege must be re-examined.**

ROLE OF PRESIDENT AND GOVERNOR AS PART OF THE LEGISLATURE

<u>Role of President</u>	<u>Role of Governor</u>
Promulgation of Ordinance.	Promulgation of Ordinance.
Summons or prorogue the parliament and can also dissolve the Lok Sabha	summons or prorogue the state legislature and can also dissolve the house
Disqualification of MP's: President in consultation with Election Commission decides.	Disqualification of MLA/MLC in consultation with the ECI.

Current Connect

Control the legislations- prior recommendation is needed to introduce certain kinds of bills Eg: withdrawing funds from Consolidated Fund of India, alteration of State boundaries

Reservation of bills- that endangers the position of the High Court, derogatory towards the constitution or against the larger public interest

ANTI-DEFECTION LAW

Recent cases- MP, Karnataka, Manipur, Goa, Rajasthan, etc. **The 52nd amendment 1985** [added the Tenth Schedule] to combat “the evil of political defections”. It came as a response to the toppling of multiple state governments by party-hopping MLAs after the general elections of 1967

Provisions:

- **Members of Political Parties:** If he/she voluntarily gives up his/her membership of such political party; or abstains from voting in contrary to any direction issued without prior permission
- **Independent Members** gets disqualified if he joins any political party after such election
- **Nominated Members** gets disqualified if he joins any political party after 6 months of his/her joining.
- Allows a group of MP/MLAs to join or merge with another political party [2/3rd members]
- **Members disqualified** under the law can stand for elections from any political party for a seat in the same House.
- **The questions of disqualification on ground of defection are referred to the Chairman or the Speaker of such House**, which is subject to ‘**Judicial review**’.

Need of Anti-defection law

- **Ensures Stability** to the government by preventing party hopping, horse -trading, reduce money power.
- **Increases faith & trust of people.**
- Ensures **Party Discipline.**
- To maintain rule of law, reduced political corruption, and bribery.

Issues –

- **Undermines Representative & parliamentary democracy** - violates their freedom of speech and the power to take independent stand over any issue. They have to party blindly.
- **Misuse / controversial role of the speaker:** Delay in deciding disqualification, False dissent by the speaker on MLAs as seen in the cases of Arunachal Pradesh and Uttarakhand
- **Limited deliberations-** Quality of Parliamentary debates/deliberations has got reduced.
- **No recognition of split in a party.**
- **Affects the Governments functioning - “Aaya Ram, Gaya Ram”**
- **Emerging loopholes:** Post Karnataka elections, MLA’s were made to resign to artificially weaken the numerical strength and by polls were held to topple the government.
- **loop holes in 10th schedule-** MLA’s post resignations are allowed to contest the election as it is not considered defection

IMPLICATIONS OF DEFECTION ON INDIAN DEMOCRACY-

- **Undermines Electoral Democracy & Betrays Public Mandate:**
- **Promotes Corruption through Horse Trading**
- **Compromised constitutional machinery:** Governor act as agent of centre in such matters. For Eg: The Karnataka Ex-Chief Minister was not called to form government even though he had sufficient numbers
- ❖ **Relieve Chairman/Speaker** from Adjudicating defection cases: 2nd ARC recommends transferring this power to higher judiciary or to Election Commission to curb the menace of defection

Current Connect

- ❖ Political parties should limit issuance of whips to instances only when the government is in danger [**Law Commission**]

SC judgments-

Kihoto Hollohan case (1992- decision of the presiding officer is **not final and can be questioned in any court. It is subject to judicial review on the grounds of malafide, perversity, etc.**

Rece Supreme Court set **three months** as the outer limit for the Speaker to conclude disqualification proceedings against defectors.

Parliament should replace the Speaker with a “permanent tribunal” headed by a retired SC judge or HC CJ.

Ordinance & its issues

B R Ambedkar-use of ordinance was during emergencies when the house is not in the state to legislate.

In 2020 alone, **Kerala issued 81 ordinances, while Karnataka issued 24 and Maharashtra 21. Parliament on average issuing more than 15 ordinance/year.**

SC views-

R C Cooper case 1970-Ordinance could be challenged on the grounds that ‘immediate action’ was not required, and it had been issued primarily to bypass debate and discussion in the legislature.

Krishna Kumar Case 2017: The Legislative power of the executive to promulgate ordinances is to be used in exceptional circumstances and not as a substitute for the law-making power of the legislature

Issues-

- **Against separation of powers**
- **Lack of clarity in laws**
- **No sunset clause or minimum instances** on which ordinance can be drafted
- **Re-promulgation** of ordinances is a fraud on the Constitution and subversion of the democratic legislative processes

Recent eg:

The Indian **Medical Council Amendment Ordinance** issued twice

ROLE OF OPPOSITION

Soul of democracy. In the absence of opposition, any autocratic ruling party can arbitrarily impose or promote its ideology, beliefs, religion, caste, creed, etc on the country.

Role of the opposition in Indian democracy:

- **Act as the voice of the voiceless.** Eg: opposition’s role in extending PM-Garib Kalyan Ann Yojana during the national lockdown.
- Ensuring **Executive’s Accountability**
- **Safeguarding rights and liberty of people** Eg: use of question hour during the 2020 Kisan Andolan was constructive in the rising rights of protestors.

Issues of opposition in India:

- Lacks **Electoral strength:** INC being the largest opposition party, lacks the numerical strength to challenge the ruling party.
- **Marred by fragile coalitions, dynastic politics**
- **No coherent strategy-** Divided on the party lines & regional. Eg: During protest for reforms in NEET exam, MP’s of Tamil Nadu alone protested without much support from other parties.
- **Defection**

Impact of weak opposition:

- A body without soul- Democracy Index of EIU placed India as a **flawed democracy due to weak opposition.**

Current Connect

- **Tyranny of the cabinet**
- **Impact on governance-** eg: when farm bills were passed, several states enacted law to nullify the changes causing deadlock for administration.

What reforms are needed?

• **Legal reform: During lack of at least 1/10th seats**, numerically largest party in the opposition should have the right to have a leader recognized as a leader of the opposition by the speaker.

• **Strengthening anti-defection law** We can adopt best practices like setting up of **Shadow Cabinet as witnessed in the UK**

PARLIAMENTARY SCRUTINY

The recent protests over Agricultural Reform laws by farmers has reignited the debate on 'ineffectiveness of Parliamentary scrutiny over the executive'

Parliamentary oversight – one of the 4 major functions [representation of citizens, law making, oversight of the executive, and scrutiny of the budget- to prevent arbitrary & unconstitutional acts of the government.

Various methods of Parliamentary scrutiny of the government

Discussion/debate; Question Hour; Zero Hour [to raise matters without any prior notice]

Various motions like adjournment motion, No-confidence motion etc.

Parliamentary committees; Finance Committees

The **Committee on Estimates** reviews budgetary estimates of regulators.

The annual audit reports are reviewed by the **Public Accounts Committee (PAC);**

Ad-hoc Committees.

REASONS FOR INEFFECTIVE PARLIAMENTARY SCRUTINY:

- **Decrease in number of sessions**
- **Disruptions during Question Hour:** In the 16th Lok Sabha, question hour has functioned in Lok Sabha for 77% of the scheduled time, while in Rajya Sabha it has functioned for 47%
- **Not referring bills to the Parliament committees:** While 60% of the Bills in the 14th Lok Sabha and 71% in the 15th Lok Sabha were referred to the Parliamentary committees, this declined to 27% in the 16th Lok Sabha.
- **No effective leader of the opposition**
- **One party dominance**

Way forward:

Strengthen parliamentary oversight:

- DRSCs should be **Periodically examined** so that the committees which have outlasted their utility can be replaced with fresh ones[NCRWC]
- **Allow parliament to convene itself.**
- **Strengthen the opposition** by adopting UK and USA model where the opposition is allowed to decide the agenda of the parliament for 20 and 22 days respectively. This was also recommended by **13th All Whips Conference.**
- **Question hour:** In UK, the PM answers all question of question hour related to government policies
- **2nd ARC** recommends **that annual reports submitted by the regulators to Parliament should include the progress on pre-agreed evaluation parameters and should be discussed** in the parliamentary committee
- **Expert support** should be provided to MPs

Reforms in the committee system are needed-

- **Increase the transparency** like video recording of committee meetings as seen in US and UK.
- **Greater public participation** especially in DRSC should be ensured.
- **Oversight of intelligence agencies** like IB and RAW have limited oversight.

Semi-presidential system

Republican system having elements of both -presidential & parliamentary democracy.
Head of state is the president, directly elected by the people, whereas the head of government is the PM- nominated by the president but can be dismissed by the legislature. Eg: France, SL.
“cohabitation”- Semi-presidential systems in which the president and the PM are from differing political parties .

Merits	Demerits
Stability as well as Responsibility- president’s fixed term & Answerable PM.	Confusion about accountability between President and the PM
Protects the president from criticism and PM can be held responsible for unpopular policies.	Adds complexity for voters to ensure accountability.
Additional checks and balances mechanism.	Confusion and inefficiency in legislative process and executive actions.

Question Hour

The first hour of every parliamentary sitting - members asks questions and usually the ministers give answers. The questions are of three kinds, namely, starred, unstarred and short notice.

Importance-

- **Ensures Accountability & Transparency**
- **Informs the public on government’s performance-**gives the public a view of the performance.
- **Credibility of answers**
- **Generates Wider Debates further.**
- **Helps Government to Define their Stand**

Impact of suspending question hour:

- **Improper checks and balances.**
- **Accountability:** When it is nullified the Indian system leans towards a presidential form where the executive is not responsible to the legislature.
- **Fall of democratic ethos**
- **Impact on states:** It might trigger a domino effect on the States and it has set an unwanted precedence.

Election and Representation

Election Commission

It is a **permanent independent body** established by the constitution **to ensure free and fair elections** which are essentials of a democratic system and a **part of the basic structure** of the Constitution. Elections are the **Bedrock of democracy** and election **commission's credibility is Central to democratic legitimacy**

The guiding principles - to uphold the values enshrined in the constitution which is **equality, equity, impartiality, Independence and the rule of law** in superintendence, direction and control.

Independence -

CEC’s **security of tenure; service condition cannot be varied to his disadvantage** after his appointment It has following **powers and functions** that are **Administrative, Advisory, Quasi-judicial.**

Administrative:

- **Delimitation** of territorial constituencies
- **Conduct of elections:** Notify the dates and schedules of elections & scrutinize nomination papers.

Current Connect

- **Registers political parties**, grants them national or state party **status** and allots **election symbols**.
- Prepare and periodically revise **Electoral rolls**.
- **Enforce Model Code of conduct**

Advisory:- Advise the president and governor on matters relating to the disqualifications of the MPs and MLAs respectively.

Quasi-Judicial:-

Settles disputes related to grant of recognition to political parties and allotment of election symbols to them

Issues-

- **Lack of Independence, shrinking autonomy** [Appointment, Removal, & financial autonomy]
- **Lack of professionalism**
- **Quality of appointees** [monopolized by ex IAS officers];
- Professionally **ill-equipped for new challenges** like production and supervision of EVMs, regulation of social media, checking tax account of political parties;
- **No power to deregister political parties** even for the gravest of violations;
- It **doesn't have power** in matters like **enforcing inner-party democracy and regulation of party finances**
- **No RPA provisions regulating the disqualified legislator** to hold high position and offices **within the party** - convicted politicians continue to influence law making by **controlling the party and fielding proxy candidates;**
- **Issue of paid news and fake news.**
- **Allegations on EVM** like malfunctioning, hacking, not registering votes, etc[**EVM in cars** of the ruling party after voting]
- **Criminalization of politics**, inability of ECI to tackle increased use of money and criminal elements in politics.

Recent egs: Inexplicable delay in declaration of polling schedule like in Gujarat elections, Infamous rescheduling of EC's press conference, Inconsistency in EC's order to transfer top officials. Objectionable remarks by political leaders-CJI had to remind the election commission that it was not a toothless body

Reforms needed --

- Make appointment procedure transparent and free of controversy- make it **multi member selection body** -PM, leader of opposition, Law Minister[**2nd ARC, law commission**].
- **Election Commissioner shall not be removed** except in the manner as the judge of Supreme Court is remove
- **Supreme Court** pointed out that **CEC cannot suo-moto recommend removal** of other election commissioners and only when asked for its opinion
- Member of election commission shall be made **ineligible to join any political party for at least 10 years**
- **Administration expenses** of ECI and salaries, allowances, pensions **shall be charged on**

Constitutional Provisions

Art 324(1)-The power of superintendence, direction and control of election.

Art 325- Universal suffrage

Art326- Universal adult franchise

Article 243 K and 243 ZA- State Election Commission [elections to Panchayat and municipality in States.]

Article 172: In case of a state of emergency, election can be postponed for one year at a time[No specific provisions for postponement of election in a non-emergency situation]

Article 324: Extraordinary powers to delay due to law and order, natural calamities like earthquakes and

floods, or any other compelling circumstances which are beyond EC's control

Election conduct rules, 1961

Election symbols(Reservation& allotment) order, 1968.

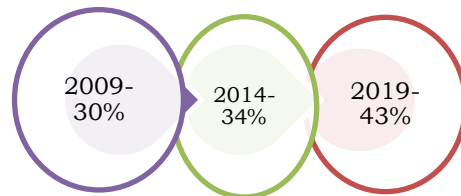
Current Connect

- CFI and not subject to vote of parliament. Recent example of delay in releasing funds for procurement of VVPAT machines.
- Give Election Commission the **power to deregister political parties**
- Paid news is not an electoral malpractices under RPA** but it should be treated as such [EC, Law commission]
- Include the offence of **filing false affidavit as a corrupt practice under section 123.**

Criminalization of politics

Participation of criminals in politics – contesting the election and getting elected- due to the nexus between politicians and criminals.

MPs having criminal cases registered against them [ADR]-



Winning probability of candidate: 13% in case of a criminal background and 5% in case of a clean record.

Rate of conviction <6% against MPs/MLAs against ~46% overall conviction rate under IPC

FACTS

- **Role of Money power in Elections:**
 - Election expenditure in India has gone up by ~6times in last 20years- from 9000cr to over 55000cr.
 - 84% MPs declared assets worth > 1Cr.
 - LS polls in Vellore [2019] cancelled due to use of money power.
- **India's position has been downgraded from 'electoral democracy to an "electoral autocracy" in the 2021 report of Sweden-based Varieties of Democracy (V-Dem) Institute**
- **Criminalisation of politics-**
 - 43% MPs have criminal cases registered against them, 19% face heinous crime charges.
 - Winning chances of a criminal background candidate is double that of a clean record candidate [ADR]
 - Rate of conviction <6% against MPs/MLAs against ~46% overall conviction rate under IPC
- **FPTP-**
 - Congress** got 26% vote in Odisha with 0 seats in 2014
 - BSP-** 20% votes in UP but 0 seats in 2014.
- **Voter turnout- Highest ever-67.11%**
 - In 9 states & UT, more women turned out to vote than men.
- Law Ministry has **reduced the age limit for senior citizens from 80 to 65** to opt for the postal ballot in the Lok Sabha and Assembly elections.

Reason:

- **Political-Criminals- Bureaucrats nexus- virtually running a parallel government [N N Vohra committee].**
- **RPA,1951** disqualifies from being MP/MLA after conviction but it doesn't prohibit from holding offices within the party. **No power** under Section 8 of RPA to disqualify candidates before conviction.
- **Weak criminal justice system & delays-** trial before lower court may last for >7 years; On an average, a criminal case takes ~15years for final disposal;
- **First past the Post system** doesn't discourage criminals from contesting elections.
- **Missing political will and constitutional morality.**
- **Voter's narrow interest** like community interests - caste or religion.
- **Buying Vote:** Voters have not yet organically evolved [SC]

Current Connect

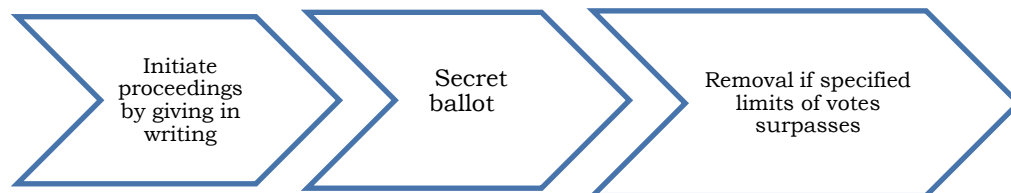
Consequences:

- **Lawbreakers become lawmakers**- reduces the quality of legislation being made, debates & discussions, and thereby eroding the trust of people in institutions.
- **Limits the choice of voters**- against free and fair election.
- **Increased black money circulation & corruption**
- **Increased violence in society.**
- **Politicisation of crime- undermines Rule of Law**
- **Politicisation of Law enforcement agencies.**
- Use of political powers to delay hearings, obtaining bails and repeated appeals raises a question on the independent and impartial working of the judiciary.

RIGHT TO RECALL

Haryana introduced the right to recall in Panchayati raj institutions.

- It is a direct democracy tool whereby the electorate has the power to remove the elected representative before the expiry of term.
- Procedure:



Advantages:

- **Greater accountability & responsibility** of the representative
- **Strengthens democracy- free and fair elections**
- **Check on the corruption & criminalization of politics**
- **Better service delivery:** Election promises would be fulfilled by the representative.

Challenges:

- **Instability of the government**
- **Frequent elections**- excessive spending, corruption, low voter turnout
- **Subjective and Vague criteria** like the dissatisfaction of the electorate with the performance of the candidate- scope for political misuse against a genuine candidate.
- Illiteracy
- Constant check will deter him from taking tough and unpopular decisions. Also, lack of security of tenure will lead to short-term plans than long-term reforms.

SC judgements

- **Kanhaiya Lal vs R K Trivedi 1985 case** held that **ECI enjoys 'Reservoir' of powers** under Art 324(1).
- **ADR vs UOI, 2002 case** held that citizens enjoy Fundamental Rights to make '**informed choices**', which includes **Right to know the background of candidates like asset-liabilities, criminal cases, pending cases, etc.**
- **Lilly Thomas vs UoI, 2013**- Immediate disqualification from contesting elections for next 6years if MPs/ MLAs is convicted for > 2 years jail term.
- **People's Union for Civil Liberties (PUCL) vs UoI case, 2013** -Right to negative vote i.e. NOTA to put moral pressure on political parties
- **Lok Prahari Vs UOI case 2018**- Mandatory disclosure of the Asset details &source of income of candidates as well as their dependants and associates.
- **2020 judgement**- Mandatory on political parties to publish details of pending criminal cases against candidates & reasons for selecting them over others and why other individuals without any criminal antecedents could not be selected.

SOCIO-ECONOMIC PROFILE OF 17TH LOKSABHA

~397 MPs were elected from National parties. Number of MPs re-elected is ~230-significantly higher than 16thLS [169].

43% of newly elected MPs are charged with criminal offences.

84% MPs have assets more than 1 cr. [ADR]

Average age of MP is 54 years. 12% MPs below the age of 40 from 8% in 16thLS. [26% in 1st LS]

72.5% have at least graduate level education.

78 women MPs -14.6% from 11.6% in 2014. Global average is ~23%.

Most MPs have declared POLITICAL & SOCIAL WORK [39%]as their occupation, while 38% are engaged in agricultural activities.

90.4% MPs are Hindus, Muslim MPs are ~5.2 %.

Voter turnout of women was almost that of men- ~67%.

14.8 candidates/constituency were field on average [PRS]

DELIMITATION COMMISSION

Recently ECI has started the delimitation process in J&K. Delimitation is the act of fixing the limits or boundaries of territorial constituencies for assembly or Lok Sabha seat based on “**One Vote One Value**” principle.

Constitutional provisions:

- **Article 81:** seats to be allotted in the Lok Sabha in the ratio of population to seats should be as equal as possible across states.
- **Article 82/170:** Delimitation of parliamentary/state constituencies after every
- **84th Constitutional amendment act:** Freezing of delimitation till 2026. [for population stabilization].

Why needed?

- a. **Unequal representation**
- b. **Higher burden on few MPs**
- c. **Violates ‘one vote one value’ principle**
- d. **Many voices are unheard.**

Arguments against Delimitation:

- Population control strategy may not work.
- Violation of constitutional limits on strength of house i.e. 550[Lok Sabha] and 250 [Rajya Sabha].
- Speaker and Chairman will find it difficult to regulate houses with increased strength. Also ensuring sufficient time for all MPs will become very difficult.

VOTING RIGHTS TO NON-RESIDENT INDIANS THROUGH POSTAL BALLOT

In 2015, the panel recommended that NRIs should be given the “**additional alternative options of e-postal ballot and proxy voting**”, apart from voting in person.

Electronically Transmitted Postal Ballot System (ETPBS)

- A flagship IT programme of Election Commission.
- It is a type of Postal voting whereby Ballot Papers are distributed electronically to voters & returned by them in Post.
- It is also known as e-postal ballots and these registered people are known as Service Voters.

Existing process for NRIs:

- **Voting rights for NRIs were introduced only in 2011**, through an amendment to the Representation of the People Act 1950.
- An **NRI can vote in person in the constituency** located in his/her place of residence, as mentioned in the passport.

Challenges:

Policing and security, Model code of conduct enforcement

Current Connect

According to **Ministry of External Affairs**, “**huge logistical challenges**” need to be addressed and “**a realistic assessment of requirements**” need to be made before the proposal is implemented.

ELECTORAL BOND

Announced in Union Budget 2017- 18 to **cleanse the system of political funding**.

Arguments in Favour:

- **Reducing the cash transaction** -to check under-the-table donations
- **Prevents black money:** Use of digital transactions, cheque, mandatory KYC norms with only 15 days validity helps to curb black money.
- **Protects the Donor from victimization.**
- **Prevent fraudulent political parties:** Eligibility criteria of 1% vote in last general or assembly election ensures to check shell parties.
- **Election commission:** The scheme is one step forward compared to the old system of cash funding,

Concerns raised by courts:

- **Anonymity of** the donor & the political party is not obligated to reveal the donation source. They need not have to maintain records of donations above 20,000.
- **Unfair election: 1%** votes in previous election criteria discriminates against new parties and hampers people’s Right to choose. E.g. RTI revealed that 94% of total donations were received by the ruling party
- **Information asymmetry:** Bonds are purchased through SBI hence ruling party may get all information about donors
- **Shell companies** may flourish with removal of the maximum cap of 7.5% of the profit
- **Risk of elite/corporate capture** of democratic process
- Reducing Indian democracy to the status of ‘**Chequebook Democracy**’.

Comparison of Indian and USA election commission		
Constitutional mandate & laws	By parliament like RPA,1951. ECI is responsible for both parliament and state elections.	Each state has its election laws and conducts its election.
Power	Reservoir of power under Art 324.	Limited power with US EC.
Composition	3 members, Independent of the government	6 member- 3 from Democratic, 3 from Republic; Not independent
Courts interference	Judiciary interferes only after completion of election	All disputes including the counting of votes are decided by the judiciary
Credibility & acceptance	No incident of rejection of mandate yet.	Often criticized for biased working and recently outgoing president refused to accept election results.

LOCAL GOVERNMENT

When the panchayat raj is established, public opinion will do what violence can never do [Mahatma Gandhi]

PRI was constitutionalized to democratise at the grass roots level and was entrusted with the task of rural development in the country.

Evolution of Panchayati Raj in India

Vedic Era- Rigveda mentions about **Sabha, Samiti and Vidatha as local self-units.**

Approval of these bodies regarding certain functions and decisions were taken by the king.

Self-government of a village is also mentioned in the ‘**Shanti Parva**’ of the Mahabharata.

Current Connect

Ancient Period- Mention of village panchayats in Kautilya's Arthashastra. **During the Mauryan and Post-Mauryan periods too, the headman was assisted by a council of elders.** The system **continued through the Gupta period**, though there were certain changes in the nomenclature. However, **no reference of women participating in the panchayat.** Vijayanagar empire also had elements of local governance.

Uttaramerur inscriptions throws light on the Decentralised administration of the Cholas. The responsibility of the village administration was entrusted to the village assembly called *Gram Sabha*. It was involved in the maintenance of roads, tanks, temples and public ponds. The village assembly was also in charge of payment of taxes due from the villages to the King's treasure.

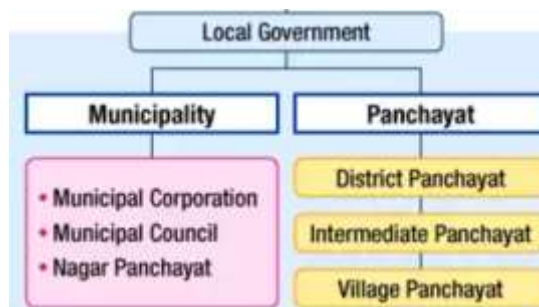
Medieval Period-Sultans of Delhi divided their kingdom into **provinces['Vilayat']** during sultanate period. However, Casteism and feudalist system of governance under the Mughal gradually eroded the self-government in villages.

British Period- During British rule, **village panchayats lost their autonomy** and got weakened. However, **Mayo's resolution of 1870 gave impetus to the development of local institutions.**

Lord Rippon in 1882 provided the democratic framework [Magna Carta of local democracy in India] to these institutions. All boards were mandated to have a two-thirds majority of non-officials who had to be elected. Ripon Resolution (1882) **focused on towns** **Montagu Chelmsford reforms of 1919** transferred the subject of local government to the provinces.

Post-Independence - Article 40[DPSP] & Article 246 empowers the state legislature to legislate with respect to any subject relating to local self-government.

In 1957, the National Development Council constituted a **committee headed by Balwant**



Committees formed to materialize PRIs	
Committee	
Balwant rai Mehta	Recommended " Democratic Decentralisation ".
Ashok Mehta (1977)	3-tier PR system should be replaced by 2-tier Panchayat Raj system - Zilla Parishad and Mandal Panchayat
G.V.K. Rao (1985)	" District " as the basic unit of planning and also holding regular election
M. Singhvi (1986)	Provide more financial resources and constitutional status to the panchayats to strengthen them

Rai Mehta which **suggested a three-tier PRIs**

Issues of PRI

- Problem of 3Fs** [Economic survey]- **Funds, Functions and Functionaries.** Need to enlarge the domain of panchayats to be able to raise their own funds. 73rd amendment left the decision to delegate powers, functions, and finances to the state legislatures
- Taxation power is limited-Subject to authorisation by the State Legislatures.**
- Panch-Pati and proxy representation** in case of women & SC/STs representatives.
- The **interference of politicians in the functioning of panchayats**

Current Connect

- **State Finance Commissions (SFCs): Many states are still in 3rd SFC stage rather than 5th which violated the mandate of the constitution with impunity** as mandated by **73rd Constitutional Amendment Act** [Art243I & Art 243Y]
- **Data problem- Local government with no proper budgetary system & deep disarray lack crucial data**
- **SFCs do not submit reports on time, lacking the proficiency. Huge task of considering large number of local governments.**
- **SFCs and local governments are seen to be of inferior constitutional status than the Union FC**
- **SFCs recommendations are not binding on the states.** States thereby avoid their responsibility to devolve certain percentage of their revenue to PRIs.
- PRIs also **suffer from structural deficiencies** i.e. no secretarial support and lower levels of technical knowledge which restricted the aggregation of bottom up planning.
- There is a **presence of ad-hocism** i.e. lack of clear setting of agenda in gram sabha, gram samiti meetings and no proper structure.
- **Accountability arrangements remain very weak** even after 26 years of PRIs constitutional arrangement.
- The issue of **ambiguity in the division of functions and funds has allowed concentration of powers with the states** and thereby restraining the elective representatives who are more aware and sensitive to the ground level issues to take control.

Suggestions

- **Fiscal federalism** i.e. fiscal autonomy accompanied by fiscal responsibility
- **2nd ARC- clear-cut demarcation of functions of each tier of the government.**
- There is **need for bottom-up planning** especially at the district level.
- **Separate bureaucratic cadre for Panchayats [Karnataka]** to solve the practice of deputation of officials.
- The center needs to **financially incentivize states** to encourage effective devolution to the panchayats in functions, finances, and functionaries.
- **Training the local representatives**
- **Social empowerment must precede the political empowerment.**
- **States like Rajasthan and Haryana have set certain minimum qualification standards** for Panchayat elections [help in improving effectiveness of governance]
- There should be clear mechanisms to ensure that States comply with the constitutional provisions, particularly in the appointment and implementation of the recommendations of the State Finance Commissions (SFCs).

ROLE OF LOCAL GOVERNMENT DURING COVID

Additional powers to GPs: Odisha conferred the powers of District Collector to Sarpanch of Gram Panchayat; now, decisions about easing lockdown, movement of immigrants and self-isolation or quarantine can be taken by the local Gram Panchayat.

• **Effective devolution: Kerala's** effective devolution that has helped in 'Flattening the curve'.

• **Strong institutional mechanism:** Most panchayats in the **Bhuj district** were able to respond quickly to corona pandemic with community kitchen, home quarantine and announcements of correct information about hand washing and social distancing on loudspeakers. This was possible because of a strong institutional mechanism in place after the earthquake in 2001.

• **Nudge against vaccine hesitancy:** The healthcare workers like **ASHAs** are helping in disseminating information related to the side-effects, effectiveness and procedure of the vaccine locally.

• **New roles:** Urban local bodies sought new roles such as providers of vegetables and facilitators in arranging groceries for people.

FACTS

There are ~ 250,000 PRIs and urban local bodies, and over 3 million elected local government representatives

India has the most -1.4 million elected women representatives.

Devolution Index, 2019-Kerala was the best performer in devolving power and resources to panchayats, followed by Maharashtra.

Pune Municipal Corporation has become the first local body in the country to issue **municipal bonds** in ~15years, raising Rs 200 crore.

Constitutional provisions:

Art 40- Organisation of village panchayats

Art 246- Empowers States to legislate on any subject related to Local Self Government

73rd& 74th Constitutional Amendment Act, 1992 – Rural & Urban

URBAN GOVERNMENTS

1. **MUNICIPAL CORPORATION**
 - Administration of large cities (Population greater than 10 lakhs); Established by Act of State Legislature.
2. **MUNICIPALITY**
 - Administration of towns and smaller cities; setup by Acts of state legislature
3. **NOTIFIED AREA Council**
 - Established by notification in the official government gazette
4. **TOWN AREA COMMITTEE**
 - Established by an Act of state legislature; for small towns- limited civic functions are carried (drainage, roads and street lighting etc.);
5. **CANTONMENT BOARD**
 - Established by an Act of Parliament (Cantonment Board Act, 2006) for civilian administration of Cantonment Area
6. **TOWNSHIP**
 - Industrial establishment providing civic amenities-Notified by the Governor;
7. **PORT TRUST**
 - Major ports are created by an Act of Parliament;

Initiatives for PRIs

- **eGramSwaraj**- web-based portal which aims to bring in better transparency by unifying the planning, accounting and monitoring functions of Gram Panchayats.
- **Rashtriya Gram Swaraj Abhiyan** - centrally sponsored scheme to achieve “Sabka Sath, Sabka Gaon, Sabka Vikas”.
- **People’s Plan Campaign (PPC)**- It aims to draw up Gram Panchayat Development Plans (GPDPs) in the country and place it in a website where anyone can see the status of the various government’s flagship schemes.

SOCIAL ISSUES

Pneumonia and Diarrhoea Progress Report

The latest annual Pneumonia and Diarrhoea Progress Report was released recently by the International Vaccine Access Centre (IVAC).

- This year's report card finds that although overall the world's health systems are falling short of ensuring that children have access to prevention and treatment services, India has achieved the global target of 90% coverage for three of the five vaccines whose coverage is monitored in the report.
 - These vaccines are Diphtheria, Pertussis and Tetanus (DPT) vaccine, Measles-containing vaccine first dose, Haemophilus influenzae type B, pneumococcal conjugate vaccine (PCV), and rotavirus vaccine.
- While India's coverage of rotavirus vaccine increased by 18 percentage points (35% rotavirus coverage in 2018 expanded to 53% in 2019), coverage against pneumococcal pneumonia increased by 9 percentage points (6% PCV coverage in 2018 expanded to 15% in 2019).
- Nearly every country included in the report lagged in access to treatments against pneumonia and diarrhea
- India failed to reach all four targets for treatment, the report stated, adding that the treatment for diarrhoea had the lowest coverage, with only 51% of children receiving ORS and 20% getting zinc
- Pneumonia continues to kill more children under five worldwide than any other single infectious disease, claiming an estimated 800,000 children's lives in 2018.
- while diarrhoeal diseases — the second leading infectious cause of death of children under 5 — claimed the lives of 437,000 young children.
- Globally, over 1.23 million children died of pneumonia and diarrhoea before reaching their 5th birthday — the equivalent of over 141 child deaths per hour or 3,400 deaths per day.

India's immunisation coverage has improved

- India's coverage of the rotavirus vaccine — rotavirus is the cause of the highest number of diarrhoea cases in the world — increased by 18 percentage points. Its coverage was estimated at 53 per cent in 2019, up from 35 per cent in 2018.
- In 2019, India completed the "100-days agenda" — an unprecedented national scale-up of the rotavirus vaccine across states to help protect 26 million children born each year against life-threatening cases of rotavirus diarrhoea.
- India's immunisation coverage against pneumococcal pneumonia, also increased by 9 percentage points — 15 per cent in 2019, up from 6 per cent in 2018.
- Conclusion
- The efficient rollout of new vaccines has improved India's scores in the 2020 report, global trends find that progress in preventing child morbidity and mortality is lagging behind targets.
- The window to act was already urgent in 2019, but in the coming year progress needs to be accelerated in order to sustain decades of progress in reducing childhood mortality.

Report card

Though India has made some strides in its vaccination programme, access to treatment leaves much to be desired

• India's under-five diarrhoea and pneumonia deaths in 2017: **2,33,240**

• India's coverage of rotavirus vaccine increased from **35%** in 2018 to **53%** in 2019

• Coverage against pneumococcal pneumonia increased from **6%** in 2018 to **15%** in 2019

• Treatment for diarrhoea had the lowest coverage with only **51%** of children receiving ORS and **20%** getting zinc

A file picture of a nurse administering pentavalent vaccine to a child in Hyderabad.

Current Connect

Step taken by government to prevent Pneumonia and Diarrhea

- In 2014 India launched Integrated Global Action Plan for the Prevention and Control of Pneumonia and Diarrhea (GAPPD) is to reduce deaths from pneumonia to fewer than 3 children per 1000 live births, and from diarrhea to less than 1 in 1000 by 2025.
- Universal Immunization Programme (UIP) is one of the largest public health programmes targeting close of 2.67 crore newborns and 2.9 crore pregnant women annually.
- Social Awareness and Action to Neutralize Pneumonia Successfully' was launched by the Union Health Ministry to mobilise people to protect children from pneumonia, and train health personnel and other stakeholders to provide prioritized treatment to control the disease.

New UN Alliance to stave off 'catastrophic food crisis'

Recently, Food and Agriculture Organization (FAO) of the United Nations launched a Food Coalition.

- FAO is a specialized agency of the United Nations that leads international efforts to defeat hunger.

What is the need of such Alliance?

- The novel coronavirus disease (COVID-19) pandemic has pulled food systems apart, threatening food security and nutrition. At least 690 million people went hungry in 2019. Now, the pandemic could tip over 130 million more people into chronic hunger by the end of 2020.
- Proposed by Italy and led by FAO, the global alliance aims to help countries get back on track to achieve the UN-mandated Sustainable Development Goals by 2030, especially the ones on ending hunger and poverty. More than 30 countries have already expressed interest in joining the coalition.
- The alliance would work as a network of networks and a multi-stakeholder coalition for a unified global action to support measures to ensure food access and increase the resilience of agricultural food systems in response to COVID-19.

The Food Coalition would work towards

- Mobilising resources, expertise and innovation
- Advocating for a joint and coordinated COVID19 response
- Promoting dialogue and exchange of knowledge and expertise among countries
- Working towards solution-oriented plans and programmes
- Expanding international cooperation and partnership for a longer term impact

Way forward

- Countries must make sure that food value chains continue to function well and that the agricultural labour force and poor consumers, both rural and urban are not pushed beyond the poverty line.
- COVID-19 has taught us that we need to increase the resilience of agri-food systems, to be ready to minimise risks and cope with them as they occur.

Sarna Tribals

- Recently, Jharkhand legislature passed a government-backed resolution that would allow Tribals in the state to identify with a distinct religion.
 - A separate column for tribe as a religious identity was included in the census from 1871 to 1951, but was subsequently dropped.
- The followers of Sarna faith believe pray to nature. The holy grail of the faith is "Jal, Jungle, Zameen" and its followers pray to the trees and hills while believing in protecting the forest areas.
- Jharkhand has 32 tribal groups of which eight are from Particularly Vulnerable Tribal Groups.
- While many follow Hindu religion, some have converted to Christianity — this has become one of the planks of demanding a separate code "to save religious identity"— as various tribal organisations put it. It is believed that 50 lakhs tribal in the entire country put their religion as 'Sarna' in the 2011 census, although it was not a code.

Current Connect

Why this code is important?

- Many of the tribals who follow this faith have later converted to Christianity—the state has more than 4% Christians most of whom are tribals.
- Some who still follow the Sarna faith believe the converted tribals are taking the benefits of reservation as a minority as well as the benefits given to Schedule Tribes.
- They also believe that benefits should be given specifically to them and not those who have converted.
- The population of tribals in the state had declined from the 38.3 per cent in 1931 to 26.02 per cent in 2011.
- It cited that one of the reasons for this was tribals who go for work in different states not being recorded in the Census.
- In other states, they are not counted as Tribals, the separate code will ensure recording of their population.
- The declining numbers affect the constitutional rights given to them and how the rights will be bestowed upon the Adivasis under 5th Schedule of the Constitution.

What are the problems?

- There are two problems. One, the term Sarna is not common to all the adherers of a naturalistic religion based on worship of forests, rivers and mountains.
- Equating the idea of a naturalistic religion with only the Schedule Tribe population is problematic. It should be open to all.

Way forward

- The protection of their language and history is an important aspect with tribals. Between 1871 and 1951, the tribals had a different code. However, it was changed around 1961-62.
- The entire world is focusing on reducing pollution and protecting the environment, it is prudent that Sarna becomes a religious code as the soul of this religion is to protect nature and the environment.

Global HIV Prevention Coalition

- Recently, Union Minister for Health and Family Welfare digitally addressed the Ministerial meeting of the Global Prevention Coalition (GPC) for HIV Prevention.
 - Launched in 2017, the Global HIV Prevention Coalition aims to bring fresh momentum and clarity to HIV prevention programmes in 28 focus countries—the 28 countries worldwide with the greatest burden of new HIV infections. The 28 coalition countries have identified and promoted priority programme approaches and interventions, rekindled political commitment for HIV prevention and guided and supported programme implementation.
- The latest progress report of the Global HIV Prevention Coalition notes that there has been significant progress in implementing 10 strategic actions set out in the Global HIV Prevention 2020 Road Map, but a number of countries still have difficulties in changing underlying factors that hold back effective HIV prevention programmes.
- The COVID-19 pandemic is an additional challenge to maintaining progress in HIV prevention this year.
- Of particular concern are disruptions in HIV prevention services such as voluntary medical male circumcision, interrupted access to prevention commodities, including safe injection supplies, the effects of lockdowns on educational and social support services and the interplay between economic downturns and heightened HIV risk behaviours and vulnerability.

India's Achievement in Prevention and Control of HIV/AIDS

- Global AIDS response has shown remarkable success in reducing new infections, improving access to prevention services for key population and treatment services for People living with HIV (PLHIV), reducing AIDS related mortality, enabling reduction in mother to child transmission of HIV and creating an enabling environment, the

Current Connect

- organization “has shown to the world a model where multiple stakeholders can come together and work cohesively towards a common goal
- Over the past decade, India has made significant progress in tackling its HIV epidemic, especially in comparison with other countries in the region.
 - The Government of India took swift and timely action by involving communities, civil society, development partners to reach out to the last mile with a robust implementation plan for ARV dispensation.
 - India’s unique HIV prevention model which is centred around the concept of ‘social contracting’ through which the targeted interventions (TI) programme is implemented.
 - India’s prevention model can be adopted and scaled up in many countries by tailoring the intervention as per local settings. It can also be replicated in other prevention and disease control programmes.
 - The government also linked key populations and PLHIV to various social welfare schemes. Advisory and guidance notes were issued by NACO from time to time aligned with global guidelines in the context.
 - The HIV Counselling & Testing Services (HCTS), Community based Screening of HIV for improving early diagnosis were also ramped up; the coverage of testing for HIV across the country was increased to achieve the Elimination of Mother to Child Transmission of HIV.
 - The Human Immunodeficiency Virus and Acquired Immune Deficiency Syndrome (Prevention and Control) Act, 2017 which has provided a legal and enabling framework for safeguarding the human rights of the infected and affected populations.

Recognition of Prior Learning (RPL)

- Ministry of Skill Development and Entrepreneurship (MSDE) conducted a special Recognition of Prior Learning (RPL) program for workers, with the Department of Panchayati Raj (DoPR) in Chandauli and Varanasi. The programme is implemented under SANKALP Programme of MSDE.
 - Skill Acquisition and Knowledge Awareness for Livelihood Promotion (“SANKALP”) is a programme of the Ministry of Skill Development with loan assistance from the World Bank.
 - SANKALP is funded through three major parts: (i) World Bank loan assistance (ii) States’ contribution and (iii) Industry contribution.

About Recognition of Prior Learning (RPL)

- The programme promote decentralization and local governance for better planning and implementation of skill development programmes.
- The implementing agency for the programme is National Skill Development Corporation (NSDC).
 - NSDC aims to promote skill development by catalyzing creation of large, quality and forprofit vocational institutions. Further, the organisation provides funding to build scalable and profitable vocational training initiatives.
 - Its mandate is also to enable support system which focuses on quality assurance, information systems and train the trainer academies either directly or through partnerships.
- Under the partnership, MSDE is supporting the State Skill Development Missions (SSDMs)/District Skill Committees (DSCs) in selection and onboarding of the PIAs and facilitating successful execution of the programme.

Importance of RPL

- About 70% of our country’s population resides in rural India and hence the inclusion of gram panchayats is crucial for the success of District Skill Development Plans and will provide a huge fillip to the Skill India Mission.
- Through RPL, aim is to align the competencies of the pre-existing workforce of the country to the standardized framework.
- Certification builds confidence, brings respect and provides recognition to the candidates, it has the potential to make skills aspirational.

Current Connect

- Supporting formalization of the informal learning of youth will supplement their efforts in finding sustainable livelihood opportunities and reduce inequalities based on privileging certain forms of knowledge over others.
- Recognition of Prior Learning (RPL) programme recognizes the value of learning acquired outside a formal setting and provides a government certificate for an individual's skills.
- This initiative is part of a larger programme on 'Skill Development Planning at the level of 'Gram Panchayat' that focuses on introducing Recognition of Prior Learning (RPL) in a structured manner in GPs of various districts across the country.

Human Freedom Index

- The Human Freedom Index 2020, a worldwide ranking of civil, economic and personal freedom, placed India at the 111th spot out of 162 countries. India ranked 94 on the index in 2019.
 - The Human Freedom Index presents the state of human freedom in the world based on a broad measure that encompasses personal, civil, and economic freedom.
 - Human freedom is a social concept that recognizes the dignity of individuals and is defined in this index as negative liberty or the absence of coercive constraint.
 - Because freedom is inherently valuable and plays a role in human progress, it is worth measuring carefully.
 - The Human Freedom Index is a resource that can help to more objectively observe relationships between freedom and other social and economic phenomena, as well as the ways in which the various dimensions of freedom interact with one another.
- India is ahead of China and Bangladesh, which ranked 129 and 139 on the 2020 index respectively. New Zealand, Switzerland and Hong Kong bagged the first three spots.
- India's scored 6.30 out of 10 in personal freedom and 6.56 in economic freedom. The country's overall human freedom score was 6.43.
- Only 15% of the world's population lives in the top quartile of countries in the HFI, and 34% live in the bottom quartile. The gap in human freedom between the most free and the least free countries has widened since 2008, increasing by 6% when comparing the top and bottom 10% of nations in the HFI.
- Out of 10 regions, the regions with the highest levels of freedom are North America (Canada and the United States), Western Europe, and East Asia. The lowest levels are in the Middle East and North Africa, sub-Saharan Africa, and South Asia.
- Countries in the top quartile of freedom enjoy a significantly higher average per capita income (\$50,340) than those in other quartiles; the average per capita income in the least-free quartile is \$7,720
- The HFI also finds a strong relationship between human freedom and democracy. Hong Kong is an outlier in this regard.

Analytica

- Personal freedom around the world has seen a "notable decline since 2008". Overall freedom has also declined, though to a lesser degree, over the same time period." Of the 12 major categories that measure in the report, all but five have seen some deterioration, with freedom of religion, identity and relationship freedoms, and the rule of law seeing the largest decreases.
- India was ranked 142nd in the Press Freedom Index, followed by a fall of 26 spots in the global economic freedom index in September 2020. India has also registered low scores on indices on academic freedom and internet freedom.
- The findings in the HFI suggest that freedom plays an important role in human well-being, and they offer opportunities for further research into the complex ways in which freedom influences, and can be influenced by, political regimes, economic development, and the whole range of indicators of human well-being.

Silver Economy**About**

As the number of senior citizens increase – from 10.38 Crore in 2011 to an estimated 17.3 Crore in 2026 and 30 Crore in 2050, the government is exploring ways to promote the idea of 'Silver Economy' by developing residential and infrastructure facilities of different grades for senior citizens through public-private partnership for a dignified and safe aging experience.

What is the silver economy?

- The Silver Economy is dedicated to the elderly in our societies. As its name suggests, the Silver Economy is not a “market” but a cross “economy”.
- The population ageing process is real and impacts every market and industry, such as: home accommodation, transport, food industry, insurance, robotics, health and e-health, communications, Internet, sports and leisure.
- The silver economy is analysed in the field of social gerontology not as existing economic system but as an instrument of ageing policy and the political idea of forming a potential, needs-oriented economic system for aging population.
 - Social gerontology is a specialization that centers on the social aspects of growing old. The goal of social gerontologists is to help older adults improve their communication and interactions with others. Ideally, they will be able to help older adults live active, independent lifestyles.

Problems Faced by the Aged People in India

1. **Lack of Infrastructure:** With increasing longevity and debilitating chronic diseases, many elder citizens will need better access to physical infrastructure in the coming years. Lack of physical infrastructure is a major deterrent to providing comfort to the aged. Many elder citizens need better access to physical infrastructure, both in their own homes and in public spaces.
2. **Healthcare Issues:** Unattended chronic disease, unaffordable medicines and treatment and malnutrition are part of old age life in India as there is no system of affordable health care. Emphasis on geriatrics in the public health system is limited with few dedicated geriatric services. The other issues of the public health system are lack of infrastructure, limited manpower, poor quality of care and overcrowding of facilities due insufficient focus on elderly care.
3. **Changing Family Structure:** The traditional Indian society with an age-old joint family system has been instrumental in safeguarding the social and economic security of the elderly people. The traditional norms and values of Indian society also laid stress on showing respect and providing care for the elderly. However, with the emerging prevalence of nuclear family set-ups in recent years, the elderly is likely to be exposed to emotional, physical and financial insecurity in the years to come.
4. **Lack of Social Support:** The elderly in India is much more vulnerable because of the less government spending on social security system. The elderly in urban area relies primarily on hired domestic help to meet their basic needs in an increasingly-chaotic and crowded city. Social isolation and loneliness have increased. Insurance cover that is elderly sensitive is virtually non-existent in India. In addition, the pre-existing illnesses are usually not covered making insurance policies unviable for the elders. Pension and social security is also restricted to those who have worked in the public sector or the organized sector of industry.
5. **Social Inequality:** Elderly are a heterogeneous section with an urban and rural divide. They are less vulnerable in rural areas as compared to their urban counterparts, due to the still holding values of the joint family system. All the elderly are not seen in the same view as the needs and problems of elderly are rejected to a vast extent as government classifies these people based on caste and other socio-cultural dimensions.
6. **Economic Dependency:** The elders living with their families are largely contingent on the economic capacity of the family unit for their economic security and well-being. Elderly often do not have financial protection such as sufficient pension and other form of social security in India. The single most pressing challenge to the welfare of older person is poverty, which is a multiplier of risk for abuse. Also due to their financial dependence, elderly persons though are most vulnerable to infections have low priority for own health.

Current Connect

Migration of younger generation, lack of proper care in the family, insufficient housing, economic hardship and break-up of joint family have made the old age homes seem more relevant even in the Indian context.

Analytica

- Shifting demographic trends demand policy reforms and cultural change
 - The demographic changes in the country call for appropriate economic and social innovation underpinned by adequate policy reform and profound cultural transformation.
 - We need innovative models of finance to drive the silver market and provide tailor-made services to seniors
- Silver Economy: A potential driver for India's growth
 - The longevity of the economy is about leveraging a healthy population's potential to drive demand while also extending the earning cycle beyond the traditional age bar of 60.
 - Being a consumption driven economy, India will benefit immensely from increased consumption of goods and services by the senior segment.

What needs to be done?

- The rising demands of senior care can be met only if there are enough businesses that offer specialised, seniorspecific services. But for such services to evolve, government intervention is critical in the following areas:
- Recognising Senior Care as a Sector: Senior Care needs to be recognised as a sector with appropriate regulations, policy support, tax structures, availability of subsidised financing, and appropriate governance mechanisms. This would attract greater investments and encourage private sector participation.
- Tax incentives: Expenses on senior care solutions (like home care, care homes etc.) should be exempted of any taxes to enable faster penetration of such products and services. This will increase private sector participation and enhance the overall quality of service.
- Providing access to low cost funding: Currently the senior living players find it difficult to raise funds for development of senior living communities. Developers either have to rely on advances from customers or infuse equity. Higher input costs lead to higher price for seniors. It therefore allows only a small segment to buy or lease senior communities. Lower financing costs would allow for more affordable senior living and senior care projects.
- Preferred status for land allocation and payments: Availability of land at lower prices than market prices and the option of staggered payments at lower interest would also help in keeping the cost of living arrangements, especially in metros, at an affordable level. This will further help in removing entry barriers and bolster growth of the silver economy.

Conclusion

- As India is poised to witness a surge in its senior population, policy support will be required to promote both the demand and supply of senior specific services to tap the economic potential of this segment. Governments, businesses, and individuals must work together to adapt policies and behaviours to ensure individual and national fiscal sustainability as the population starts ageing.
- A critical step in this direction will be allowing people to work longer and helping them plan better for their retirements, while offering critical support to the senior care industry to provide necessary services at affordable rates. This will not only create a win-win model for the consumers and the industry but will also create a national ecosystem that manages the population ageing smoothly.

Disability in India

- The 2011 census estimated that the number of people with disabilities in India is close to 2.68 crore (or 2.2% of the population) — that is more than the entire population of Australia.
 - Until the 2011 census, there were questions on seven kinds of disabilities in the questionnaire. This list of disabilities was expanded to 21 when the Rights of People with Disabilities was introduced in 2016.

Current Connect

- Rural men had the highest prevalence of disability in India, according to the NSO report. A higher proportion of men were disabled in India compared with women, and disability was more prevalent in rural areas than in urban areas.
- Inability to move without assistance was the most common disability. More men experienced locomotor disability than women.

Issues related to Disabilities in India

- Persons with disabilities are considered as one of the marginalized groups in the whole world. They have the same kind of health needs like non-disabled ones — for health screening, immunization etc.
- They may even experience a narrower health margin, both because of social exclusion and poverty.
- They are disabled not only by their bodies but by society as well. Thus, disability isn't only a health problem. It's a complex phenomenon that reflects the interaction between the features of an individual's body & characteristics of the society in which the person lives in.
- A large number of children with disabilities (CWDs) remain out of school.
- Although the SarvaShikshaAbhiyan has made an effort to promote the inclusion of children with disabilities, the system faces a lot of challenges in identifying these children as well as responding to their needs.
- A number of disabilities in India can be avoided and prevented including those that arise from medical issues during pre-natal, natal and post-natal conditions, injuries, accidents and malnutrition.
- But the health sector hasn't yet reacted proactively to disability, particularly in rural regions.
- Even though many persons with disabilities are capable of productive work they remain unemployed. Forget about the private sector offering employment to these people even the public sector hardly does.
- Despite of the fact that 3% is reserved for PWDs, only ten percent posts are identified as suitable. The quota policy even covers only three kinds of disability — hearing, visual and locomotor.
- Evidence suggests that PWDs face different kinds of barriers in accessing the health as well as rehabilitation services they require in several settings.
- Overcoming all kinds of difficulties faced by persons with disabilities needs interventions for removing environmental & attitudinal barriers.

Constitution Rights

- Article 15(1) enjoins on the Government not to discriminate against any citizen of India (including disabled) on the ground of religion, race, caste, sex or place of birth.
- There shall be equality of opportunity for all citizens (including the disabled) in matters relating to employment or appointment to any office under the State.
- No person including the disabled irrespective of his belonging can be treated as an untouchable. It would be an offence punishable in accordance with law as provided by Article 17 of the Constitution.
- Every person including the disabled has his life and liberty guaranteed under Article 21 of the Constitution.
- Article 25 guarantees to every citizen (including the disabled) the right to freedom of religion. Every disabled person (like the non-disabled) has the freedom of conscience to practice and propagate his religion subject to proper order, morality and health.
- No disabled person can be compelled to pay any taxes for the promotion and maintenance of any particular religion or religious group.
- The right to education is available to all citizens including the disabled. Article 29(2) provides that no citizen shall be denied admission into any educational institution maintained by the State or receiving aid out of State funds on the ground of religion, race, caste or language.

Current Connect

- Article 45 directs the State to provide free and compulsory education for all children (including the disabled) until they attain the age of 14 years.

Government Initiatives for Disabled in India

1. Accessible India Campaign which will focus on making India a disabled-friendly country.
2. ADIP Scheme
3. Composite Regional Centre for Skill Development, Rehabilitation and Employment of Persons with Disabilities.
4. Deendayal Disabled Rehabilitation Scheme

Conclusion

- In India, the numbers of disabled are so large, their problems are complex, available resources also scarce, social stigma still attached and people attitudes so damaging.
- Attitudinal barriers engrained as part of India's historical response to disability must be changed through education programs for both teachers and the general populace. These programs require financial and collaborative commitment from key national and state education stakeholders, and partnership with universities to support research-based initiatives.
- It is the only legislation which can eventually bring about a substantial change in a uniform manner.
- Therefore, in country like India mainstreaming of these people is challenging issue. For achieving this task it's necessary to change public attitudes, remove social stigma, provide barrier free environment, needs reformation in the area of policy and institutional level.

Burden on Women

- A political Party recently promised salaries to housewives as a part of its electoral campaign in Tamil Nadu.
- Demand for wages against housework was first raised at the third National Women's Liberation conference in Manchester, England.
- International Wages for Housework Campaign (IWFHC) was formed by Selma James in 1972. Since then, several organisations, particularly in the UK, US, Canada and Italy, have raised similar requests.
- In India, an application by the National Housewives Association, seeking recognition as a trade union in 2010, was rejected by the deputy registrar of trade unions on the ground that housework is not a trade or an industry.
- In 2012, the then minister for Women and Child development, Krishna Tirath, announced that the government was considering mandating a salary for housework to wives, from husbands.

Women and the Burden of Unpaid labour

- The traditional Indian imagination of a household almost takes it for granted that certain jobs within the household are to be performed only by women.
- These tasks can include domestic upkeep, cooking, cleaning and childcare, while a broader definition would also include the hours of emotional labour that goes into holding families together and putting up with patriarchal constructions of what women are expected to tolerate and expect.
- Regardless of the hours of the day women put in to this domestic labour, the work is often dismissed as a set of daily chores and not accounted for in either the GDP or the employment metrics.
- Since the work done at home doesn't necessarily generate products and services for the market, economists often ignore it in their calculations and the result is that a massive portion of the work done by women in India goes unrecognised as labour and is treated as a duty.
- While much of this imbalance is explained by the discrepancy in care-giving and unpaid work, institutional and policy inertia, outdated organisational structures and discrimination, one additional explanatory factor is the skills differentials in the types of degrees women and men seek out in their education.

Current Connect

- India particularly, is a country where this phenomenon is at its worst, with women putting in 352 minutes a day into domestic work while men put in only 51.8. While to the common observer, this might not seem like a problem, the fact that 49 per cent of women in a country of 1.3 billion people don't have their work accounted for in the annual GDP, throws up several problems.

Facts

- The proportion of “unpaid work per day is far higher for women than men globally, while in case of India on average 66 per cent of women's work is unpaid.
- According to the Census in 2011, people engaged in household duties have been treated as non-workers, even when 159.9 million women stated that “household work” was their main occupation.
- In a report, the International Monetary Fund also suggested that if women's participation in the economy was raised to that of men, then India could grow its GDP by 27 per cent.

Benefits

- While the global value of unpaid domestic labour by women hovers around 13 per cent, in India, the number is almost 40 per cent of its current GDP.
- In recognising this labour as genuine work, the benefit to India in terms of its GDP figures is almost self-evident, more importantly however, is its potential at the level of families for women's empowerment around the country.
- Recognition is one of the most central processes in empowerment, and for more than 150 million women in the country, the recognition of their primary occupation as genuine work, that contributes not only to the family but to the welfare of the nation state as a whole, is such that it gives them a claim to equality within the patriarchal Indian household that only recognises the work done by men.
- Second, it moves us towards a more holistic understanding of labour that isn't purely tied to the exchange value of a service on the market, and recognises an extremely intimate form of labour that has proved essential to keeping the unit of the family intact and functional.
- Third, once recognised as work, this arena of unpaid domestic labour that is dominated almost entirely by women can become one where women can demand some degree of parity in terms of the time and energy expended on it. Without the recognition of unpaid women's labour as genuine work, the building block of this argument goes missing and recognition becomes fundamental to this call for gender justice.

Conclusion

- More than creating a new provision of salary for housework, we need to strengthen awareness, implementation and utilisation of other existing provisions. Starting from the right to reside in the marital home, to streedhan and haqmeher, to coparcenary and inheritance rights as daughters and to basic services, free legal aid and maintenance in instances of violence and divorce.
- Our aim cannot be only to ensure “basic income” to women. Women should be encouraged and helped to reach their full potential through quality education, access and opportunities of work, gender-sensitive and harassment-free workplaces and attitudinal and behaviour change within families to make household chores more participative. Once these conditions are met, working inside the home or outside must be a woman's choice, a freedom that she can exercise for herself.

Pradhan Mantri Kaushal Vikas Yojna (3.0)

- Recently, the third phase of PradhanMantriKaushalVikasYojana (PMKVY 3.0) will be launched in 600 districts across all states of India.
 - It is implemented by National Skill Development Corporation.
 - The objective of this Skill Certification Scheme is to enable a large number of Indian youths to take up industry-relevant skill training that will help them in securing a better livelihood.
 - Individuals with prior learning experience or skills will also be assessed and certified under Recognition of Prior Learning (RPL).

Current Connect

- The Government's growth agenda is guided by 'Aatmanirbhar Bharat' and 'Vocal for Local' vision. Keeping this in mind, PMKVY 3.0 is a progressive step towards achieving the vision by establishing increased connect at state, district and block level.
- PMKVY 2.0 broadened the skill development with inclusion of Recognition of Prior Learning (RPL) and focus on training. With the advent of PMKVY 3.0, the focus is on bridging the demand-supply gap by promoting skill development in areas of new-age and Industry 4.0 job roles.
- While the National Educational Policy puts focus on vocational training for a holistic growth and increased employability, PMKVY 3.0 role will be a propagator of vocational education at an early level for youth to capitalize on industry-linked opportunities
- As a young nation, we're poised to seize the opportunities that will make India the Skill Capital of the World. By taking the bottom-up approach to training, PMKVY 3.0 will identify job roles that have demand at the local level and skill the youth, linking them to these opportunities.
- PMKVY 3.0 will encourage healthy competition between states by making available increased allocation to those states that perform better.

Global Housing Technology Challenge (GHTC)

- The Ministry of Housing and Urban Affairs, Government of India has conceptualized a Global Housing Technology Challenge - India (GHTC- India) which aims to identify and mainstream a basket of innovative technologies from across the globe that are sustainable and disaster-resilient.
- Such technologies would be cost effective, speedier and ensure a higher quality of construction of houses, meeting diverse geo-climatic conditions and desired functional needs.
- The GHTC-India platform aspires to provide an ecosystem for the adoption of innovative technologies in the housing construction sector in a holistic manner.
- Lighthouse projects are envisaged that will be built using these innovative technologies and further support will be provided to upcoming domestic technologies to foster an environment of research and development.
- Conceptualised through extensive consultations with various stakeholders, GHTC-India leverages the scale and successes of the PradhanMantriAwasYojana (Urban) and its Technology Sub-Mission.
- It furthers the transformative vision of the Hon'ble Prime Minister and his belief in technological advances to rapidly deliver low-cost housing that meets stringent environmental, societal, quality and economic standards.
- To enable a technology transition, GHTC-India will encourage participation from across the affordable urban housing and construction sectors, such as technology providers, researchers, start-ups, developers, academia, public sector agencies, and civil society organizations.
- **Light House Project:** LHPs are model housing projects with houses built with shortlisted alternate technology suitable to the geo-climatic and hazard conditions of the region. This will demonstrate and deliver ready to live houses with speed, economy and with better quality of construction in a sustainable manner.
 - LHP, shall mean a model housing project with approximate 1,000 houses built with shortlisted alternate technology suitable to the geo-climatic and hazard conditions of the region.
 - This will demonstrate and deliver ready to live houses with speed, economy and with better quality of construction in a sustainable manner.
 - The minimum size of houses constructed under LHP shall be in accordance with the prevailing guidelines of the PradhanMantriAwasYojana (Urban).
 - Constructed housing under LHP will include on site infrastructure development such as internal roads, pathways, common green area, boundary wall, water supply, sewerage, drainage, rain water harvesting, solar lighting, external electrification, etc.

Current Connect

- For the subsequent allotment of constructed houses under LHPs to the eligible beneficiaries in States/ UTs, procedures of existing guidelines of PMAY (U) will be followed.

City Innovation Exchange

About

Recently, the City Innovation Exchange (CiX) platform was launched by Ministry of Housing and Urban Affairs.

Need

- Urban India is in dire need of the capability to discover and scale innovation at speed to keep up with the escalating scope and complexities of its challenges.
- Identifying and removing systemic bottlenecks, blind spots and inefficiencies are imperatives that requires urgent attention. The vast geography and diversity of our 4000+ cities further complicate the challenge of discovering the right solutions for local needs and aspirations.
- Smart Cities Mission, under Ministry of Housing and Urban Affairs, envisions bringing administrators and urban stakeholders in direct connection with India's innovation ecosystem to significantly augment the problem-solving capacity of our cities. In due time, the CiX platform will immensely contribute to the Ease of Doing Business and Ease of Living in Cities.

About

- The CiX will connect cities to innovators across the national ecosystem to design innovative solutions for their pressing challenges.
- The platform will ease the discovery, design& validation of solutions through a robust, transparent and user centric process that will reduce barriers for innovators and cities to discover fitting solutions.
- Built on the concept of 'open innovation', the platform will help in the flow of ideas 'outside in and inside out', enhancing the skills and capacity required to deliver smart urban governance.
- Through interaction with the Academia and Businesses/ Start-ups, the platform will benefit cities in the transfer of ideas from 'labs' to real environment. Similarly, by helping urban governments interact with citizens, the platform will ensure adoption of tested solutions that will be impactful and sustainable.

Importance

- The platform will be a significant addition to the growing innovation ecosystem of India and focuses on fostering innovative practices in cities. CiX, through an 'open innovation' process, engages with innovators to design-test-deliver on solutions to pressing urban challenges.
- The platform in due time will help our cities in adopting solutions that will enhance the quality of life for its residents and significantly improve the Ease of Doing Business.
- The Platform has more than 400 start-ups, 100 smart cities, more than 150 challenges statements and over 215 solutions at the time of launch.

Intensified Mission Indradhanush (IMI) 3.0

- Recently, States/Union Territories (UTs) have rolled out Intensified Mission Indradhanush (IMI) 3.0 to cover children and pregnant women who missed the routine immunisation during the COVID-19 pandemic.
 - Immunization Programme in India was introduced in 1978 as _Expanded Programme of Immunization (EPI) by the Ministry of Health and Family Welfare, Government of India. In 1985, the programme was modified as _Universal Immunization Programme (UIP) to be implemented in phased manner to cover all districts in the country by 1989-90 with the one of largest health programme in the world. Despite being operational for many years, UIP has been able to fully immunize only 65% children in the first year of their life.

Current Connect

- To strengthen and re-energize the programme and achieve full immunization coverage for all children and pregnant women at a rapid pace, the Government of India launched –Mission Indradhanush in December 2014.

Goal of Mission Indradhanush

- The ultimate goal of Mission Indradhanush is to ensure full immunization with all available vaccines for children up to two years of age and pregnant women. The Government has identified 201 high focus districts across 28 states in the country that have the highest number of partially immunized and unimmunized children.
- Earlier the increase in full immunization coverage was 1% per year which has increased to 6.7% per year through the first two phases of Mission Indradhanush.
- Four phases of Mission Indradhanush have been conducted till August 2017 and more than 2.53 crore children and 68 lakh pregnant women have been vaccinated.
- To further intensify the immunization programme, the Prime Minister launched the Intensified Mission Indradhanush (IMI) in 2017. Through this programme, Government of India (GoI) aims to reach each and every child up to two years of age and all those pregnant women who have been left uncovered under the routine immunisation programme/UIP.
- The focus of special drive was to improve immunisation coverage in select districts and cities to ensure full immunisation to more than 90% by December 2018.

Why India need this programme?

Every year the Universal Immunization Programme caters to the vaccination needs of 2.65 crore children and 2.9 crore pregnant women against 12 Vaccine Preventable Diseases. Despite these efforts by all the States and UTs, some children and pregnant women get missed out from this network. Mission Indradhanush is indeed a successful strategy to reach out to every dropped out and left out child and pregnant woman. There has been remarkable improvement in the immunization coverage which is also evident in the NFHS5 data as available for 22 States.

Benefits of programme

- Implementing large campaigns like IMI 3.0 even during the roll out of COVID-19 vaccine is a clear indication of India's health system getting stronger day by day.
- IMI 3.0 aimed to reach the unreached population with all the available vaccines under Universal Immunisation Programme (UIP) and thereby accelerate the full immunization and complete immunization coverage of children and pregnant women.
- The Mission Indradhanush campaigns have proven to be tailor made for the Indian context, and have given far reaching results during the earlier phases.
- Mission Indradhanush & IMI has enabled the immunization system in reaching hard to reach and high-risk areas including brick kilns, construction sites and nomadic population. – The previous campaigns also helped in improving the micro-planning, generating demand for immunization services and strengthening the supporting systems.

“Population versus Planet” Conference

- India was one of the first countries in the world to formulate a National Family Planning Program way back in 1952 which was later expanded to cover maternal and child health as well as adolescent health and nutrition and has taken giant strides in spreading awareness & enhancing adoption of family planning techniques while also ensuring healthier lives for its citizens.
- Even though India's population has increased from 36 crore in 1951 to 121.02 crore in 2011, the country has witnessed significant decline in both fertility and mortality; the crude birth Rate which was recorded at 40.8 per 1000 in 1951 has declined to 20.0 in 2018.
- Total Fertility Rate (TFR) has declined from 6.0 in 1951 to 2.2 in 2015-16.
- Death rate in India has declined from 7 in 2012 to 6.2 in 2018.

Step taken by India

- India has been an important and active member of Family Planning 2020 partnership, advancing collaborative efforts to address the policy, financing, delivery and socio-cultural barriers to women accessing contraceptive information, services and supplies.

Current Connect

- The alliance, which is now entering its next phase, provided an impetus to our national agenda of protecting mothers and children through improving access to family planning choices from the time of the partnership's initiation in 2012.
- India added more than 1.5 crore additional users for modern contraceptives thereby increasing the modern contraceptive use to 55%.
- The Partnership helped India add two new contraceptives, namely the Injectable Medroxy Progesterone Acetate (MPA) and Centchroman in the National contraceptive basket while the total allocation for Family Planning during this period was to the tune of 3 billion USD.
- Family Planning Logistics Management and Information system was developed under the Digital India initiative for ensuring last mile availability of the contraceptives. A holistic media campaign covered all aspects of Information Education & Communication as well as Behaviour Change Communication and this is how demand generation was achieved.
- Strengthening post pregnancy contraception with more than 10 million pregnant women benefiting through Post-Partum Intra-Uterine Contraceptive Device (PPIUCD) and improving quality remained the central tenets of the program.
- As a result of our persistent efforts on three key fronts of Supplies, Services and Information, India was able to provide modern contraceptive access to 14.2 Crore beneficiaries and thus averting 5.6 Crore unintended pregnancies, 18.6 lakh unsafe abortion and 30 thousand maternal deaths in 2019.
- NFHS5 that bolsters India's remarkable achievements in Family Planning- 20 out of 22 States surveyed so far have shown an increase in modern contraceptive use and 21 showing a decline in unmet needs for contraception while 19 of them have shown a decline in fertility. India is on the verge of achieving the replacement Total Fertility Rate (TFR) with 28 out of 36 states & UTs having already achieved the replacement Total fertility rate of 2.1.

Population Projection for India and States 2011-2036

- Population projection for India and States 2011-2036, released in July 2020, indicates that the TFR is expected to decline from 2.37 during 2011-2015 to 1.73 during 2031-35.
- India is now in a phase of demographic transition with a substantial percentage of youth population. The youth population in the age group of 15-24 years is projected to decline from 233 million in 2011 to 227 million in 2036.
- However, the proportion of the working age population is expected to increase from 61% in 2011 to 65% in 2036. India is adding 12 million people to the working age population each year.

Conclusion

It is evident that the impact of the interventions is now beginning to yield dividends. Today, India is knocking at the door of achieving replacement level fertility, and has made remarkable improvement in reducing maternal and child mortality. With commitment and perseverance, India can achieve the goal of population stabilization and advancing the development goals of the country.

Jal Jeevan Mission-Urban

- Recently, ministry of Housing and Urban Affairs has selected 10 pilot cities to survey for JalJeevan Mission to launched a new project to install water connections to every urban household.
- It has been designed to provide universal coverage of water supply to all households through functional taps in all 4,378 statutory towns in accordance with SDG Goal- 6.
- crore is the estimated gap in urban household tap connections that is proposed to be covered under JJM(U). Likewise, estimated gap in sewer connections/septage in 500 AMRUT cities proposed to be covered in JJM(U) is 2.64 crore.
- Rejuvenation of water bodies to augment sustainable fresh water supply and creating green spaces and sponge cities to reduce floods and enhance amenity value through an Urban Aquifer Management plan are other key areas of the Mission.
- JJM(U) will promote circular economy of water through development of city water balance plan for each city focusing on recycle/reuse of treated sewage, rejuvenation of water

Current Connect

- bodies and water conservation. 20% of water demand to be met by reused water with development of institutional mechanism.
- A Technology Sub-Mission for water is proposed to leverage latest global technologies in the field of water.
- Information, Education and Communication (IEC) campaign is proposed to spread awareness among masses about conservation of water.
- Pey Jal Survekshan will be conducted in cities to ascertain equitable distribution of water, reuse of wastewater and mapping of water bodies with respect to quantity and quality of water through a challenge process.
- Mission has a reform agenda with focus on strengthening of urban local bodies and water security of the cities. Major reforms are reducing non-revenue water to below 20%; recycle of treated used water to meet at least 20% of total city water demand and 40% for industrial water demand at State level; dual piping system, electric vehicle charging points; Wi-fi infrastructure in new buildings; unlocking value and improving land use efficiency through adequate urban planning; GIS based master plans of the cities; raising funds through issuance of municipal bonds and rejuvenation of water bodies.

Salient features of Mission

- A PeyJalSurvekshan will determine the distribution of water, wastewater, and water bodies in 10 cities: Patiala, Rohtak, Churu, Agra, Surat, Badlapur, Bhubaneswar, Tumkur, Kochi and Madurai. Five of these cities are water-scarce and five are water abundant.
- The scheme will be implemented first through signing of MoUs between the Centre, states, and the urban local bodies. The cities will then prepare city water balance plans, recycle/reuse plans and aquifer management plans. The state will vet and approve the development of the project with a baseline assessment.
- In order to promote Public private partnership, it has been mandated for cities having million plus population to take up PPP projects worth minimum of 10 percent of their total project fund allocation.
- There is an estimated 2.68 crore urban households without tap connection and 2.64 crore households in AMRUT cities without sewer connection or septage option.

Road Safety Report by World Bank

- Bringing the focus on the social and financial impact of road accidents in India, the World Bank recently released a report titled “Traffic Crash and Disabilities”.
 - The report released by Transport Minister states that 75 percent of low-income households in India reported a decrease in their income if there was a road crash in the family.
 - The Burden on Indian Society today has 1 percent of the total vehicles around the world but accounts for 11 percent of the global road accidents.
- In India, pedestrians, bicyclists and motorcyclists, who mostly represent the poor income strata of the society, also happen to have the least safety protection in the event of a traffic crash. They account for more than half the total road crash deaths.
- And most of those unfortunate ones, who are involved in a crash, do not have adequate access to medical and social safety net. The burden of the crash is borne not only by the victim but by their entire household.
- This study assesses the social, financial, gender, and psychological impacts of road crashes on poor and disadvantaged households. It is based on the survey data collected from four Indian states – Uttar Pradesh, Bihar, Tamil Nadu and Maharashtra
- The decline in total household income was sharper among low-income households (LIH) (75%) than high-income households (HIH) (54%).
- The severe impact of decline in income was highest among low-income households in rural areas (56%) compared to low-income households in urban areas (29.5%) and high-income households in rural areas (39.5%).

Current Connect

- Within households, women bear the brunt of caregiving activities post-crash, leading to a double burden of physical and mental stress and exacerbated inequality of opportunities in returning to livelihoods and income generating tasks.

Financial burden of road accidents

In India, over 1.5 lakh people lose their lives and more than 4.5 lakh are injured in road accidents every year, which not only causes trauma to the families but accidental deaths also result in an economic loss equivalent to a massive 3.14 percent of GDP each year. Some 70 percent of the fatalities are in the age group of 18 to 45 years, impacting the economically productive lives. The World Bank estimates the total cost of Road Traffic Injuries (RTIs) at Rs 12.9 lakhs crore for the year 2016.

Social burden of road accidents

- In addition to financial distress, poor households experience a deterioration in their quality of life accompanied by psychological suffering and emotional distress
- Within households, it is women who bear the brunt of caregiving activities, leading to a double burden of labour and mental load, exacerbated inequalities of opportunities in returning to livelihoods and income-generating tasks.
- Inequality in insurance coverage and delay in accessing compensation further mars the quick recovery process among LIH. Insurance coverage was significantly higher among HIH and households in urban areas vis-à-vis LIH urban areas.
- Low rates of insurance coverage and poor awareness related to legal compensation processes among truck drivers: Overall, 2/3rd of the respondent truck drivers did not file an FIR after the crash. Only 40% of the truck drivers were covered under life insurance and 18% under medical insurance at the time of the crash.
- Overall, 2/3rd of the truck drivers were not aware of third-party liability insurance. None of the drivers said that they had applied/benefited from cashless treatment at the hospital, solatium fund for hit and run case, or ex-gratia schemes.
- Information asymmetry and poor awareness on legal compensation among LIH: Only less than a quarter of the LIH victims were aware of the compensation process and insurance clauses. Only a handful of the victims availed government compensation/ex gratia.

Way forward

- The Ministry of Road, Transport, and Highways will engage with the Save Life Foundation and World Bank and work towards framing relevant laws and policies to address the challenges.
- The importance of quality standards on crash helmets for two-wheeler users and how mandatory front airbags help improve safety. The government is also working to get regular eye check-ups for truck drivers.
- The report points to a serious matter that healthcare services are not adequate in rural areas in India and there is a lack of education and awareness that makes low-income households more prone to road accidents.
- India needs social schemes for low-income households. There has been a 54 percent drop in road fatalities in Tamil Nadu. India needs to urge other states to follow the model to improve conditions.

Universal Primary Healthcare

- India marked another key milestone in universalising Primary Health Care. The planned target of operationalizing 70,000 Ayushman Bharat- Health and Wellness Centres (AB-HWCs) by 31st March 2021 has been realised ahead of time.
- Ayushman Bharat (AB) is an attempt to move from a selective approach to health care to deliver comprehensive range of services spanning preventive, promotive, curative, rehabilitative and palliative care.
 - It has two components which are complementary to each other. Under its first component, 1,50,000 Health & Wellness Centres (HWCs) will be created to deliver Comprehensive Primary Health Care, that is universal and free to users, with a focus on wellness and the delivery of an expanded range of services closer to the community.

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- The second component is the Pradhan Mantri Jan Arogya Yojana (PM-JAY) which provides health insurance cover of Rs. 5 lakhs per year to over 10 crore poor and vulnerable families for seeking secondary and tertiary care.

About Health and wellness centre

- HWCs demonstrate a high potential for positive outcomes in terms of gender equity for care seeking, and promoting wellness as a critical component of primary health care. To date, about 41.35 crore people have accessed care in these AB-HWCs. About 54% of them are women.
- The HWCs also focus on wellness and healthy lifestyles through various activities like Yoga, local sports, Zumba.
- Tele-consultation services are another key component of the HWCs. More than 9.45 lakh Teleconsultations have been done at the HWCs.
- Preventive Health Care is the essential component of the services delivered through HWCs.

HWCs performance during COVID-19

- During the COVID-19 pandemic, AB-HWCs played a significant role in undertaking public health action related to COVID prevention and enabling non-COVID essential health services.
- About 75% of total NCD Screenings have been conducted during this COVID period (between 1st February 2020 to till date) itself, showing the confidence reposed by people in these AB-HWCs during the present public health challenge.
- More than 60% of team leaders (CHOs and Medical Officers) and more than 90% of field workers of HWC teams are women.

Healthcare in Rural India

- Healthcare is the right of every individual but lack of quality infrastructure, dearth of qualified medical functionaries, and non-access to basic medicines and medical facilities thwarts its reach to 60% of population in India.
- A majority of 700 million people lives in rural areas where the condition of medical facilities is deplorable.
- Though a lot of policies and programs are being run by the Government but the success and effectiveness of these programs is questionable due to gaps in the implementation.
- In rural India, where the number of Primary health care centers (PHCs) is limited, 8% of the centers do not have doctors or medical staff, 39% do not have lab technicians and 18% PHCs do not even have a pharmacist.
- India also accounts for the largest number of maternity deaths. A majority of these are in rural areas where maternal health care is poor.
- Even in private sector, health care is often confined to family planning and antenatal care and do not extend to more critical services like labor and delivery, where proper medical care can save life in the case of complications.

The Problems

- Due to non-accessibility to public health care and low quality of health care services, a majority of people in India turn to the local private health sector as their first choice of care.
- If we look at the health landscape of India 92 percent of health care visits are to private providers of which 70 percent is urban population. However, private health care is expensive, often unregulated and variable in quality. Besides being unreliable for the illiterate, it is also unaffordable by low-income rural folks.
- To control the spread of diseases and reduce the growing rates of mortality due to lack of adequate health facilities, special attention needs to be given to the health care in rural areas.
- The key challenges in the healthcare sector are low quality of care, poor accountability, lack of awareness, and limited access to facilities.

Challenges for Primary Healthcare System in India

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- In India, communicable diseases, maternal, perinatal, and nutritional deficiencies continue to be important causes of deaths noncommunicable diseases like diabetes, cardiovascular diseases, respiratory disorders, cancers, and injuries are showing the rising trends. Mental health disorders are also on the rise also taking a substantial toll of human lives.
- The health issues related to elderly population are common due to increase in life expectancy. India has been witnessing rapid urbanization particularly in recent decades. Currently one-fourth of the urban population lives in slums with severely compromised health and sanitary conditions. While the primary healthcare system is struggling to provide services, there is an emerging need for addressing above mentioned issues. This presents huge challenge to the current primary healthcare system in India.
- The current primary healthcare structure is extremely rigid, making it unable to respond effectively to local realities and needs. The lack of resources, which is acute in some states, is certainly a contributing factor to the poor performance of the primary healthcare system.
- There is a need to explore and understand the reasons that prompt people to visit health facilities and the reasons driving them away from free government care.
- Large diversity in India calls for local adaptation of the basic healthcare package and its delivery mechanism.
- In India, considerable progress has been made in the field of basic universal education, gender equality in education, and global economic growth. However, there is slow progress in the improvement of health indicators related to mortality, morbidity, and various environmental factors contributing to poor health conditions.

Role of Private Sector in Healthcare

- India is encouraging investment in healthcare sector; over the years, the private sector in India has gained a significant presence in all the sub-segments of medical education and training, medical technology and diagnostics, pharmaceutical manufacture and sale, hospital construction and ancillary services, as also the provisioning of medical care.
- Over 75% of the human resources and advanced medical technology, 68% of hospitals and 37% of total beds in the country are in the private sector.
- The composition of private sector in India is diverse with large number of sole practitioners or small nursing homes having bed capacities of less than 20. There are also several corporate entities, including pharmaceutical firms, and nonresident Indians (NRIs), who have invested in the Indian healthcare sector and are providing world-class care at a fraction of the cost compared to many developed countries.
- In addition, there are also traditional healthcare providers, such as Ayurveda and Yoga, who have set up facilities. It is reported that there are 1369 hospitals with a bed capacity of over 53000 in India catering to the needs of traditional Indian healthcare; about 726,000 registered practitioners are working under the traditional healthcare system.

Conclusion

India's health scenario currently presents a contrasting picture. While health tourism and private health care are being promoted, a large section of Indian population still reels under the risk of curablediseases that do not receive adequate attention of policymakers. India's National Rural Health Mission is undeniably an intervention that has put public health care upfront. Although the government has been making efforts to increase healthcare spending via initiatives like the National Rural Health Mission, much still remains to be done. The priority will be to develop effective and sustainable health systems that can meet the dual demands posed by the growth in non-communicable diseases and peoples' needs for better quality and higher levels of health care.

Food Security Act, 2013

About

The NITI Aayog recently circulated a discussion paper on a proposed revision in the National Food Security Act (NFSA), 2013.

National Food Security Act, 2013

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- As passed by the Parliament, Government has notified the National Food Security Act, 2013 on 10th September, 2013 with the objective to provide for food and nutritional security in human life cycle approach, by ensuring access to adequate quantity of quality food at affordable prices to people to live a life with dignity.
- The Act provides for coverage of up to 75% of the rural population and up to 50% of the urban population for receiving subsidized food grains under Targeted Public Distribution System (TPDS), thus covering about two-thirds of the population.

Need for revision in the NFSA, 2013?

- The NFSA provides a legal right to persons belonging to “eligible households” to receive foodgrains at subsidised price– rice at Rs 3/kg, wheat at Rs 2/kg and coarse grain at Rs 1/kg — under the Targeted Public Distribution System (TPDS).
- These are called central issue prices (CIPs). A revision of CIPs is one of the issues that have been discussed. The other issues are updating of the population coverage under the NFSA, and beneficiary identification criteria.
- Under sub-section (1) of Section 3 of the Act, the term “eligible households” comprises two categories — “priority households”, and families covered by the Antyodaya Anna Yojana (AAY).
- Priority households are entitled to receive 5 kg of foodgrains per person per month, whereas AAY households are entitled to 35 kg per month at the same prices.

For how long are these prices valid, and how are they to be revised?

- Under Schedule-I of the Act, these subsidised prices were fixed for “a period of three years from the date of commencement of the Act”. While different states began implementing the Act at different dates, the deemed date of its coming into effect is July 5, 2013, and the three-year period was therefore completed on July 5, 2016.
- However, the government has yet not revised the subsidised prices. The government can do so under Schedule-I of the Act, after completion of the three-year period. To revise the prices, the government can amend Schedule-I through a notification, a copy of which has to be laid before each House of Parliament as soon as possible after it is issued.
- Even the Economic Survey of 2020-21 had recommended a revision in the CIPs.
- The revised prices cannot exceed the minimum support price for wheat and coarse grains, and the derived minimum support price for rice.

What is the extent of coverage, and how is it to be updated?

- The Act has prescribed the coverage under “eligible households” — 75% of the rural population and up to 50% of the urban population. On the basis of Census 2011 figures and the national rural and urban coverage ratios, 81.35 crore persons are covered under NFSA currently.
- This overall figure has been divided among the states and Union Territories, based on the NSSO Household Consumer Expenditure Survey 2011-12.
- In its discussion paper, the NITI Aayog has suggested that the national rural and urban coverage ratio be reduced from the existing 75-50 to 60-40. If this reduction happens, the number of beneficiaries under the NFSA will drop to 71.62 crore (on the basis of the projected population in 2020).

UNDP report on State of Women amid Pandemic

- Recently, State of Women amid Pandemic report has been by United Nations Development Programme (UNDP) proposed a temporary basic income (TBI) for poor women in developing countries can help millions of them cope with the effects of the novel coronavirus disease (COVID-19) pandemic.
- Women’s earnings have been persistently lagging behind men’s despite a narrowing of human capital gaps over the recent years.
- Globally, the median share of women aged 25 or older with at least a completed shortcycle tertiary education is higher (21.2 percent) than the corresponding share of men (19.5 percent), whereas the weighted average gross enrolment ratio in tertiary education is 41.7 percent among women and 36.2 percent among men.

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- Yet, the gender wage gap reached 22 percent on average before the pandemic, ranging from 21-25 percent in middle- and high-income countries.
- Critical drivers of this unequal outcome are pervasive social norms that place a disproportionate burden of unpaid work on women, the lack of opportunities for them to reconcile unpaid work with paid work, the vertical and horizontal gender segregation in the labour market where women are overly represented in low-paid occupations, and power imbalances within the household.
- Beyond complex gendered norms, some of the economic vulnerability imposed on women also comes from policy and political decisions that have persistently deprived them of compensation in the form of equal pay, paid maternity leave, universal health, unemployment, and care benefits.
- The latter are critical as about seven in ten female workers worldwide are in the informal economy with little or none of these benefits, and those with care responsibilities in particular are more likely to engage in self-employment, domestic work, and occupations that often expose them to health hazards, precarious working conditions, and exploitation.

Need for Universal basic Income to overcome the effects

- The large-scale TBI scheme proposed by UNDP in a policy brief showed that a monthly investment of 0.07-0.31 per cent of a developing countries' gross domestic product (GDP) could provide reliable financial security to 613 million working-aged women living in poverty.
- The benefits of such a meaningful investment could not only help women and their families absorb the shock of the pandemic, but also empower women to make independent decisions about money, livelihoods and life choices
- Women have been hit harder than men by the pandemic, losing income and leaving the labour market at a greater rate. This vulnerability is due to gender inequality.
- As these countries are likely operating under limited fiscal capacity and prioritization, a special TBI for women may emerge as a paramount policy instrument that recognizes the disproportionate effect of the crisis on a group that faces persistent and cumulative vulnerabilities across several dimensions.
- Hence, a TBI for women is an emergency measure of affirmative action that could start paving the road towards a public good that the whole society can benefit from: gender equality.
- Crucially, a TBI for women is not a substitute but an urgent complement to the response policies already in place. This is critical as most of the response to the crisis has not been designed to be gender sensitive.
- The proposed TBI focuses on workingage women, aged 15-64, in the developing world and considers a monthly transfer that is homogeneous within a given country but varies across countries according to the cost of living.

Would a Temporary Basic Income (TBI) reach the intended recipients?

- Critical conditions for TBI to contribute to women's economic security and independence is that the scheme is provided at the individual level and not be subject to behavior and spending conditions. While specific fiscal and political implementation challenges are discussed at some length in UNDP's TBI report and need to be addressed on a country-by-country basis, for women to receive the transfer, they also need to have bank or mobile money accounts, which is still not a reality for 35 percent of women worldwide. Hence, a TBI may need to be tied to initiatives to improve financial inclusion to work.
- All these elements may facilitate transfer payments sent directly to women, thus ideally providing them with economic support and independence. The question of whether they would control their own bank or mobile accounts remains open. Depending on household dynamics and power relations, some women may not have full control over their own resources if pervasive gender norms are not disrupted.

Way Forward

- A TBI for women is urgent and only fair on its own terms and could prove to be a critical vehicle for gender equality, though certainly not the only one. Long-term, sustainable gender equality is a multidimensional challenge that requires a number of structural

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interventions: changes in complex and rigid social norms, legislation on several fronts, institutional and fiscal reform, coordinated responses both across sectors and across different levels of government, and a clear visualization of the contribution of unpaid care and domestic work to national accounting.

- Some interventions would demand significant resources and coalitions that seem difficult to achieve in the current context. Nevertheless, some policies capable of yielding significant returns along and beyond monetary emergency responses, and at a relatively low cost, seem attainable as the first building blocks of more equitable societies.
- Beyond reconciling paid work and family responsibilities, governments must address other sources of the gender pay gap such as horizontal and vertical segregation in the labour market. The response should include anti-discrimination laws and affirmative action initiatives.

World Press Freedom index

- Recently, World Press Freedom Index has released and India retains 142 of 180 spot, remains “one of the world’s most dangerous countries” for journalists.
 - The latest index released ranks 180 countries, topped, yet again, by Norway followed by Finland and Denmark, while Eritrea is at the bottom. China is ranked 177, and is only above North Korea at 179 and Turkmenistan at 178.
- According to the 2021 World Press Freedom Index, journalism is “totally blocked or seriously impeded” in 73 nations and “constrained” in 59 others. Countries around the world have used the coronavirus pandemic as grounds to block journalists’ access to information sources and reporting in the field.
- In the Asia-Pacific region, authoritarian regimes have used the pandemic to “perfect their methods of totalitarian control of information, while the ‘dictatorial democracies’ have used coronavirus as a pretext for imposing especially repressive legislation with provisions combining propaganda with suppression of dissent.

India’s Performance

- India is ranked 142, same as last year, after it had consistently slid down from 133 in 2016. In the South Asian neighborhood, Nepal is at 106, Sri Lanka at 127, Myanmar (before the coup) at 140, Pakistan at 145 and Bangladesh at 152. India shares the “bad” classification with Brazil, Mexico and Russia.
- In India, journalists are “exposed to every kind of attack, including police violence against reporters, ambushes by political activists, and reprisals instigated by criminal groups or corrupt local officials”.
- Criminal prosecutions are, meanwhile, often used to gag journalists critical of the authorities, with some authorities invoking draconian laws like Section 124a of the Indian Penal Code, under which sedition is punishable by life imprisonment.
- Journalists who dare to criticize the government are branded as ‘antistate,’ ‘anti-national’ or even ‘pro-terrorist.’
- This exposes them to public condemnation in the form of extremely violent social media hate campaigns that include calls for them to be killed, especially if they are women.

Freedom of Press in India: Constitutional Perspective

- In India before Independence, there was no constitutional or statutory guarantee of freedom of an individual or media/press. At most, some common law freedom could be claimed by the press, as observed by the Privy Council in Channing Arnold v. King Emperor.
- With object and views, the Preamble of the Indian Constitution ensures to all citizens inter alia, liberty of thought, expression, belief, faith and worship. The constitutional significance of the freedom of speech consists in the Preamble of Constitution and is transformed as fundamental and human right in Article 19(1)(a) as freedom of speech and expression.
- Everyone has the right to freedom of opinion and expression, this right includes freedom to hold opinions without interference and to seek, receive and impart information and ideas through any media and regardless of frontiers.

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- At last it can be concluded that, the Freedom of the Press is nowhere mentioned in the Indian constitution. It is believed that Freedom of Speech and Expression in Article 19 of the Indian constitution include freedom of the press.
- Freedom of expression enables one to express one's own voices as well as those of others. But freedom of the press must be subject to those restrictions which apply to the freedom of speech and expression. The restrictions mentioned in Art. 19 are defamation, contempt of court, decency or morality, security of the state, friendly relations with other states, incitement to an offence, public order and maintenance of the sovereignty and integrity of India.
- The status of freedom of the press is the same as that of an ordinary citizen. The press cannot claim any immunity from taxation, is subject to the same laws regulating industrial relations, and press employees are subject to the same laws regulating industrial employment.

Conclusion

Indian government need to be concerned about India's low ranking in such international indices. Media is considered as the fourth pillar of democracy and it must be provided with enough freedom to play its role without any fear and partiality in a democratic country like India.

National Policy for Rare Diseases 2021

- Recently, Union health and family welfare minister has approved the National Policy for Rare Diseases 2021.
- Ministry of Health and family Welfare, Government of India formulated a National Policy for Treatment of Rare Diseases (NPTRD) in July, 2017. Implementation of the policy, however, faced certain challenges
- A limiting factor in its implementation was bringing States on board and lack of clarity on how much Government could support in terms of tertiary care.
- Public Health and Hospitals is primarily State subject. Stakeholder consultation with the State Governments at the draft stage of formulation of the policy could not be done in an elaborate manner.
- When the policy was shared with State Governments, issues such as cost effectiveness of interventions for rare disease visa-vis other health priorities, the sharing of expenditure between Central and State Governments, flexibility to State Governments to accept the policy or change it according to their situation, were raised by some of the State Governments.

Key highlights of National Policy for Rare Diseases

- Along with lowering the cost of treatment of rare diseases, the policy aims to increase focus on indigenous research and local production of medicines.
- Those who are suffering from rare diseases (diseases listed under Group 1 in the rare disease policy) that require one-time treatment will have the financial support of up to Rs. 20 lakh under the umbrella scheme of Rashtriya Arogya Nidhi. It will cover about 40 per cent of the population who are eligible under the Pradhan Mantri Jan Arogya Yojana.
- The policy will make use of a crowd funding mechanism to cover the cost of treatment of rare diseases. As part of it, corporates and individuals will be encouraged to extend financial support through a robust IT platform. A national hospital-based registry of rare diseases will be created to ensure adequate data and comprehensive definitions of such diseases are available for those interested in research and development.
- Through the help of Health and Wellness Centres, District Early Intervention Centres and counselling, the policy aims to screen and detect rare diseases at early stages, which will in turn help in their prevention.
- A draft of the policy was put in the public domain on January 13, 2020, and comments from stakeholders, the general public, organisations, states and Union territories were invited on the same.
- The Supreme Court and various high courts expressed concern about the lack of a national policy for rare diseases. Rare diseases are difficult to research upon and

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availability and accessibility to medicines are important in the process of treatment. The policy aims to help the nation overcome these fundamental challenges.

Definition of Rare Diseases

- There is no universal or standard definition of rare disease. A disease that occurs infrequently is generally considered a rare disease, and it has been defined by different countries in terms of prevalence – either in absolute terms or in terms of prevalence per 10,000 population. A country defines a rare disease most appropriate in the context of its own population, health care system and resources.
- As mentioned above, India faces the limitation of lack of epidemiological data to be able to define rare diseases in terms of prevalence or prevalence rate, which has been used by other countries.
- To overcome this, a hospital based National Registry for Rare Diseases has been initiated by ICMR by involving centers across the country that are involved in diagnosis and management of Rare Diseases.
- This will yield much needed epidemiological data for rare diseases. In the absence of epidemiological data on diseases considered as rare in other countries, it is not possible to prescribe threshold prevalence rates to define a disease condition as rare.

Rare Diseases: Issues and Challenges

- The field of rare diseases is complex and heterogeneous. The landscape of rare diseases is constantly changing, as there are new rare diseases and conditions being identified and reported regularly in medical literature.
- Apart from a few rare diseases, where significant progress has been made, the field is still at a nascent stage. For a long time, doctors, researchers and policy makers were unaware of rare diseases and until very recently there was no real research or public health policy concerning issues related to the field.
- This poses formidable challenges in development of a comprehensive policy on rare diseases. Nevertheless, it is important to take steps, in the short as well as long term, with the objective of tackling rare diseases in a holistic and comprehensive manner.

Challenges in research and development

- A fundamental challenge in research and development for the majority of rare diseases is that there is relatively little known about the pathophysiology or the natural history of these diseases. Rare diseases are difficult to research upon as the patient pool is very small and it often results in inadequate clinical experience.
- Therefore, the clinical explanation of rare diseases may be skewed or partial. The challenge becomes even greater as rare diseases are chronic in nature, where long term follow-up is particularly important. As a result, rare diseases lack published data on long-term treatment outcomes and are often incompletely characterised.

What need to be done?

- This makes it necessary to explore international and regional collaborations for research, collaborations with the physicians who work on any rare disease and with patient groups and families dealing with the consequences of these disorders.
- This will help gain a better understanding of the pathophysiology of these diseases, and the therapeutic effects that would have a meaningful impact on the lives of patients.
- There is also a need to review and where possible modify, clinical trial norms keeping in mind the particular challenges in rare diseases, without compromising on the safety and quality of the drugs or diagnostic tools.

The Indian Scenario

- Data on how many people suffer from different diseases that are considered rare globally, is lacking in India. The cases identified so far have been diagnosed at tertiary hospitals.
- So far only limited number of diseases has been recorded in India from tertiary care hospitals that are globally considered as rare diseases though ambit may encompass from 7000 to 8000 disorders. The commonly reported diseases include Primary immunodeficiency disorders, Lysosomal storage disorders (Gaucher's disease, Mucopolysaccharidoses, Pompe disease, fabry disease etc.) small molecule inborn errors of metabolism (Maple Syrup urine disease, organic acidemias etc.), Cystic Fibrosis,

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osteogenesis imperfecta, certain forms of muscular dystrophies and spinal muscular atrophy, etc

Way forward

- The Government will have a hospital based National Registry for Rare Diseases at ICMR with the objective of creating a database of various rare diseases. Steps have already been taken in this direction by ICMR. Over a period of time, the registry is expected to yield information on hospital based data and disease burden.
- The Government shall take steps to create awareness amongst all the levels of health care personnel as well as general public towards the rare diseases. This will encourage people to seek pre-marital genetic counselling, identification of high-risk couples & families and also result in prevention of births as well as early detection of cases of rare diseases.
- Public Health and hospitals being a State subject, the Central Government shall encourage and support the State Governments in implementation of a targeted preventive strategy
- The Government shall create a digital platform for bringing together notified Centres of Excellence where patients of rare diseases can receive treatment or come for treatment, on the one hand and prospective voluntary individual or corporate donors willing to support treatment of such patients. Funds received through this mechanism will be utilized for treatment of patients suffering from rare diseases.

Digital India Land Records Modernisation Programme (DILRMP)

- Recently, Central government plans to issue a 14-digit identification number to every plot of land in the country within a year's time. It will subsequently integrate its land records database with revenue court records and bank records, as well as Aadhaar numbers on a voluntary basis.
- The Unique Land Parcel Identification Number (ULPIN) scheme has been launched in ten States this year and will be rolled out across the country by March 2022.

About the new initiative

- "The Aadhaar for land", a number that would uniquely identify every surveyed parcel of land and prevent land fraud, especially in the hinterlands of rural India, where land records are outdated and often disputed.
- The identification will be based on the longitude and latitude coordinates of the land parcel, and is dependent on detailed surveys and geo-referenced cadastral maps.
- This Department has taken new initiatives under the programme like NGDRS [National Generic Document Registration System], ULPIN, linking of court to land records, integration of consent based Aadhaar number with land records etc.
- Linking Aadhaar with land records through ULPIN would cost ₹3 per record while seeding and authentication of landowner Aadhaar data would cost ₹5 each.
- Creating a modern land record room in every district would cost ₹50 lakh per district, while the integration of land records with the Revenue Court Management System would cost ₹270 crore.

Digital India Land Records Modernisation Programme (DILRMP)

- The Land Reforms (LR) Division was implementing two Centrally Sponsored Schemes viz.: Computerisation of Land Records (CLR) & Strengthening of Revenue Administration and Updating of Land Records (SRA&ULR). Later on, in 2008, the Cabinet approved merger of these schemes into a modified Scheme named Digital India Land Records Modernization Programme (DILRMP).
- The main aims of DILRMP are to usher in a system of updated land records, automated and automatic mutation, integration between textual and spatial records, inter-connectivity between revenue and registration, to replace the present deeds registration and presumptive title system with that of conclusive titling with title guarantee.
- The citizen is expected to benefit from DILRMP in one or more of the following ways-
 - Real-time land ownership records will be available to the citizen.

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- Since the records will be placed on the websites with proper security IDs, property owners will have free access to their records without any compromise in regard to confidentiality of the information
- Free accessibility to the records will reduce interface between the citizen and the Government functionaries, thereby reducing rent seeking and harassment.
- Public-private partnership (PPP) mode of service delivery will further reduce citizen interface with Govt. machinery, while adding to the convenience.
- Abolition of stamp papers and payment of stamp duty and registration fees through banks, etc. will also reduce interface with the Registration machinery.
- With the use of IT inter linkages; the time for obtaining RoRs, etc. will be drastically reduced.
- The single-window service or the web-enabled “anytime-anywhere” access will save the citizen time and effort in obtaining RoRs, etc.
- Automatic and automated mutations will significantly reduce the scope of fraudulent property deals.
- Conclusive titling will also significantly reduce litigation.
- This method will permit e-linkages to credit facilities.
- Market value information will be available on the website to the citizen.
- Certificates based on land data (e.g., domicile, caste, income, etc.) will be available to the citizen through computers.
- Information on eligibility for Government programs will be available based on the data.
- Issuance of land passbooks with relevant information will be facilitated.

Status of Digital India Land Records Modernization Programme (DILRMP) in 2021

- The DILRMP, a Central Sector scheme, has been extended up to 2020-21 at a total cost of Rs. 950 crores. It attempts to build upon the commonalities that exist in the arena of land records in various States to develop an appropriate ILIMS across the country, on which different States can also add State-specific needs as they may deem relevant and appropriate.
- Substantial progress has now been achieved in the prime components of computerization of Record of Rights - more than 90% in 24 States/UTs, digitization of cadastral maps - more than 90% in 22 States/UTs, computerization of Registration - more than 90% in 27 States/UTs, connectivity between Sub-Registrar Offices and Tehsils, integration of Registration and Land Records - more than 90% in 20 States/UTs.

Conclusion

The new initiative will enhance the service deliveries to the citizen of the country and will also function as inputs to the schemes of the other sectors like Agriculture, Finance Disaster Management etc.

Global Gender Gap Report 2021

- India has fallen 28 spots to rank 140th among 156 countries on the World Economic Forum’s Global Gender Gap index. In 2020, India had ranked 112th among 153 countries on the index.
- Another generation of women must wait for gender parity as an extra 36 years are added to the time remaining to close the gender gap.
- Despite progress in education and health, women face economic hurdles, declining political participation and workplace challenges.
- Progress towards gender parity is stalling in several large economies and industries. This is partly due to women being more frequently employed in sectors hardest hit by lockdowns combined with the additional pressures of providing care at home.
- The deterioration in 2021 is partly attributed to a widening political gender gap in several large population countries. Despite over half of the 156 indexed countries registering an

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improvement, women still hold only 26.1% of parliamentary seats and 22.6% of ministerial positions worldwide. On its current trajectory, the political gender gap is expected to take 145.5 years to close, compared to 95 years in the 2020 edition of the report, an increase of over 50%.

- The economic gender gap has seen only a marginal improvement since the 2020 edition and is expected to take another 267.6 years to close. The slow progress is due to opposing trends – while the proportion of women among skilled professionals continues to increase, income disparities persist and few women are represented in managerial positions.
- Although these findings are sobering, gender gaps in education and health are nearly closed. In education, while 37 countries have reached gender parity, it will take another 14.2 years to completely close this gap due to slowing progress. In health, over 95% of this gender gap has been closed, registering a marginal decline since last year.

COVID-19's impact on women

- The pandemic has had a more negative impact on women than men, with women losing jobs at higher rates (5% vs 3.9% among men, International Labour Organization), partly due to their disproportionate representation in sectors directly disrupted by lockdowns, such as the consumer sector. Data from the United States also indicates that women from historically disadvantaged racial and ethnic groups are worst affected.
- Women's representation in emerging jobs Sectors with historically low representation of women are also those with fast-growing "jobs of tomorrow". In cloud computing, for example, women make up 14% of the workforce; in engineering, 20%; and in data and artificial intelligence, 32%; and it is more difficult for women to switch into these emerging roles than men.

India Specific

- India had so far closed 62.5% of its gender gap. It noted that most of the decline was seen on the Political Empowerment sub-index, where India went back 13.5 percentage points.
- The main change that took place this year is the significant decline in the share of women among ministers, which halved, from 23.1% in 2019 to 9.1% in 2021.
- In addition, the share of women in parliament remains stagnant at 14.4% and the share of the last 50 years in which a woman has been head of state is 15.5%.
- Reduction in women's labour force participation rate was another reason for the drop in India's rank. The share of women in professional and technical roles declined further to 29.2% and the share of women in senior and managerial positions also remains low: only 14.6% of these positions are held by women and there are only 8.9% of firms with female top managers.
- The estimated earned income of women in India was one-fifth of men's, which put India among the bottom 10 countries globally on that indicator.
- With 93.7% of this gap closed to date, India ranks among the bottom five countries in this sub-index. Wide sex ratio at birth gaps is due to high incidence of gender-based sexselective practices.
- The report showed that though India had closed 96.2% of the Educational Attainment subindex gender gap, certain gaps existed in terms of literacy. "One third of women are illiterate (34.2%) compared to 17.6% of men.

What need to be done?

- The pandemic's combined effect of accelerated automation, the growing "double shift" of work and care, in parallel with other labour market dynamics such as occupational segregation, are likely to have a long-term impact on economic opportunities for women, risking inferior re-employment prospects and a persistent drop in income.
- The report offers ways for countries to work towards closing their gender gaps. These include further investment in the care sector and equitable access to care leave for working men and women, policies and practices that proactively focus on overcoming occupational segregation by gender, effective mid-career skills-development policies for women, and managerial practices that embed sound, unbiased hiring and promotion practices.

Model Insurance Villages

- Recently, the Insurance Regulatory and Development Authority of India (IRADI) has come out with the concept of model insurance villages to cover the entire population in those areas, with the financial support of various institutions like NABARD and CSR funds.
- 1993: Committee on Reforms in the Insurance Sector, headed by Mr. R. N. Malhotra, (Retired Governor, Reserve Bank of India) set up to recommend reforms.
- 1994: The Malhotra Committee recommends certain reforms having studied the sector and hearing out the stakeholders
 - Some recommended reforms:
 - Private sector companies should be allowed to promote insurance companies
 - Foreign promoters should also be allowed
 - Government to vest its regulatory powers on an independent regulatory body answerable to Parliament

About the Model Insurance Villages

- The idea behind the model village concept is to offer comprehensive insurance protection to all the major insurable risks that villagers are exposed to and make available covers at affordable or subsidised cost.
- The concept may be implemented in a minimum of 500 villages in different districts of the country in the first year and increased to 1,000 villages in the subsequent two years.
- The choice of villages is to be made carefully, considering the various relevant aspects and parameters in order to implement the concept successfully for a period of three to five years.
- According to the IRDAI, in order to demonstrate the concept and efficacy of insurance as risk management tool and to make farmers and rural population aware of benefits of insurance, special focused efforts need to be made to cover the entire population in the village and their property, farms/crops, farm machineries, vehicles, different village level services, manufacturing enterprises and other specific insurance needs of the particular village through targeted efforts in few selected villages. Such model villages are expected to tackle losses due to natural calamities like floods and earthquakes. There's no catastrophe insurance in the country now.
- Every general insurance company and reinsurance company accepting general insurance business and having office in India (partnering with general insurance company of their choice) needs to be involved for piloting the concept.
- The efforts in selected villages need to be continued for a minimum of 3 to 5 years so as to make insurance benefits visible to the community.
- In order to make the premium affordable, financial support needs to be explored through NABARD, other institutions, CSR funds, government support and support from re-insurance companies and to keep some of the covers available with very minimum or nominal premium cost. This is to ensure that families and their property, crops get cover and the entire village community participate in the initiative.

COVID outbreak in Vulnerable Tribal Groups

- With the second wave of COVID-19 sweeping across rural heartland of Odisha, infections are being reported among the Particularly Vulnerable Tribal Groups (PVTGs).
- Tribal communities are often identified by some specific signs such as primitive traits, distinctive culture, geographical isolation, shyness to contact with the community at large and backwardness.
- Along with these, some tribal groups have some specific features such as dependency on hunting, gathering for food, having pre-agriculture level of technology, zero or negative growth of population and extremely low level of literacy. These groups are called Particularly Vulnerable Tribal Groups.
- PVTGs are more vulnerable among the tribal groups. Due to this factor, more developed and assertive tribal groups take a major chunk of the tribal development funds, because of which PVTGs need more funds directed for their development.

Current Connect

- In this context, in 1975, the Government of India initiated to identify the most vulnerable tribal groups as a separate category called PVTGs and declared 52 such groups, while in 1993 an additional 23 groups were added to the category, making it a total of 75 PVTGs out of 705 Scheduled Tribes, spread over 17 states and one Union Territory (UT), in the country (2011 census).
- Criteria for identification of PVTGs.
 - Pre-agricultural level of technology
 - Low level of literacy
 - Economic backwardness
 - A declining or stagnant population.

How and Why COVID-19 Outbreaks in these tribal groups?

- As state government didn't stopped weekly markets where Tribals come in contact with outside world.
- As it is difficult to prevent spread of highly infectious coronavirus state government do not any precautions to keep tribal communities safe.
- The administration would find it very tough to stop faster spread, if virus makes further inroad into tribal communities. Since many Tribals live in tiny huts, it makes transmission of the virus very difficult to contain and isolate.
- Apparently, unlike other states where special drives are being held to vaccinate the vulnerable tribal population, such measures are yet to start in Odisha.

Which PVTGs effected by COVID-19?

- The PVTGs such as Bonda, Birhor, ChuktiaBhunjia, Didayi, DongariaKandha, Hill Kharia, Juang, KutiaKondh, LanjiaSaora, Lodha, Mankirdia, PaudiBhuyan and Saora have been identified on the basis of stagnant or diminishing populations, subsistence level of economy associated with pre-agricultural stages of hunting, food gathering and shifting cultivation, and relative physical isolation.

Registration of Unorganised Workers

- Recently, The Supreme Court asked the Centre and states to complete the registration of unorganised workers, who had to return to their native villages after the Covid-induced national lockdown last year, —as early as possible so that they —are able to reap the benefit of different welfare schemes.
- The term unorganized worker has been defined under the Unorganized Workers' Social Security Act, 2008, as a home-based worker, self-employed worker or a wage worker in the unorganized sector and includes a worker in the organized sector who is not covered by any of the Acts mentioned in Schedule-II of Act i.e. the Employee's Compensation Act, 1923 (3 of 1923).
- As per the survey carried out by the National Sample Survey Organization in the year 2011-12, the total employment in both organized and unorganized sector in the country was of the order of 47 crore. Out of this, about 8 crore were in the organized sector and the balance of 39 crore in the unorganized sector.
 - The workers in the unorganized sector constitute more than 90 percent of the total employment in the country.
 - A large number of unorganized workers are home based and are engaged in occupations such as beedi rolling, agarbatti making, papad making, tailoring, and embroidery work.

Impact of COVID on unorganised sector

- The already declining labour market faced a further decline due to the pandemic. According to the 2018-19 data, 52% of the labour force is self-employed. 24% were casual workers without any financial security and the remaining 24% were regular waged workers. The shock of the pandemic affected the labour force unequally.
- The regular formal employed are the least affected. Coupled with job tenure, high salaries, and social security, they are in a comfortable position. They can enjoy the privilege of working from home.

Current Connect

- The less-educated casual workers who engage in low paying work are the most affected. They work in unstable conditions and are susceptible to layoffs. Physical distancing, safety measures, along with the fear of contracting the disease itself, the casual workers are left to face the brunt of the pandemic.
- Most of the migrants are casual workers or daily wage workers. With the lockdown in effect, many were jobless. The ILO predicted that the pandemic would push 400 million workers to poverty. Their pathetic situation forced the migrants to return to their villages. Without money, food, and transportation, many migrants either walked or cycled on their return.
- India is an agrarian economy. Food and agriculture contribute 16.5% in the GDP, the highest by any industry. Approx. half of the total workforce of the country is employed in agriculture. The pandemic hit during the peak of the Rabi season, also the time when the harvest reaches the mandis for sale by governmental agencies. The non-availability of labour has resulted in longer harvesting time, which resulted in a spike of the daily wage for harvesting crops.
- The fishing industry employs around 14 million people and contributes 1.1% in the GDP. 80% of the employed are small scale fishermen. The lockdown imposed restrictions on fishing, which reduced the supply to the markets. Higher prices of fish and other marine products, along with the pandemic, inflicted losses on the vendors.
- Another industry severely affected by the pandemic are the handloom and handicrafts industry. The already dull industry was made worse by the pandemic. The absence of exhibitions, banning the sale of nonessential items, and lowered demand contribute to their decline. The export of the industry fell by 40% to \$2.1 billion from \$3.53 billion.
- The MSME sector is one of the worst-hit sectors. It employs 120 million people, produces 45% of the exports, and contributes 37% of the GDP. In a situation filled with fear, lowered demand, and a ban on the sale of non-essential commodities, the MSME sector is the most vulnerable. The key challenges are to pay wages, rents, and pressing creditors. Businesses like garments, logistics, and consumer goods face a sharp decline. Businesses dependent on imports such as pharmaceuticals, electronic gadgets, and consumer durables are declining due to disruption in the value chain.

Conclusion

- Unorganized workers in India face many problems like low wages, cruel treatment by employers, poor living condition, etc. Social security is one of the important subjects that should be recognized by the government to reduce poverty in the country. Apart from the Unorganized Workers Social Security Act, 2008, there are many schemes like old age scheme, life insurance scheme, health insurance scheme, etc. for the welfare of unorganized workers.
- The rights of the unorganized workers are protected by various articles in the constitution of India. The unorganized workers should be given awareness regarding their health, living, and wages and should not be exploited by the employers in their working areas.

World Employment and Social Outlook

About

Global unemployment is expected to be at 205 million in 2020, surpassing the 2019 level of 187 million and the jobs shortfall induced by novel coronavirus disease (COVID-19) pandemic was 75 million in 2021 and is expected to be 23 million in 2022, warned the World Employment and Social Outlook: Trends 2021 released by International Labour Organization (ILO).

Reason for unemployment

- There has been an unprecedented disruption to labour markets worldwide due to COVID-19 pandemic, which has affected the lives of the younger generation and brought about disruption to their education, especially in those regions of the world where digital infrastructure is less developed. Also made it more difficult for them to enter the labour market and hold on to their jobs.

Current Connect

- The pandemic worsened long-standing inequalities with many women workers dropping out of the labour force, putting at risk years of progress towards achieving gender equality and pushing them back to the more traditional gender roles.
- For informal and low-skilled workers, working from home was not an option. Many had to face huge health risks to keep their jobs, often with no access to social security benefits.

What are the situations in different sectors?

- Many businesses, particularly micro and small enterprises, have already gone bankrupt or are facing a highly uncertain future, with negative consequences for their future productivity and their ability to retain workers.
- The problem is most pronounced in those sectors of economic activity that have been most affected by the crisis – that is, accommodation and food services, wholesale and retail trade, construction and manufacturing – and in activities where there is a large number of smaller enterprises.
- Informal workers have also been affected disproportionately by the crisis. Roughly 2 - billion workers – or 60.1 per cent of the globally employed – were working informally in 2019.
- Informal employees were three times more likely than their formal counterparts, and 1.6 times more likely than the self-employed, to lose their jobs as a result of the crisis, thereby contributing to the observed shift towards self-employment.
- Workers with higher skill levels tend to work in occupations that have been less affected by employment losses and that have benefited from options for working remotely.
- Many migrant workers experienced an abrupt termination of their employment along with nonpayment or delayed payment of wages, and at the same time often lacked access to social protection benefits that could make up for their income losses.

Situation of Unemployment in India due to COVID-19

- India's unemployment rate rose to its highest level since 1991 during 2020 as coronavirus pandemic caused economy to come to a screeching halt.
- India's unemployment rate sharply rose to 7.11 per cent in 2020 from 5.27 per cent in 2019, said a report by Centre for Economic Data and Analysis (CEDA) based on the ILOSTAT database of International Labour Organisation. Going back, India saw its unemployment rate rise between 2008, when it was 5.36 per cent to 5.65 per cent in 2010. It maintained a downward trend between 2013 and 2019, when it came down from 5.67 per cent to 5.27 per cent.
- India also registered higher unemployment rate compared to United States, United Kingdom and Germany between 2015 and 2019, the report said. However, the US had higher unemployment rate as compared to India in 2020 (8.31 per cent). United Kingdom and Germany had unemployment rates of 4.34 per cent and 4.31 per cent, respectively.
- The rise in unemployment is likely to continue with India looking at double-digit unemployment rate in May this year.

What need to be done?

- There is an urgent need to build back better — create productive employment opportunities and foster long-term labour market prospects for the most vulnerable.
- There is a need to strengthen social protection schemes like the Mahatma Gandhi National Rural Employment Guarantee Scheme in India and make sure nobody is left behind.
- This would require strong institutions and social dialogue and strong international cooperation to fight global disparities.

SAGE (senior care Ageing Growth Engine) initiative

- Recently, the Ministry of Social Justice and Empowerment has launched the SAGE (Senior care Ageing Growth Engine) initiative
- The SAGE portal will be a “one-stop access” of elderly care products and services by credible start-ups. The SAGE portal will be opened for applications from 5th June, 2021 onwards.

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- The start-ups will be selected on the basis of innovative products and services, which they should be able to provide across sectors such as health, housing, care centers, apart from technological access linked to finances, food and wealth management, and legal guidance.
- The key objective of the SAGE initiative is to promote the ‘Silver Economy’ by encouraging entrepreneurial ventures and start-ups to participate in this space.
- Silver Economy is defined as the system of production, distribution and consumption of goods and services aimed at utilizing the purchasing potential of the older and ageing populations, as well as satisfying their consumption requirements and living essentials and healthcare needs.
- The SAGE project intends to identify, evaluate, verify and aggregate these needs to deliver products, solutions and services to the stakeholders.

Key Features

- The government envisions elements of gerontechnology – enabling technologies to suit the requirement of the elderly population – to be vital for implementation of this scheme. Gerontechnology includes various technical systems and solutions to help the elderly and their caregivers perform basic daily activities.
- Gerontechnologies enable elders to maintain their autonomy and help compensate for functional impairments.
- To achieve this objective, the ministry has called upon entrepreneurs and start-ups to develop impactful and innovative solutions for the elderly.
- The ministry conducted detailed research with expert groups on subjects ranging from financial security, livelihoods and income generation, shelter, skilling & reskilling, healthcare and nutrition, awareness, and capacity building to develop an outline of the ideal senior care model.

Significance of SAGE

- The number of elderly people is steadily increasing in our country, so there is a need to keep in mind that the elderly should remain happy, healthy, and financially and physically active for which a Senior Citizen Welfare Fund was started in 2016.
- Taking forward the service programs related to senior citizens, this Senior care Ageing Growth Engine (SAGE) portal has now been launched today. SAGE programme and SAGE portal have been launched with a view to help such persons who are interested in entrepreneurship in the field of providing services for elderly care.

Way forward

- Initial estimations suggest that the Silver Economy is worth Rs. 73,082 crore (US \$ 10 billion) at present. To boost traction in this space, the ministry has pledged Rs. 1 crore (US \$140,000) as the initial equity funding for each start-up selected to commence operations under the SAGE initiative.
- It will also continue to participate in the initiative by playing the role of a facilitator between businesses and target populations once the start-ups deploy product and service solutions.
- In addition, the government has outlined a vision for ‘model senior care’ public-private partnership (PPP) projects, in which states will be allowed to allocate land and funds to build capacity and care facilities for senior citizens, including people from the weaker sections of society.
- The PPP model stressed the need for recognising senior care as a sector with the appropriate regulations and standards, policy support, tax structure, availability of subsidised financing and appropriate governance mechanisms.

All India Survey on Higher Education (AISHE) 2019-20

- This Report provides key performance indicators on the current status of Higher education in the country.
- Indicators of educational development such as Institution Density, Gross Enrolment Ratio, Pupil-teacher ratio, Gender Parity Index, Per Student Expenditure will also be

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calculated from the data collected through AISHE. These are useful in making informed policy decisions and research for development of education sector.

Key Features of AISHE 2019-20

- Total Enrolment in Higher Education stands at 3.85 crore in 2019-20 as compared to 3.74 crore in 2018-19, registering a growth of 11.36 lakh (3.04 %). Total enrolment was 3.42 crore in 2014-15.
- Gross Enrolment Ratio (GER), the percentage of students belonging to the eligible age group enrolled in Higher Education, in 2019-20 is 27.1% against 26.3% in 2018-19 and 24.3% in 2014-2015.
- Gender Parity Index (GPI) in Higher Education in 2019-20 is 1.01 against 1.00 in 2018-19 indicating an improvement in the relative access to higher education for females of eligible age group compared to males.
- Pupil Teacher Ratio in Higher Education in 2019-20 is 26.
- The Total Number of Teachers stands at 15,03,156 comprising of 57.5% male and 42.5% female.

Challenges in Higher Education in India

- **Enrolment:** The Gross Enrolment Ratio (GER) of India in higher education is only 15% which is quite low as compared to the developed as well as, other developing countries. With the increase of enrolments at school level, the supply of higher education institutes is insufficient to meet the growing demand in the country.
- **Equity:** There is no equity in GER among different sects of the society. According to previous studies the GER in higher education in India among male and female varies to a greater extent. There are regional variations too some states have high GER while as some is quite behind the national GER which reflect a significant imbalances within the higher education system.
- **Quality:** Quality in higher education is a multi-dimensional, multilevel, and a dynamic concept. Ensuring quality in higher education is amongst the foremost challenges being faced in India today. However, Government is continuously focusing on the quality education. Still Large number of colleges and universities in India are unable to meet the minimum requirements laid down by the UGC and our universities are not in a position to mark its place among the top universities of the world.
- **Infrastructure:** Poor infrastructure is another challenge to the higher education system of India particularly the institutes run by the public sector suffer from poor physical facilities and infrastructure. There are large number of colleges which are functioning on second or third floor of the building on ground or first floor there exists readymade hosiery or photocopy shops.
- **Political interference:** Most of the educational Institutions are owned by the political leaders, who are playing key role in governing bodies of the Universities. They are using the innocent students for their selfish means. Students organise campaigns, forget their own objectives and begin to develop their careers in politics.
- **Faculty:** Faculty shortages and the inability of the state educational system to attract and retain well qualified teachers have been posing challenges to quality education for many years. Large numbers of NET / PhD candidates are unemployed even there are lot of vacancies in higher education, these deserving candidates are then applying in other departments which is a biggest blow to the higher education system.
- **Research and Innovation:** there are very nominal scholars in our country whose writing is cited by famous western authors. There is inadequate focus on research in higher education institutes. There are insufficient resources and facilities, as well as, limited numbers of quality faculty to advice students. Most of the research scholars are without fellowships or not getting their fellowships on time which directly or indirectly affects their research.

Suggestions Improving the System of Higher Education

- There is a need to implement innovative and transformational approach from primary to higher education level to make Indian educational system globally more relevant and competitive.

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- Higher educational institutes need to improve quality and reputation.
- There should be a good infrastructure of colleges and universities which may attract the students.
- Government must promote collaboration between Indian higher education institutes and top International institutes and also generates linkage between national research laboratories and research centers of top institutions for better quality and collaborative research.
- There is a need to focus on the graduate students by providing them such courses in which they can achieve excellence, gain deeper knowledge of subject so that they will get jobs after recruitment in the companies which would reduce unnecessary rush to the higher education. Universities and colleges in both public private must be away from the political affiliations, Favouritism, money making process should be out of education system etc.
- There should be a multidisciplinary approach in higher education so that students knowledge may not be restricted only upto his own subjects.

Conclusion

- Education is a process by which a person's body, mind and character are formed and strengthened. It is bringing of head, heart and mind together and thus enabling a person to develop an all-round personality identifying the best in him or her. Higher education in India has expanded very rapidly in the last six decades after independence yet it is not equally accessible to all.
- Opportunities are available but how to get benefits from these opportunities and how to make them accessible to others is the matter of concern.
- In order to sustain that rate of growth, there is need to increase the number of institutes and also the quality of higher education in India. To reach and achieve the future requirements there is an urgent need to relook at the Financial Resources, Access and Equity, Quality Standards, Relevance, infrastructure and at the end the Responsiveness.

World Drug Report

- Around 275 million people used drugs worldwide last year, while over 36 million people suffered from drug use disorders, according to the World Drug Report released recently by United Nations office on Drug and Crime.
- For two decades, the United Nations Office on Drugs and Crime (UNODC) has been helping make the world safer from drugs, organized crime, corruption and terrorism.
- In the last 24 years cannabis potency had increased by as much as four times in parts of the world, even as the percentage of adolescents who perceived the drug as harmful fell by as much as 40 per cent, despite evidence that cannabis use is associated with a variety of health and other harms, especially among regular long-term users.
- Most countries have reported a rise in the use of cannabis during the pandemic. In surveys of health professionals across 77 countries, 42 per cent asserted that cannabis use had increased.
- Globally, over 11 million people are estimated to inject drugs, half of whom are living with Hepatitis C. Opioids continue to account for the largest burden of disease attributed to drug use.
- According to the latest global estimates, about 5.5 per cent of the population aged between 15 and 64 years have used drugs at least once in the past year, while 36.3 million people, or 13 per cent of the total number of persons who use drugs, suffer from drug use disorders.

The Dark Web

- Drug markets on the dark web only emerged a decade ago but major ones are now worth at least US\$ 315 million in annual sales.
- Rapid technological innovation, combined with the agility and adaptability of those using new platforms to sell drugs and other substances, is likely to usher in a globalized market where all drugs are more available and accessible everywhere. This,

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in turn, could trigger accelerated changes in patterns of drug use and entail public health implications.

Drug Abuse Problem in India

- Prescription drug abuse is growing in India and the problem is serious in South Asia. According to a UN report, drugs enter the cross-border illicit markets through various channels, being diverted from India's pharmacy industry and smuggled from Afghanistan.
- The International Narcotics Control Board (INCB), an independent UN body tasked with monitoring the production and consumption of narcotics worldwide, said in its annual report that governments in South Asia continue to respond strongly to the threat of drug trafficking and abuse in the region.
- According to UNODC, India accounts for 10 percent of the total pharmaceuticals produced in the world. In its report, it noted that the law required all drugs with "abuse potential" to be sold only on prescription, but that there was "significant diversion" from this.
- According to a study by the Delhi Commission for Protection of Child Rights on Substance Abuse by Children, 100 percent of the children in conflict with the law were drug abusers, while 95.5 percent of them staying in child care institutions were on drugs and 93 percent of street children consumed narcotics. The study also states that 88 percent of the children consumed drugs due to "peer pressure".

Steps Taken by the Indian Government

- **NashaMukt Bharat Annual Action Plan for 2020-21:** It aims to focus on 272 most affected districts and launch a three-pronged attack combining efforts of Narcotics Bureau, Outreach/Awareness by Social Justice and Treatment through the Health Dept. The Action Plan has the following components: Awareness generation programmes; Focus on Higher Educational institutions, University Campuses and Schools; Community outreach and identification of dependent population; Focus on Treatment facilities in Hospital settings; and Capacity Building Programmes for Service Provider.
- The Ministry of Social Justice and Empowerment has drafted a five-year action plan for addressing the problem of drug and substance abuse in the country. **The National Action Plan for Drug Demand Reduction (2018-2023)** aims to employ a multi-pronged strategy — involving education, de-addiction and rehabilitation of affected individuals and their families — to address the issue.
- The Indian government has taken a significant step to help alcohol and drug abusers by launching a national toll-free helpline number – 1800-11-0031 and control drug abuse in India. The helpline was started to set in motion the Indian Prime Minister's plan to eradicate the menace of drug abuse in India and assist the existing victims in successful rehabilitation.

Largest drop in Open Defecation: WASH report

Context

- Report on water, sanitation and hygiene has been jointly released by World Health organization and UNICEF.

What report says?

- India was responsible for the largest drop in open defecation since 2015, in terms of absolute numbers.
- Within India, open defecation had been highly variable regionally since at least 2006.
- In 2006, the third round of the National Family Health Survey (NFHS) found open defecation to be practiced by less than 10 per cent of the population in four states and the Union Territory of Delhi, but by more than half the population in 11 states.
- By 2016, when the fourth round of the NFHS was conducted, open defecation had decreased in all states, with the largest drops seen in Himachal Pradesh and Haryana.
- It, however, showed that progress in curbing open defecation in sub-Saharan Africa was slow.

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Progress in SDG 6

- The report also noted some progress towards the achieving SDG 6. Between 2016 and 2020, the global population with access to safely managed drinking water at home increased to 74 per cent, from 70 per cent.
- SDG 6 states that ensuring availability and sustainable management of water and sanitation for all by 2030 entails that water must be accessible at source, available when needed and free from any contamination.
- The report has shown an improvement in at-source water resources including piped water, boreholes or tube-wells, protected dug wells, protected springs, rainwater and packaged or delivered water.
- Water sources are considered 'accessible on premises' if the point of water collection is within the dwelling, compound, yard or plot, or is supplied to the household through piped supply or tanks.
- Globally, access to safely managed sanitation services increased over the 2000-2020 period by an average of 1.27 percentage points per year.

Report on hygiene in context of the COVID-19

- It is now recognised by scientists and research studies that people are infected with SARS-COV-2 through exposure to respiratory droplets of infected peoples.
- In June 2020, the World Health Organization and Unicef jointly launched the 'Hand Hygiene for All' initiative, which aims to improve access to handwashing infrastructure as well as stimulating changes in handwashing practices where facilities are available. Handwashing facilities with soap and water increased to 71 per cent, from 67 per cent.
- However, 3 in 10 people worldwide could not wash their hands with soap and water at home during the COVID-19 pandemic due to lack of water resources.

Government of India programme and Initiatives

- The Government of India has demonstrated its commitment to the overall well-being of its citizens. Back in 2005, the central government established the National Health Mission and introduced structural reforms to strengthen health care and sanitation.
- The National Health Policy 2017 clearly articulates the government's commitment to reforming the health sector and achieving universal health coverage, not least by proposing an increase in the health budget to 2.5% of GDP.
- The policy also sets bound targets for disease elimination, reduction of premature and preventable mortality, systems strengthening, as well as improving health services.
- The government launched Mission Indradhanush in 2015 to rapidly increase immunisation coverage.
- It is also investing significant resources towards ending open defecation by 2019 through the Swachh Bharat programme.

NIPUN Bharat

- Ministry of Education has launched a National Initiative for Proficiency in Reading with Understanding and Numeracy (NIPUN Bharat), for ensuring that every child in the country necessarily attains foundational literacy and numeracy (FLN) by the end of Grade 3, by 2026-27.
- The National Mission which has been launched under the aegis of the centrally sponsored scheme of SamagraShiksha, will focus on providing access and retaining children in foundational years of schooling; teacher capacity building; development of high quality and diversified Student and Teacher Resources/Learning Materials; and tracking the progress of each child in achieving learning outcomes.
- The School Education Department says no additional funding is being allocated for the National Initiative for Proficiency in Reading with Understanding and Numeracy (NIPUN Bharat). Instead, money is being allocated from the flagship SamagraShiksha scheme, which actually saw a 20% drop in its budget this year.

Student Covered under NIPUN Bharat Programme

Current Connect

- The mission will focus on children of age group of 3 to 9 years including pre-school to Grade 3.
- The children who are in Class 4 and 5 and have not attained the foundational skills will be provided individual teacher guidance and support, peer support and age appropriate and supplementary graded learning materials to acquire the necessary competencies.

Objectives of NIPUN Bharat Programme

- To ensure an inclusive classroom environment by incorporating play, discovery, and activity-based pedagogies, linking it to the daily life situations of the children and formal inclusion of children's home languages.
- To enable children to become motivated, independent and engaged readers and writers with comprehension possessing sustainable reading and writing skills.
- To make children understand the reasoning in the domains of number, measurement and shapes; and enable them to become independent in problem solving by way of numeracy and spatial understanding skills.
- To ensure availability and effective usage of high-quality and culturally responsive teaching learning material in children's familiar/home/mother language(s).
- To focus on continuous capacity building of teachers, head teachers, academic resource persons and education administrators.
- To actively engage with all stakeholders i.e., Teachers, Parents, Students and Community, policy makers for building a strong foundation of lifelong learning.
- To ensure assessment 'as, of and for' learning through portfolios, group and collaborative work, project work, quizzes, role plays, games, oral presentations, short tests, etc.
- To ensure tracking of learning levels of all students.

How this programme is Unique

- The unique feature is that the goals of the Mission are set in the form of LakshyaSoochi or Targets for Foundational Literacy and Numeracy.
- Although, the overall aim is to achieve the desired learning outcomes by the end of grade 3, however, in order to generate greater awareness among the parents, community, volunteers etc. the Lakshyashas been developed from Balvatika to Grade 3.
- The Laskhyas are based on the learning outcomes developed by the NCERT and international research and ORF studies.
- The success of NIPUN Bharat will primarily depend on teachers, so, there will be a special emphasis on capacity building of teachers.
- A special package for foundational literacy and Numeracy under NISHTHA is being developed by NCERT and around 25 lakh teachers teaching at pre-primary to primary grade will be trained this year on FLN.

Benefits of NIPUN Bharat Mission

- Foundational skills enable to keep children in class thereby reducing the dropouts and improve transition rate from primary to upper primary and secondary stages.
- Activity based learning and conducive learning environment will improve quality of education.
- Innovative pedagogies such as toy-based and experiential learning will be used in classroom transaction thereby making learning a joyful and engaging activity.
- Intensive capacity building of teachers will make them empowered and provide greater autonomy for choosing the pedagogy.
- Holistic development of the child by focusing on different domains of development like physical and motor development, socio-emotional development, literacy and numeracy development, cognitive development, life skills etc. which are interrelated and interdependent, which will be reflected in a Holistic Progress Card.
- Children to achieve steeper learning trajectory which may have positive impacts on later life outcomes and employment.

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- Since almost every child attends early grades, therefore, focus at that stage will also benefit the socio-economic disadvantaged group thus ensuring access to equitable and inclusive quality education.

Way forward

- The goal has simply been to enrol children in school, and then to ensure that they finish Class 10. This mission specifies stage-wise learning goals to ensure that students are acquiring the necessary building blocks.
- Annual Status of Education Report (ASER) found that less than 30% of Class 3 students could read at Class 2 level or do double digit subtraction in 2018. Operationalising a changed mindset would require changes in curriculum, teacher training, assessment, and messaging to parents, such as holistic report cards.
- There is a need for following the NEP recommendation to see early childhood education as a continuum, with a focus on the Anganwadi and pre-school systems as well.
- There would be a need to ensure that when schools are reopened, there is a focus on school readiness activities for younger classes, rather than going straight to a traditional curriculum.
- NIPUN Bharat could recommend a 60-90-day focus on foundational literacy and numeracy before transitioning to a regular timetable.

Vaccine Hesitancy in India

Context

- The Vice President emphasized the need to educate people on the importance of Covid-19 Vaccination and urged all stakeholders to work collectively to achieve the target of full vaccination by the year end.

What were the reasons for Vaccination Hesitancy?

- Vaccine hesitancy has crippled various government programmes even before the Covid outbreak, including for polio elimination.
- It has been more prevalent in rural areas for a variety of reasons, including the dearth of health education.
- In the case of Covid-19, the focus was initially on urban areas, which saw maximum vaccination numbers in the early days of the rollout.
- Rural India called for a nuanced strategy that involved engagement with, and participation of, multiple stakeholders and influencers.
- With information about supply available in advance, district administrations have undertaken calibrated campaigns to reach out to the public.

What need to be done?

- There is a need to dispel fears in some sections and the vaccination drive should turn into a truly Pan-India 'Jan Andolan'.
- Urging the medical fraternity to take a lead in creating awareness and educating the people on the importance of getting themselves vaccinated.
- Stating that community support is critical in our fight against Corona virus, those having vaccine hesitancy should be made aware of the fact that they are putting their own lives and those of their family members at avoidable risk.
- The Centre and States need to work together in 'Team India' spirit to quicken the pace of the vaccine campaign.

SAMVAD Initiative: 2nd Phase

Context

- Ministry of Women and Child Development on the eve of Independence Day, launched 2nd phase of SAMVAD.
- SAMVAD - Support, Advocacy & Mental health interventions for children in Vulnerable Circumstances and Distress. SAMVAD is a National Initiative and Integrated Resource that works in child protection, mental health and psychosocial care.

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About SAMVAD Initiative

- SAMVAD's new initiatives with regards to mental health and psychosocial care of children in difficult circumstances encompasses a specialized training curriculum on childhood trauma, interventions for children in conflict with the law, forensics in child and adolescent psychiatry and mental health, education and mental health support to children with special needs, protection and care in the context of adoption and foster care and integration of child protection and mental health in the Panchayati Raj systems.

What is Mental Health?

- Mental health includes our emotional, psychological, and social well-being. It affects how we think, feel, and act. It also helps determine how we handle stress, relate to others, and make choices. Mental health is important at every stage of life, from childhood and adolescence through adulthood. **Mental Health and India**
- A study revealed that in the same year, 14% of India's population suffered from mental health ailments, including 45.7 million suffering from depressive disorders and 49 million from anxiety disorders.
- The Covid-19 pandemic has further accentuated this mental health crisis, with reports from across the world suggesting that the Virus and associated lockdowns were having a significant impact on the population – particularly younger individuals.
- A study by the India State-Level Disease Burden Initiative showed that the disease burden in India due to mental disorders increased from 2.5% in 1990 to 4.7% in 2017 in terms of DALYs (disability-adjusted life years), and was the leading contributor to YLDs (years lived with disability) contributing to 14.5% of all YLDs in the country (India State-Level Disease Burden Initiative, 2017).
- The National Mental Health Survey (NMHS), 2015-16 found that nearly 80% of those suffering from mental disorders did not receive treatment for over a year.
- This survey also identified large treatment gaps in mental healthcare, ranging from 28% to 83% across different mental disorders (National Institute of Mental Health and Neuro- Sciences (NIMHANS), 2016).

Economic burden of Mental disorders

- WHO estimates the economic loss to India on account of mental health disorders to be US\$ 1.03 trillion.
- The NMHS also found that mental health disorders disproportionately affect households with lower income, less education, and lower employment.
- These vulnerable groups are faced with financial limitations due to their socioeconomic conditions, made worse by the limited resources available for treatment.
- Lack of State services and insurance coverage results in most expenses on treatment – when sought – being out-of-pocket expenses, thus worsening the economic strain on the poor and vulnerable.

Initiatives taken by Indian Government

- The Mental Healthcare Act, 2017 makes several provisions to improve the state of mental health in India. This Act rescinds the Mental Healthcare Act, 1987 which was criticised for failing to recognise the rights and agency of those with mental illness.
- This includes stating access to mental healthcare as a right; and instituting Central and State Mental Health Authorities (SMHA), which would focus on building robust infrastructure including registration of mental health practitioners and implementing service-delivery norms. Although the Act required states to set up an SMHA in nine months of the Act being passed, as of 2019, only 19 out of 28 states had constituted an SMHA.
- The National Mental Health Programme (NMHP) was introduced in 1982, in keeping with the WHO's recommendations, to provide mental health services as part of the general healthcare system. Although the programme has been successful in improving mental healthcare access at the community level, resource constraints and insufficient infrastructure have limited its impact.

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COVID-19 and Mental Health

- A survey by the Indian Psychiatry Society indicated that 20% more people suffered from poor mental health since the beginning of the Covid-19 pandemic.
- Emerging evidence indicates that during the Covid-19 pandemic, women exhibit relatively higher levels of psychological stress among the urban poor and households with migrant workers in rural areas – who were acutely affected by the lockdown restrictions – show higher incidence of mental health issues relative to those without migrants.
- Students were also severely affected by the lockdowns as it required adapting to a new learning medium and environment, as well as increased concerns about future prospects.

Where India is Lacking?

Developed countries allocate 5-18% of their annual healthcare budget on mental health, while India allocates roughly 0.05%.

Conclusion

- Acknowledging the extent of the issue would be the first step towards addressing the mental health crisis in the country. The next and most pertinent step – given the socioeconomic groups largely affected by the crisis – would be to take initiative towards making mental healthcare more accessible, with targeted interventions for vulnerable groups.

Concern over Food Fortification

Context

Centre plans to mandatorily fortify rice and edible oils with vitamins and minerals, a group of scientists and activists have written to the Food Safety and Standard Authority of India (FSSAI), warning of the adverse impacts on health and livelihood.

What is fortification of Food?

- Fortification is the addition of key vitamins and minerals such as iron, iodine, zinc, Vitamin A & D to staple foods such as rice, milk and salt to improve their nutritional content. These nutrients may or may not have been originally present in the food before processing.

Why do we need Fortification of Food?

- 70% of people in India do not consume enough micronutrients such as vitamins and minerals. About 70 percent of pre-school children suffer from anaemia caused by Iron Deficiency and 57 percent of preschool children have sub-clinical Vitamin A deficiency.
- Neural Tube Defects (NTDs) are the most common congenital malformation with an incidence that varies between 0.5-8/1000 births. It is estimated that 50-70% of these birth defects are preventable. One of the major causes is deficiency of Folic Acid.
- Thus, deficiency of micronutrients or micronutrient malnutrition, also known as –hidden hunger, is a serious health risk. Unfortunately, those who are economically disadvantaged do not have access to safe and nutritious food.
- Others either do not consume a balanced diet or lack variety in the diet because of which they do not get adequate micronutrients. Often, there is considerable loss of nutrients during the processing of food.
- One of the strategies to address this problem is fortification of food. This method complements other ways to improve nutrition such as diversification of diet and supplementation of food.

What are the benefits of Fortification?

- Since the nutrients are added to staple foods that are widely consumed, this is an excellent method to improve the health of a large section of the population, all at once.
- Fortification is a safe method of improving nutrition among people. The addition of micronutrients to food does not pose a health risk to people. The quantity added is so

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small and so well regulated as per prescribed standards that likelihood of an overdose of nutrients is unlikely.

- It does not require any changes in food habits and patterns of people. It is a socio-culturally acceptable way to deliver nutrients to people.
- It does not alter the characteristics of the food— the taste, the feel, the look. It can be implemented quickly as well as show results in improvement of health in a relatively short period of time.
- This method is cost-effective especially if advantage is taken of the existing technology and delivery platforms.
- The **Copenhagen Consensus** estimates that every 1 Rupee spent on fortification results in 9 Rupees in benefits to the economy. It requires an initial investment to purchase both the equipment and the vitamin and mineral premix, but overall costs of fortification are extremely low. Even when all program costs are passed on to consumers, the price increase is approximately 1-2%, less than normal price variation. Thus it has a high benefit-to-cost ratio.

Key findings of the Study

- They cited multiple studies to show that dietary diversity and higher protein consumption are key to solving undernutrition in India, rather than adding a few synthetic micronutrients which could harm the health of consumers. The Study warned that —evidence supporting fortification is inconclusive and certainly not adequate before major national policies are rolled out.
- The letter points to recent studies published in the medical journal Lancet and in the American Journal of Clinical Nutrition which shows that both Anaemia and Vitamin, a deficiencies are over diagnosed, meaning that mandatory fortification could lead to hyper-vitaminosis.
- It also notes that many of the studies which FSSAI relies on to promote fortification are sponsored by food companies who would benefit from it, leading to conflicts of interest.
- The letter explains that one major problem with chemical fortification of foods is that nutrients don't work in isolation but need each other for optimal absorption.
- Undernourishment in India is caused by monotonous cereal-based diets with low consumption of vegetables and animal protein.
- Adding one or two synthetic chemical vitamins and minerals will not solve the larger problem, and in undernourished populations can lead to toxicity.
- Citing a 2010 study that showed iron fortification causing gut inflammation and pathogenic gut microbiota profile in undernourished children.

Other Concerns

- The letter also argued that mandatory fortification would harm the vast informal economy of Indian farmers and food processors including local oil and rice mills, and instead benefit a small group of multinational corporations who will have sway over a ₹3,000 crore market.
- Just five corporations have derived most of the benefits of global fortification trends and these companies have historically engaged in cartelising behaviour leading to price hikes.

What is the solution?

- Dietary diversity is a healthier and more cost-effective way to fight malnutrition.
- Once iron-fortified rice is sold as the remedy to anaemia, the value and the choice of naturally iron-rich foods like millets, varieties of green leafy vegetables, flesh foods, liver, to name a few, will have been suppressed by a policy silence.
- Government should stop promoting polished rice, which has lost a lot of its nutrition on the one hand, and talks about chemical fortification on the other hand.

Conclusion

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- Food is the fundamental right of every citizen. Food habits in our country are so diverse and it is important to keep our health and the health of the agro ecosystem intact and also to build the local economy.

Ayushman Bharat Digital Mission

Context

- Prime Minister launched the Ayushman Bharat Digital Mission (ABDM).

About the mission

- Ayushman Bharat Digital Mission will connect the digital health solutions of hospitals across the country with each other. The Mission will not only make the processes of hospitals simplified but also will increase ease of living. The Digital Ecosystem will also enable a host of other facilities like Digital Consultation, Consent of patients in letting medical practitioners access their records, etc. With the implementation of this scheme, old medical records cannot get lost as every record will be stored digitally.
- The Ayushman Bharat Digital Mission (ABDM) aims to develop the backbone necessary to support the integrated digital health infrastructure of the country. It will bridge the existing gap amongst different stakeholders of Healthcare ecosystem through digital highways.

What is the unique health ID, and how does one get it?

- If a person wants to be part of the ABDM, she must create a health ID, which is a randomly generated 14-digit number. The ID will be broadly used for three purposes: unique identification, authentication, and threading of the beneficiary's health records, only with their informed consent, across multiple systems and stakeholders.
- One can get a health ID by self-registration on the portal or by downloading the ABDM Health Records app on one's mobile. Additionally, one can also request the creation of a health ID at a participating health facility, which may include government or private hospitals, community health centres, and wellness centres of the government across India.
- The beneficiary will also have to set up a Personal Health Records (PHR) address for consent management, and for future sharing of health records.

What is a PHR address?

- It is a simple self-declared username, which the beneficiary is required to sign into a Health Information Exchange and Consent Manager (HIE-CM). Each health ID will require linkage to a consent manager to enable sharing of health records data.
- An HIE-CM is an application that enables sharing and linking of personal health records for a user. At present, one can use the health ID to sign up on the HIE-CM; the National Health Authority (NHA), however, says multiple consent managers are likely to be available for patients to choose from in the near future.

What does one need to register for a health ID?

- Currently, ABDM supports health ID creation via mobile or Aadhaar. The official website states that ABDM will soon roll out features that will support health ID creation with a PAN card or a driving licence. For health ID creation through mobile or Aadhaar, the beneficiary will be asked to share details on name, year of birth, gender, address, mobile number/Aadhaar.

Analytica

Are personal health records secure?

- The NHA says ABDM does not store any of the beneficiary health records. The records are stored with healthcare information providers as per their "retention policies", and are "shared" over the ABDM network "with encryption mechanisms" only after the beneficiary express consent.

Is health ID being permanent?

- No, the NHA says ABDM, supports such a feature. Two options are available: a user can permanently delete or temporarily deactivate her health ID.

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- On deletion, the unique health ID will be permanently deleted, along with all demographic details. The beneficiary will not be able to retrieve any information tagged to that health ID in the future, and will never be able to access ABDM applications or any health records over the ABDM network with the deleted ID.

Benefits

- You can access your digital health records right from admission through treatment and discharge. Second, you can access and link your personal health records with your health ID to create a longitudinal health history.

How do private players get associated with a government digital ID?

- The NHA has launched the NDHM Sandbox: a digital architecture that allows helps private players to be part of the National Digital Health Ecosystem as health information providers or health information users.
- The private player sends a request to NHA to test its system with the Sandbox environment. The NHA then gives the private player a key to access the Sandbox environment and the health ID application programming interface (API).
- The private player then has to create a Sandbox health ID, integrate its software with the API; and register the software to test link records and process health data consent requests. Once the system is tested, the system will ask for a demo to the NHA to move forward. After a successful demo, the NHA certifies and empanels the private hospital.

Why is this initiative significant?

- As the Prime Minister highlighted on Monday, the initiative has the potential to “increase the ease of living” along with “simplifying the procedures in hospitals”.
- At present, the use of digital health ID in hospitals is currently limited to only one hospital or to a single group, and mostly concentrated in large private chains. The new initiative will bring the entire ecosystem on a single platform.
- For instance, if a patient is getting treated at AIIMS, Delhi, and wants to move to another hospital in a different city, and if that hospital is also on the centralised ecosystem, the patient does not have to carry physical health records or files of several years of treatment, as the medical history is readily available.
- The system also makes it easier to find doctors and specialists nearest to you. Currently, many patients rely on recommendations from family and friends for medical consultation, but now the new platform will tell the patient who to reach out to, and who is the nearest. Also, labs and drug stores will be easily identified for better tests using the new platform.

Global Innovation Index 2021

Context

- India has climbed 2 spots and has been ranked 46th by the World Intellectual Property Organization in the Global Innovation Index 2021 rankings.

How India performance improves?

- The consistent improvement in the GII ranking is owing to the immense knowledge capital, the vibrant start-up ecosystem, and the amazing work done by the public and the private research organizations.
- The Scientific Departments like the Department of Atomic Energy; the Department of Science and Technology; the Department of Biotechnology and the Department of Space have played a pivotal role in enriching the National Innovation Ecosystem.
- The NITI Aayog has been working tirelessly to ensure the optimization of the national efforts for bringing policy led innovation in different areas such as electric vehicles, biotechnology, nano technology, space, alternative energy sources, etc.
- The India Innovation Index, the latest edition of which was released last year by the NITI Aayog, has been widely accepted as a major step in the direction of decentralization of innovation across all the states of India. A constant thrust in monitoring and evaluating India’s position in the global rankings has been provided by the NITI Aayog, including in the GII.

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- The Confederation of Indian Industry (CII) has also been leading from the front as a torchbearer of India's journey towards an innovation driven economy.

Way forward

- In the last decade and a half since its inception, the GII has supported countries around the globe as they improve their innovation investments and related policies. Dozens of countries from all regions and income groups already actively use the GII framework in the construction of their pro-innovation policies. It has charted the rising understanding of how important innovation is to growth in an interconnected but competitive worldwide economy.
- As we look toward the exit of the current crisis, let us focus on using innovation to deepen the transformation of our economies and societies for the good of all. The pandemic has already accelerated digital ways of working, living and playing, while boosting technology trends all over the world. In this future world where technology, innovation and creativity are even more important for the global economy, it is my hope that the GII will continue to help guide policymakers and others so that we can build back better.

SPIN Scheme

Context

- Khadi and Village Industries Commission (KVIC) launched a unique Scheme called SPIN (Strengthening the Potential of India) and set up a pottery cluster under SFURTI Scheme.

SFURTI Scheme:

- The objectives of the scheme is to organize the traditional industries and artisans into clusters to make them competitive and provide support for their long term sustainability, sustained employment, to enhance marketability of products of such clusters, to equip traditional artisans of the associated clusters with the improved skills, to make provision for common facilities and improved tools and equipment's for artisans, to strengthen the cluster governance systems with the active participation of the stakeholders, and to build up innovated and traditional skills, improved technologies, advanced processes, market intelligence and new models of public-private partnerships, so as to gradually replicate similar models of cluster-based regenerated traditional industries.

About SPIN Scheme

- SPIN Scheme in which 780 potters from Uttar Pradesh, Bihar, Rajasthan and Jharkhand have registered for financial assistance from the bank to begin their own business. Out of these, 110 artisans are from Varanasi.
- SPIN Scheme enables the registered potters to get a direct loan from the banks under PradhanMantriShishu Mudra Yojana. Under the SPIN Scheme, KVIC is acting as a facilitator for financial aid to potters through RBL bank and also providing training to the artisans, opting for this scheme.
- Under this scheme, there will be no financial burden on the exchequer and the loan will be repaid by the potter in easy instalments. The SPIN scheme, thus, aims at infusing self-sustainability in the Indian pottery sector.
- Kashi Pottery Cluster” at Village Bhatti in Varanasi is the first pottery cluster in Varanasi district set up by KVIC under the SFURTI Scheme.
- Kashi Pottery Cluster” at Village Bhatti in Varanasi. This is the first pottery cluster in Varanasi district set up by KVIC under the SFURTI Scheme.
- In addition to this, KVIC distributed tool sets to 80 carpentry artisans in Varanasi and also planted 2000 bamboo saplings at Sewapuri Ashram in Varanasi.

Salient Features of SPIN Scheme

- It is a no-subsidy program
- KVIC facilitates potters to get bank loans under PradhanMantriShishu Mudra Yojana
- No financial burden on the exchequer

- Beneficiaries can repay the loans in easy instalments.

Reform in Urban Planning: NITI Aayog Report

Context

- NITI Aayog launched a report on measures to ramp up urban planning capacity in India.
- The report, titled 'Reforms in Urban Planning Capacity in India'. The report has been developed by NITI Aayog, in consultation with concerned ministries and eminent experts in the domain of urban and regional planning. It presents a condensed outcome of the extensive deliberations and consultations conducted over a period of 9 months.

Need for such measures

- In the coming years, urban India will power the growth of the Indian economy. Urban challenges, including town planning, need greater policy attention in our country. There is a compelling need to plug the gaps in urban planning capacity in the country, else a huge opportunity for rapid, sustainable and equitable growth would be at risk of being missed.
- Urbanization is the driving force of the Indian economy. The country has reached a turning point in its transformation. It will be half urban in a couple of decades. This is the first time in the history of India that the question of urban planning capacity has been dealt with in depth.
- Greater synergies among the public and private sectors and education institutions will provide a massive boost towards making Indian cities more liveable, competitive, and sustainable.

Suggested Reforms in Urban Planning Capacity

The problem

- India is home to 11% of the total global urban population. By 2027, India will surpass China as the most populous country in the world. Unplanned urbanization, however, exerts great strain on our cities. In fact, the Covid-19 pandemic has revealed the dire need for the planning and management of our cities.
- Urban planning is the foundation for an integrated development of cities, citizens, and the environment. Unfortunately, it has received due attention so far. The existing urban planning and governance framework is complex, which often leads to ambiguity and lack of accountability.
- Issues like lack of availability of serviced land, traffic congestion, pressure on basic infrastructure, extreme air pollution, urban flooding, water scarcity and droughts are not merely a reflection of infrastructural shortcomings in the cities. These issues indicate a deep and substantial lack of adequate urban planning and governance frameworks.

Recommendations

- **Programmatic Intervention for Planning of Healthy Cities:** Every city must aspire to become a 'Healthy City for All' by 2030. The report recommends a Central Sector Scheme '500 Healthy Cities Programme', for a period of 5 years, wherein priority cities and towns would be selected jointly by the states and local bodies.
- **Programmatic Intervention for Optimum Utilization of Urban Land:** All the cities and towns under the proposed 'Healthy Cities Programme' should strengthen development control regulations based on scientific evidence to maximize the efficiency of urban land (or planning area). The report recommends a sub-scheme 'Preparation/Revision of Development Control Regulations' for this purpose.
- **Ramping Up of Human Resources:** To combat the shortage of urban planners in the public sector, the report recommends that the states/UTs may need to a) expedite the filling up of vacant positions of town planners, and b) additionally sanction 8268 town planners' posts as lateral entry positions for a minimum period of 3 years and a maximum of 5 years to meet the gaps.
- **Ensuring Qualified Professionals for Undertaking Urban Planning:** State town and country planning departments face an acute shortage of town planners. This is

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compounded by the fact that in several states, ironically, a qualification in town planning is not even an essential criterion for such jobs. States may need to undertake requisite amendments in their recruitment rules to ensure the entry of qualified candidates into town-planning positions.

- **Re-engineering of Urban Governance:** There is a need to bring in more institutional clarity and also multi-disciplinary expertise to solve urban challenges. The report recommends the constitution of a high-powered committee to re-engineer the present urban-planning governance structure. The key aspects that would need to be addressed in this effort are: i) clear division of the roles and responsibilities of various authorities, appropriate revision of rules and regulations, etc., ii) creation of a more dynamic organizational structure, standardisation of the job descriptions of town planners and other experts, and iii) extensive adoption of technology for enabling public participation and inter-agency coordination.
- **Revision of Town and Country Planning Acts:** Most States have enacted the Town and Country Planning Acts, that enable them to prepare and notify master plans for implementation. However, many need to be reviewed and upgraded. Therefore, the formation of an apex committee at the state level is recommended to undertake a regular review of planning legislations (including town and country planning or urban and regional development acts or other relevant acts).
- **Demystifying Planning and Involving Citizens:** While it is important to maintain the master plans' technical rigour, it is equally important to demystify them for enabling citizens' participation at relevant stages. Therefore, the committee strongly recommends a 'Citizen Outreach Campaign' for demystifying urban planning.
- **Steps for Enhancing the Role of Private Sector:** The report recommends that concerted measures must be taken at multiple levels to strengthen the role of the private sector to improve the overall planning capacity in the country. These include the adoption of fair processes for procuring technical consultancy services, strengthening project structuring and management skills in the public sector, and empanelment of private sector consultancies.
- **Measures for strengthening human resource and match demand-supply:** The profession needs more structuring, skill-mapping, and data-basing of the workforce to bridge the gap between demand and supply. The Advisory Committee recommends the constitution of a 'National Council of Town and Country Planners' as a statutory body of the Government of India. Also, a 'National Digital Platform of Town and Country Planners' is suggested to be created within the National Urban Innovation Stack of MoHUA. This portal is expected to enable self-registration of all the planners and evolve as a marketplace for potential employers and urban planners.

Conclusion

- The political leadership, decision-makers and planners need to reach a common consensus that a promise to save the environment from the strains of urbanization is a promise of economic growth in the long run. The road to reform may be long. Collaborative, concerted and cooperative efforts are required to strengthen the urban planning capacity of the country. The moment to start is now, if the country has to keep pace with the emerging demands of time.

The Poshan Scheme (PM's Overarching Scheme for Holistic Nutrition)

Context

- Inaugural of the Mission Poshan 2.0 and urged all aspirational districts of the country to make a commitment to establish a PoshanVatika (nutrition Malnourished (SAM) garden)
- National Nutrition Mission named as the Hon'ble Prime Minister's overarching scheme for Holistic Nutrition-POSHAN Abhiyaan was launched as a multi-ministerial convergence mission, with the overarching vision to make India malnutrition free by 2022
- POSHAN Abhiyaan is Government of India's flagship programme to **improve nutritional outcomes for children (0-6 years), adolescent Girls, pregnant women and lactating**

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- **mothers.**

The objective of PoshanAbhiyan

- Prevent and **reduce Stunting in children** (0- 6 years) by 2%
- Prevent and reduce **under-nutrition** (underweight prevalence) in children (0-6 years) by 2%
- Reduce the **prevalence of anaemia among young** Children (6-59 months) by and
- Reduce the **prevalence of anaemia among Women and Adolescent Girls** in the age group of 15-49 years **by 3 %.**
- **Reduce Low Birth Weight (LBW) by 2%.**
- Although the target to reduce Stunting is at least 2% p.a., Mission would strive to achieve reduction in Stunting from 38.4% (NFHS-4) to 25% by 2022 (Mission 25 by 2022).

Salient Features

- The POSHAN Abhiyan, as an apex body, will monitor, supervise, fix targets and guide the nutrition related interventions across the Ministries.
- Mapping of various Schemes contributing towards addressing malnutrition
- Eliminating registers used by AWWs
- Incentivizing Anganwadi Workers (AWWs) for using IT based tools
- Setting-up Nutrition Resource Centres, involving masses through Jan Andolan for their participation on nutrition through various activities, among others.

Mission Poshan 2.0 scheme:

- Mission Poshan 2.0 was launched in February 2021 to prevent any further backsliding of nutrition indicators. Mission Poshan 2.0 has been announced in Budget 2021-22.
- The announcement was made as the government decided to devote attention and resources towards integrating numerous nutrition schemes in the country.
- **Mission Poshan 2.0 brings together the Integrated-Child Development Services (ICDS)—Anganwadi Services, Supplementary Nutrition Programme, PoshanAbhiyaan, Scheme for Adolescent Girls and National Crèche Scheme.**

Implementation of the Scheme:

- The government has identified 112 aspirational districts for the initial phase. Implementation of this programme will be done by the Ministry of Women and Child Development in collaboration with the Ministry of Health and Family Welfare and the Ministry of Education under the aegis of Early Childhood Care and Education (ECCE) within the National Education Policy (NEP).

Sustainable Development Goal (SDG)-3: seeks to ensure health and well-being for all, at every stage of life. The Goal addresses all major health priorities, including reproductive, maternal and child health; communicable, non-communicable and environmental diseases; universal health coverage; and access for all to safe, effective, quality and affordable medicines and vaccines.

Conclusions

- It is evident that Mission Poshan 2.0 is a critical step towards solving the challenge of malnutrition in India. However, its success depends largely on the way it is implemented. Conversion of multiple schemes and ministries is a mammoth task and can prove to be successful only if there is clarity in roles, objectives and targets for all stakeholders involved.

Swachh Bharat Mission-Urban 2.0 and AMRUT 2.0

Context

- Second Phase of flagship programme Swachh Bharat Mission-Urban (Swachh Bharat Mission-Urban 2.0) and Atal Mission for Rejuvenation and Urban Transformation (AMRUT 2.0) was launched.

The objectives of the Swachh Bharat mission

- Elimination of **open defecation**
- Eradication of **Manual Scavenging**

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- Modern and Scientific **Municipal Solid Waste Management**
- To effect behavioral change regarding healthy sanitation practices
- Generate awareness about **sanitation** and its linkage with **public health** Capacity Augmentation for ULB's.
- To create an enabling environment for private sector participation in **Capex**(capital expenditure) **and Opex**(operation and maintenance)

Components of the Mission

- The Mission has the following components:
- Household toilets, including conversion of insanitary latrines into pour-flush latrines; **Community toilets, Public toilets, Solid waste management, IEC & Public Awareness** Capacity building and **Administrative & Office Expenses (A&OE)**
- **Funding pattern-** The funding pattern between the Central Government and the State Government/ Urban Local Bodies (ULBs) **is 75:25**. In case of North Eastern States and the states with **Special Category, the funding pattern is 90:10**.

Objectives of the AMRUT scheme

- Ensuring every household has access to a tap with the **assured supply of water** and a **sewerage connection**.
- Increasing the **amenity value of cities by developing greenery** and well maintained open spaces and
- **Reducing pollution** by switching to public transport or constructing facilities for non-motorized transport.

The key Highlights of the Schemes:

- With launching second phase of SBM and AMRUT, the government has paved the way of better implementation of the schemes, in context of this the following has comprised of objectives to be accomplished.

Impact of SBM-U and AMRUT

- SBM-U and AMRUT have contributed significantly to improve urban landscape during the last seven years.
- The two flagship Missions have augmented the capacity to deliver basic services of water supply and sanitation to the citizens.
- Swachhta has become a Jan Andolan today.
- All urban local bodies have been declared Open Defecation Free (ODF) and 70% solid waste is being scientifically processed now.
- AMRUT has been ensuring water security by adding 1.1 crore household water tap connections and 85 lakh sewer connections, thus benefiting more than 4 crore people.

Challenges associated with implementations of first tier of the SBM-U and AMRUT Mission

- According to report- released by the Lok Sabha Standing Committee in 2020, Less than 30% of cities certified as ODF+ under Phase 2 of the Swachh Bharat Mission (Urban-2).
- The progress of work on **Open Defecation-Free Plus (ODF+)** and **ODF++ under Phase 2** of the Swachh Bharat Mission (Urban) has been slow.
- Despite the fact that work on three protocols under the next phase of Swachh Bharat Mission (Urban-2), **ODF+, ODF++ and Water Plus** is to be completed by 2024, the ground situation was not matching with the assigned timeline.
- **ODF+ and ODF++ were launched in August 2018** to further scale up and sustain the work undertaken by the cities after achieving the ODF status under Phase I of the Swachh Bharat Mission- Urban (SBM-Urban).
- ODF+ and ODF++ are aimed towards proper maintenance of toilet facilities and safe collection, conveyance, treatment/disposal of all faecal sludge and sewage. **While ODF+ focuses on toilets with water, maintenance and hygiene, ODF++ focuses on toilets with sludge and septage management.**

Current Connect

- AMRUT Mission is lagging behind in the implementation of AMRUT schemes among the nine civic bodies in the state.
- Main challenges in implementing the three schemes lie under sewerage and septage management.
- According to progress report of the Ministry of Households and Urban Affairs (MoHUA), the scheme is lagging behind in Credit Rating and Municipal Bonds, Energy audit of water pumps, Replacement of streetlights with LED lights, Online Building Permission System (OBPS), and Capacity Building.

Way Forward

- Governments have always focused on designing the right policies and development schemes. However, over the years, many such well-designed schemes failed to make a significant dent on the lack of access to basic services that a large proportion of our population faced. Hence the government can adopt following approach for achieving the target.
- Swachh Bharat Mission is a Behavioural Change Programme- hence it is necessary to communicate at all levels above and below the line. Mass and Inter-personal ways are the fundamental to the SBM.
- **Alignment and robust coordination** and continuation of engagement of Prime Minister (PM) to Chief Minister (CM) and CM to PM should be established for better implementation of the Swachh Bharat Mission. Hence the **PM-CM-DM model** can work and bring rapid change in the implementation of the SwachhBharat Mission-Urban Programme.
- Better tracking of the work being implemented in the urban areas will bring the transparency in the implementation.
- Subsuming of the schemes under AMRUT: Subsuming of the schemes such as JalJeevan Mission which provides water connections to all AMRUT cities brought the economical utilization of the fund disbursed by the central government.
- **Better sewage Treatment Plants** should be established. It can curb the water pollution in the cities.
- **Robotic Fenboat technology** that is capable of collecting around 60 samples of pollutants from a river in one minute.
- **Improvement of Water Management Regime:** Through better improvement in water management regime can pave the way of better water reusable approach.

Conclusion

- Swachh Bharat Mission is a behavioral change programme which have infused a Jan andolan directed towards sanitation in the urban areas. It has nudged the people of realize for better life styles which is to be achieved through sanitation and toilet building in the households. In context of behavioral change **Mahatma Gandhi** quoted over **“Sanitation is more important than independence” and further added, “So long as you do not take the broom and the bucket in your hands, you cannot make your towns and cities clean.” Cleanliness and sanitation was an integral part of the Gandhian way of living”**
- AMRUT mission, a flagship programme is being implemented which needs to be implemented drastically in cities of India and AMRUT 2.0 is now made continue to fulfil the targets into a set time of the implementation. Implementation is challenge which can overcome by adopting PM-CM-DM model which envisaged the need of better coordination.

Economy

Indian Railways: Opening the Door for Private Players

- Indian Railways opened up the train operations on existing rail infrastructure to private entities.
- It began with the Indian Railway Catering and Tourism Corporation (IRCTC), a public sector undertaking, introducing the Lucknow-Delhi Tejas Express, in 2019. The Tejas were the first trains allowed to run by a 'non-railway' operator.
- The present move takes another step towards competing passenger train operations, bringing new-generation trains and attracting investments.
- The Railways said —majority of trains will be manufactured in India and the private entity will be responsible for financing, procuring, operation and maintenance of the trains.
- Private entities will only run 5 per cent of the trains while the 95 per cent, with the same ticket fares, will be run by the Railways. The Railways is expecting that the private train operations will begin by April 2023.
- If NGOs want to adopt stations for cleaning activity, it may be permitted by Divisional Railway Managers with the condition that it should result in savings.
- The objective of the initiative is to:
 - (a) introduce modern technology rolling stock
 - (b) reduce maintenance
 - (c) reduce transit time
 - (d) boost job creation
 - (e) provide enhanced safety
 - (f) provide world class travel experience to passengers
 - (g) reduce demand supply deficit in the passenger transportation sector

Debroy committee

- In 2015, the panel chaired by Bibek Debroy recommended that the way forward for the railways was “liberalisation and not privatization” in order to allow entry of new operators —to encourage growth and improve services.
- It was estimated in Economic Surveys that a one rupee push in the railway sector would have a forward linkage effect of increasing output in other sectors by ₹2.50. The Debroy committee found this significant to take the “Make in India” objective forward.
- A regulatory mechanism was a prerequisite to promote healthy competition and protect the interests of all stakeholders.

Conclusion

- Train services operated by Indian Railways cover several classes of passengers, meeting the social service obligation to connect remote locations, and adopting the philosophy of cross-subsidy for passengers in low-cost trains through higher freight tariffs. In more recent years, it has focused on revenue generation through dynamic demand-based pricing. The aim should always need to be ensure better service delivery as well as a better way to finance railways social obligations.

India-Sri Lanka Currency Swap Agreement

- The Reserve Bank of India has signed an agreement for extending a \$400- million currency swap facility to Sri Lanka to boost the foreign reserves and ensure financial stability of the country, which is badly hit by the COVID-19 pandemic.
- The India-Sri Lanka swap agreement took place under the South Asian Association for Regional Cooperation (SAARC) framework.

Current Connect

- The SAARC Currency Swap Facility came into operation on November 15, 2012 with an intention to provide a backstop line of funding for short term foreign exchange liquidity requirements or balance of payment crises till longer term arrangements are made.
- To further financial stability and economic cooperation within the SAARC region, the Reserve Bank of India last year revised Framework on Currency Swap Arrangement for SAARC countries 2019-2022 (valid from November 14, 2019 to November 13, 2022).
- Under the Framework for 2019-22, RBI will offer swap arrangement within the overall corpus of US \$ 2 billion. The drawals can be made in US Dollar, Euro or Indian Rupee. The Framework provides certain concessions for swap drawals in Indian Rupee.
- The Currency Swap Facility will be available to all SAARC member countries, subject to their signing the bilateral swap agreements.

A currency swap between two countries is an agreement to exchange currencies of the two countries or any hard currency, based on market exchange rate at the time of the transaction.

The parties agree to swap (exchange) back these quantities of the two currencies at a specified date in the future at predetermined conditions like using the same exchange rate as in the first transaction.

Benefits of Swap agreements

- The currency swaps agreements help countries to meet short term foreign exchange liquidity requirements.
- It also ensures availability of adequate foreign exchange to avoid any Balance of Payments (BOP) crisis.
- These swap operations carry no exchange rate or other market risks, as transaction terms are set in advance. The absence of an exchange rate risk is the major benefit of such a facility.

Conclusion

- These positive developments illustrate active implementation of the leadership-level commitment to work together for addressing the challenges arising from the COVID-19 pandemic, and further the mutually beneficial India-Sri Lanka partnership, including in the economic domain.

Mega Food Park

- Recently Union Minister of Food Processing inaugurated Zoram Mega Food Park in Mizoram. The Food Park will help in doubling farmer's income in the region and will provide gainful employment to youth.
 - In the north eastern states nearly 40% wastage of fruits happens in the absence of any processing unit.
 - After processing of fruits, the rich and high variety of fruits could also be sold as pure packaged juice in major metropolitan cities in India.
 - The North-East Region has the potential to become the Organic Destination of the world due to its rich agricultural and horticultural produce.
 - Sikkim has already been declared as an organic state.
- The Scheme of Mega Food Park aims at providing a mechanism to link agricultural production to the market by bringing together farmers, processors and retailers so as to ensure maximizing value addition, minimizing wastage, increasing farmer's income and creating employment opportunities particularly in rural sector.
- The Mega Food Park Scheme is based on —Clusterl approach on hub and spoke model and envisages creation of state of art support infrastructure in a well-defined agri/horticultural zone for setting up of modern food processing units in the industrial plots provided in the park with well-established supply chain.
- Mega Food Park typically consist of supply chain infrastructure including collection centers, primary processing centers, central processing centers, cold chain and food processing units.
- This is also a right move in providing the much needed forward and backward linkage.

The Consumer Protection Act, 2019

- The Consumer Protection Act, 2019 came into force from July 2020. The new Act will empower consumers and help them in protecting their rights through its various notified Rules and provisions like Consumer Protection Councils, Consumer Disputes Redressal Commissions, Mediation, Product Liability and punishment for manufacture or sale of products containing adulterant/ spurious goods.
 - The Consumer Protection Act, 2019 which comes into effect from July 20, replacing the earlier Consumer Protection Act, 1986, gives more power to consumers.
 - There is a need to large attention to consumer protection and to include the changing market pattern due to e-commerce.

Highlights

- The new Act broadens the definition of consumer, by recognising those engaged in offline as well as online multi-level and telemarketing transactions, which will protect those rendered vulnerable in the wake of rapidly-developing technology.
- The Act establishes the Central Consumer Protection Authority (CCPA) to promote, protect and enforce the rights of consumers.
- The rules for prevention of unfair trade practice by e-commerce platforms will also be covered under this Act.
- Consumers can now institute a complaint from where they reside.

- National Commission can hear cases above ₹10 crore when compared to above ₹1 crore earlier work.

- Parties can be allowed to settle the disputes through mediation.

- The CCPA will be empowered to conduct investigations into violations of consumer rights and institute complaints/prosecution.

- It can order recall of unsafe goods and services, order discontinuance of unfair trade practices and misleading advertisements.

- The CCPA can impose penalties on manufacturers/endorsers/publisher of misleading advertisements.

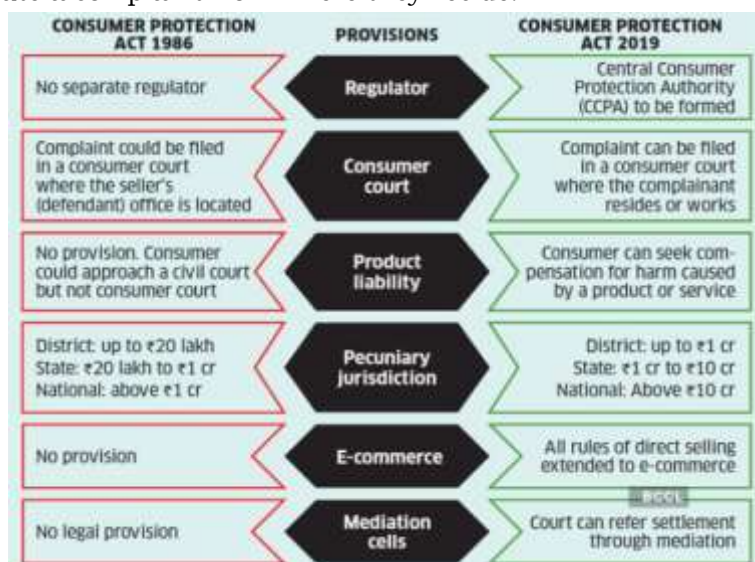
- Under this act every e-commerce entity is required to provide information relating to return, refund, exchange, warranty and guarantee, delivery and shipment, modes of payment, grievance redressal mechanism, payment methods, security of payment methods, chargeback options, etc.

- There is provision for informing about the country of origin which is necessary for enabling the consumer to make an informed decision at the pre-purchase stage.

- The e-commerce platforms have to acknowledge the receipt of any consumer complaint within forty-eight hours and redress the complaint within one month from the date of receipt under this Act.

- The new Act introduces the concept of product liability and brings within its scope, the product manufacturer, product service provider and product seller, for any claim for compensation.

- The Act provides for punishment by a competent court for manufacture or sale of adulterant/spurious goods.



Current Connect

- The new Act has several provisions for simplifying the consumer dispute adjudication.
- As per the Consumer Disputes Redressal Commission Rules, there will be no fee for filing cases upto Rs. 5 lakh.
- There are provisions for filing complaints electronically, credit of amount due to unidentifiable consumers to Consumer Welfare Fund (CWF).
- The Act has also provision for the Central Consumer Protection Council, an advisory body on consumer issues, headed by the Union Minister of Consumer Affairs, Food and Public Distribution with the Minister of State as Vice Chairperson and 34 other members from different fields. The Council will have three-year tenure.

Conclusion

- The Consumer Protection Act 2019 is a way forward in ensuring that consumer interests are protected and have incorporated many provisions which have become the need of the hour in the era of e-commerce.

Equalisation levy

- The concept of equalisation levy in India emerged as a result of the deliberations of the OECD Base Erosion and Profit Shifting Project, which crystallised in the BEPS Project report.
- The equalisation levy is an additional safeguard against BEPS (Base Erosion and Profit Shifting) and loss of revenue in India due to activities of the e-commerce operators operating in the country.
- The purpose of the equalisation levy is to ensure greater competitiveness, fairness, reasonableness and exercise the ability of governments to tax businesses that have a close nexus with the Indian market through their digital operations.
- It has been imposed to provide greater clarity, certainty and predictability in respect of characterisation of payments for digital services and consequent tax liabilities to all stakeholders, so as to minimise costs of compliance and administration as also tax disputes in these matters.
- It applies equally to all non-resident e-commerce operators not having permanent establishment in India, irrespective of the origin of such companies and there is no bias against any particular country.
- India also maintained that the equalisation levy is entirely consistent with India's commitments under the WTO and international taxation agreements.
- The market share of e-commerce companies have grown rapidly in the last few years. It has become important to provide a level playing field to various stakeholders. The equalization levy is a move in right direction and also acts as a safeguard against BEPS.

Disinvestment of state-owned banks

- The government is working on a privatization plan to help to raise money by selling assets in non-core companies and sectors when the country is strapped for funds due to lack of economic growth caused by the coronavirus pandemic.
- The union government has stated that it is considering designating the banking sector as a strategic under the new privatization policy- announced as a part of the „Atmanirbhar Bharat“ package.
- In recent years, the Indian banking system has seen many mergers and acquisitions:
- In March 2020, the Union Cabinet had approved the merger of 10 public sector banks into four, paving the way for the largest consolidation among state-owned lenders.
 - Punjab National Bank took over the Oriental Bank of Commerce and the United Bank;
 - Canara Bank took over Syndicate Bank;
 - Union Bank of India took over Andhra Bank and Corporation Bank;
 - Indian Bank was to be merged with Allahabad Bank.

Current Connect

- In 2018, it was decided to merge Bank of Baroda with Vijaya Bank and Dena Bank.
- In 2017, five associate banks and BhartiyaMahila Bank were merged into State Bank of India.

Issues with disinvestment of PSBs

- **Unfavourable market conditions:** Banks may face rising bad loans later this financial year because of the fallout from the Covid-19 crisis. India expects bad loans at its banks could double after the crisis brought the economy to a standstill. Indian banks already had 9.35 trillion rupees (\$124.38 billion) of soured loans, equivalent to about 9.1% of their total assets at the end of September 2019.
- **Governance Issues:** Private Banks are prone to malpractices in the wake of serving the interest of its promoters.
- **Regulation Issues:** RBI control on Private Banks is not at par with PSBs as RBI the power to revoke a banking license, merge a bank, shut down a bank, or penalize the board of directors which is not true for private banks.
- **Social justice:** Unlike private banks, PSBs through their welfare policies like farm loan waiver, education loan, financial inclusion etc. act as an instrument for social justice.

Benefits of disinvestment

- **Non-performing assets (NPAs):** The majority of the non-performing assets lies in the public sector banks.
- **Need of time:** Indian economy is suffering a lot due to COVID-19 crisis and the government needs funds for that and disinvestment could help a lot.
- **Autonomy:** Due to government interference in PSUs board appointments (as the Bank Bureau board is not fully functional) creates an issue of politicization and interference in the normal functioning of Banks which can be solved by disinvestments.
- **Reducing inequality:** There is a major difference between the incentives of public and private sectors banks. Also there is a huge gap between approaches of two types of banks which can be reduced by disinvestment.

Way Forward

- Though privation of PSBs can help the government in this time of crisis but also the public in general need PSBs for welfare schemes in this time too. So the government must make a good judgment of the value of the company it decides to disinvest from and if the market conditions are not favourable for the move it must wait for the opportune moment. In fact, in this time of crisis the government should pump money into its state-owned banks and when they plan to disinvest PSBs then the money received must be utilized strictly for new asset creation only.

Transparent Taxation Platform

- The 'Transparent Taxation' platform aims at bringing more transparency in official communication through the newly introduced Document Identification Number.
- In the past few years, the Central Board of Direct Taxes (CBDT) has carried out major tax reforms in the country in the direct taxes.
 - The Dividend Distribution Tax (DDT) was also abolished in 2019.
 - The Finance Act, 2020 has provided an option to individuals and co-operatives for paying income-tax at concessional rates if they do not avail specified exemption and incentive.
 - The Finance Act, 2020 removed the Dividend Distribution Tax in order to increase the attractiveness of the Indian Equity Market.
- India is one of the lowest tax consuming countries in the world when it comes to corporate taxes.
- The Income Tax Department has also introduced 'Vivad se Vishwas Act, 2020' for settling pending tax disputes. To reduce taxpayers' grievances, monetary thresholds for filing of departmental appeals in various appellate Courts have been raised. Also, digital transactions and electronic modes of payment are promoted.

Current Connect

Corporate Tax: It is a levy placed on a firm's profit by the government. The money collected from corporate taxes is used as a nation's source of income.

Minimum Alternate Tax (MAT) is a tax effectively introduced in India to facilitate the taxation of "zero tax companies" i.e., those companies which show zero or negligible income to avoid tax. Under MAT, such companies are made liable to pay to the government, by deeming a certain percentage of their book profit as taxable income.

Tax buoyancy is one of the key indicators to assess the efficiency of a government's tax system. It explains this relationship between the changes in government's tax revenue growth and the changes in GDP.

Dividend Distribution Tax: It is a tax levied on dividends that a company pays to its shareholders out of its profits. DDT is taxable at source, and is deducted at the time of the company distributing dividends.

- The 'Transparent Taxation' platform is aimed at bringing more transparency in official communication through the newly-introduced Document Identification Number (DIN).
 - Every communication with the Department will now carry a unique document identification number.
- Transparent Taxation- Honoring the Honest will have faceless assessments, faceless appeal and taxpayer charter. The faceless assessments and taxpayer charter came in effect on the day of announcement while the faceless appeal will come into effect from September 25.
- **Faceless assessment:** The aim of this scheme is to eliminate the face-to-face interactions between taxpayers and Income Tax Department officers.
 - Under faceless assessment, a central computer picks up tax returns for scrutiny based on risk parameters and mismatch and then allots them randomly to a team of officers.
 - This allocation is reviewed by officers at another randomly selected location and only if concurred, a notice is sent by the centralised computer system. All such notices need to be responded to electronically.
 - Income tax surveys to collect information for scrutiny assessment will be undertaken only by the investigation wing.
- **Faceless appeal:** It will be launched as part of the process to reduce physical interface between tax officers and taxpayers.
 - Appeals will be allotted at random to officers, taxpayers will not need to visit offices or meet any officials, the identities of the officers deciding the appeal will remain unknown, and the appellate decision will be team-based and reviewed.
- **Taxpayer charter:** The charter, listing the Income Tax Departments' duties to taxpayers and in turn highlighting the taxpayers' responsibilities, commits to providing fair and reasonable treatment, treating the taxpayer as honest, setting up a mechanism for appeal and review, reducing cost compliance and making timely decisions.

Direct Tax Issues

- The tax rate in India is quite high for both individuals as well as corporate.
- In India, the assessment process is physical which leads to the allegation of harassment by tax officials often referred to as tax terrorism.
- In the taxation system, there have been a huge number of tax litigations, which makes the whole tax dispute resolving mechanism unviable.
- There are a plethora of exemptions in direct tax code which makes the filling process more complex and reduces the effective tax rate.
- Low tax collection and less population in tax giving slab.

Government e-Marketplace (GeM) 4.0

- GeM is a one-stop National Public Procurement Portal to facilitate online procurement of common use Goods & Services required by various Central and State Government Departments / Organizations / Public Sector Undertakings (PSUs).

Current Connect

- The aim of GeM is to transform the way in which procurement of goods and services is done by the Government Ministries and Departments, Public Sector Undertakings and other apex autonomous bodies of the Central Government.
- It is a completely paperless, cashless and system driven e-market place that enables procurement of common use goods and services with minimal human interface.

National Public Procurement refers to the process by which governments and state-owned enterprises purchase goods and services from the private sector. As public procurement utilises a substantial portion of taxpayers' money, governments are expected to follow strict procedures to ensure that the process is fair, efficient, and transparent and minimizes wastage of public resources.

Government e-Marketplace (GeM) is an online procurement platform for government ministries and departments, and the most widely used channel for public procurement in India. MSMEs, DPIIT recognised startups and other private companies can register on GeM as sellers and sell their products and services directly to government entities.

About

- Unified Public Procurement System for the country would mean bringing the functionalities of a number of government e-Procurement portals (publishing portals) on GeM to reduce duplicity and enable a unified and streamlined approach to procurement.
- This will provide a single user flow for government buyers, consolidating all government procurement onto a single platform leading to economies of scale, better price discovery and sharing of best practices.
- It can analyse patterns of behaviour of buyers and sellers to improve buyers and sellers journeys on the platform, facilitate effective and efficient search, introduce hyper ledger for traceability and distributed trust and smart contracts and carry out marketplace enhancements for fast, easy and transparent procurement with cost savings.
- The Voice of the Customer initiative in GeM will have a virtual assistant to provide on the spot assistance and hand holding to buyers and sellers.
- The transformational portal will have a host of advanced features and functionalities ranging from demand aggregation to price variation clauses besides a number of enhancements for the marketplace, improvements in the catalog management system and a revamped bidding and rating system of sellers where ratings of sellers can be used as a filter by buyers.
- It aims to uplift the marginalised and underprivileged sections of society and be part of their growth story with a special focus on MSMEs, self-help groups, artisans, weavers, craftsmen and TRIFED products.

GeM Facilities:

- Listing of products for individual, prescribed categories of Goods/ Services of common use
- Look, estimate, compare and buying facility on dynamic pricing basis.
- Market place buying of majority of common User Items.
- Buying Goods and Services online, as and when required.
- Single window system for aggregating demands and ordering
- Transparency and ease of buying
- Useful for low value buying and also for bulk buying at competitive price using Reverse Auction/ e-bidding.
- Continuous vendor rating system.
- User friendly dash board for buying and monitoring supplies and payments
- Return policy

Sin Goods and Sin Tax

- A sin tax is levied on specific goods and services (Sin goods) at the time of purchase.

Current Connect

- These Sin good items receive the excise tax due to their ability, or perception, to be harmful or costly to society.
- Applicable items include tobacco products, alcohol, and gambling ventures. Sin taxes seek to deter people from engaging in socially harmful activities and behaviors, but they also provide a source of revenue for governments.
- Sin taxes are typically added to liquor, cigarettes, and goods that are considered morally hazardous. Because they generate enormous revenue, state governments favor sin taxes.
- Society accepts sin taxes because they affect only those who use sin taxed products or engage in sin taxed behaviors. When individual states run a deficit, a sin tax is generally one of the first taxes recommended by lawmakers to help fill the budget gap.
- A sin tax is a type of Pigovian tax, which is levied on companies which create negative externalities with their business practices. Sin tax proponents maintain that the targeted behaviors and goods produce negative externalities.
- Sin taxes are typically regressive taxes, meaning the less money a person makes, the more significant is the percentage of their income these taxes consume.

National Strategy for Financial Education

- The Reserve Bank of India came out with a '5-Core Actions' approach for promoting financial education, which among other things include development of relevant content for school children and adults, community participation and collaboration among various stakeholders.
- Since the launch of the first National Strategy for Financial Education(NSFE) in 2013, various stakeholders have undertaken several measures to improve the financial literacy of the cross-section of the population in the country.
- Based on the review of progress made under the strategy and keeping in view the various developments that have taken place over the last 5 years, the National Centre for Financial Education (NCFE) has prepared the revised NSFE (2020-2025).
- Financial literacy is defined as a combination of financial awareness, knowledge, skills, attitude, and behaviour necessary to make sound financial decisions and ultimately achieve individual financial well-being.
- The 'National Strategy for Financial Education 2020-2025' (NSFE), has suggested a multistakeholder-led approach for creating a financially aware and empowered India.
- The five Cs, outlined by the strategy paper, are: Content, Capacity, Community, Communication and Collaboration.
- According to NSFE, Financial literacy supports the pursuit of financial inclusion by empowering the customers to make informed choices leading to their financial well-being.
- To achieve the vision of creating a financially aware and empowered India, NSFE has laid down strategic objectives, like inculcate financial literacy concepts among the various sections of the population through financial education to make it an important life skill, and encourage active savings behaviour.
- NSFE stresses on development of financial literacy content for school children (including curriculum and co-scholastic), teachers, young adults, women, new entrants at workplace/entrepreneurs (MSMEs), senior citizens, persons with disabilities, illiterate people.
 - NSFE (2020-25) ask for updating the content of financial education in school curriculum for students of classes VI to X.
- It also makes a case for integrating financial education in courses like B.Ed./M.Ed. besides other teachers' training courses to create a cadre of financially educated teaching professionals.
- It also calls for development of a financial literacy mobile app, and leverage social media.

Current Connect

Benefits

- Financial education will help in promoting knowledge and skills which a relatively youthful population needs to avoid the pitfall of reckless spending through, say, the indiscriminate use of credit cards, a habit vigorously promoted by irresponsible marketing schemes.
- The national level financial education programme starting at the primary school level will make up for the shortfalls in the sector specific programmes.
- Financial education will have a positive, multiplier effect as ordinary citizens get to know the nuances of savings and investment. In turn, there will be a welcome deepening of the financial markets.

Conclusion

- The NSFE document intends to support the Vision of the Government of India and financial sector regulators by empowering various sections of the population to develop adequate knowledge, skills, attitude and behaviour which are needed to manage their money better and plan for their future. The strategy recommends adoption of a multi-stakeholder approach to achieve financial well-being. There is a need for a joint effort by all the banking, financial services and insurance companies as well to be able to achieve noticeable changes in the perceptions that an average Indian has about financial management.

GDP Contraction

- In any economy, the GDP (total demand for goods and services) is generated from one of the four engines of growth.
- The biggest engine is consumption demand from private individuals, which account for 56.4% of all GDP before this quarter.
- The second biggest engine is the demand generated by private sector businesses which account for 32% of all GDP in India.
- The third engine is the demand for goods and services generated by the government, which account for 11% of India's GDP.
- The last engine is the net demand on GDP after we subtract imports from India's exports, since India typically imports more than it exports, its effect is negative on the GDP.

Gross Domestic Product (GDP)

- ❖ GDP is the final value of the goods and services produced within the geographic boundaries of a country during a specified period of time, normally a year. GDP growth rate is an important indicator of the economic performance of a country.
- ❖ GDP can be calculated in three ways: using the production, expenditure, or income approach. All methods should give the same result.
- ❖ The formula for calculating GDP with the expenditure approach is: $GDP = \text{private consumption} + \text{gross private investment} + \text{government investment} + \text{government spending} + (\text{exports} - \text{imports})$.

Impact on Economy

- In a scenario where sectors like construction, trade and other services is contracting so sharply i.e., their output and incomes are falling, it would lead to more and more people either losing jobs (decline in employment) or failing to get one (rise in unemployment).
- With Covid-19, as people have stayed at home, the multiplier effect of spending has broken down to a large extent. This has, in turn, had a further negative impact on jobs and spending.
- As companies are encouraging their employees to work from home many peoples like drivers and cleaners where losing their jobs.

Way Forward

- There is only one engine that can boost GDP and that is the government (G). Only when government spend more, either by building roads and bridges and paying salaries or by directly handing out money, then the economy can revive in the short

Current Connect

to medium term. If the government does not spend adequately enough then the economy will take a long time to recover. Also, some suggested measures could be followed to revive the economy:

- Banks should cut interest rates to ease the pressure on consumption.
- Companies and brands should offer discounts and offers to get people to consume again.
- Government can clearly do to get consumption going again is to reduce the GST on two-wheelers from 28% to 18%.
- Government expenditure between April and June went up by 16.4% by putting in money into female Jan Dhan accounts. Now is the time to put money in male Jan Dhan accounts as well.
- The government also increased allocation and spending through the Mahatma Gandhi National Rural Employment Guarantee Scheme.
- The Reserve Bank of India can also print money and fund government expenditure.

Monetization of subsidiaries of Power Grid Corporation of India

- The Cabinet Committee on Economic Affairs has approved Asset Monetization of subsidiaries of Power Grid Corporation of India Limited- POWERGRID through Infrastructure Investment Trust.
- POWERGRID is a public limited company under the administrative control of the Ministry of Power, Government of India, started its commercial operation in the year 1992-93 and is today, a Maharatna company, engaged in the business of power transmission.
- The Company, along with its wholly owned subsidiaries acquired through the Tariff Based Competitive Bidding (TBCB) process, owns and operates a pan India transmission network.
- The Company meets its fund requirement for its Capital Expenditure (CAPEX) through its internal accruals and debt.
- The Budget 2019-20 emphasized investment led growth and indicated that new and innovative financial instruments including Infrastructure Investment Trusts (InvITs), have been launched as part of the brown field asset monetization strategy for augmenting infrastructure investment.

Infrastructure Investment Trusts (InvITs)

- InvITs is like a mutual fund, which enables direct investment of small amounts of money from possible individual/institutional investors in infrastructure to earn a small portion of the income as return.
- InvITs work like mutual funds or real estate investment trusts (REITs) in features.
- InvITs can be treated as the modified version of REITs designed to suit the specific circumstances of the infrastructure sector.
- SEBI notified the SEBI (Infrastructure Investment Trusts) Regulations, 2014 on September 26, 2014, providing for registration and regulation of InvITs in India. The objective of InvITs is to facilitate investment in the infrastructure sector.

Analytica

- This is the first time any PSU in the power sector will undertake asset recycling by monetising its assets through the InvIT model and using the proceeds to fund the new and under-construction capital projects.
- The proceeds from the asset monetisation would be deployed by POWERGRID in their new and under-construction projects.
- The PGCIL, a public limited company under the administrative control of the Ministry of Power, is engaged in the business of power transmission.
- The company, along with its wholly-owned subsidiaries acquired through the Tariff Based Competitive Bidding (TBCB) process, owns and operates a pan India transmission network.

Current Connect

- Asset recycling is a key strategy of the Government of India to release the capital invested in operational assets and the proposed InvIT of the PGCIL would attract both domestic as well as global investors including Sovereign Wealth Funds.
- Sale of assets to InvITs is a way of accessing long term, relatively cheap finance required to fund infrastructure projects in the transmission sector.

Way forward

- The InvIT would provide an opportunity to the general public and institutional investors such as Pension Funds, Mutual Funds, to benefit from this investment opportunity and –participate in the growth of Indian Infrastructure Sector.

Doorstep Banking Services

- The government recently launched a doorstep banking services initiative by public sector banks (PSBs) which will provide convenience to customers.
- Doorstep Banking Service is a part of EASE (Enhanced Access and Service Excellence) reforms that the Department of Financial Services had undertaken in 2018.
- PSB Reforms EASE Agenda is a common reform agenda for PSBs aimed at institutionalizing clean and smart banking.
- Doorstep Banking Services is envisaged to provide convenience of banking services to the customers at their door step through the universal touch points of Call Centre, Web Portal or Mobile App. Customers can also track their service request through these channels.
- The services shall be rendered by the Doorstep Banking Agents deployed by the selected Service Providers at 100 centres across the country.
- At present only non-financial services viz. Pick up of negotiable instruments (cheque / demand draft / pay order, etc.), Pick up new cheque book requisition slip, Pick up of 15G / 15H forms, Pick up of IT / GST challan, Issue request for standing instructions, Request for account statement, Delivery of non-personalised cheque book, demand draft, pay order, Delivery of term deposit receipt, acknowledgement, etc., Delivery of TDS / Form 16 certificate issuance, Delivery of pre-paid instrument / gift card are available to customers. Financial services shall be made available from October 2020.
- The services can be availed by customers of Public Sector Banks at nominal charges. The services shall benefit all customers, particularly Senior Citizens and Divyangs who would find it at ease to avail these services.

SWAMIH Investment Fund

- In order to give relief to homebuyers of stalled projects, a Special Window for Completion of Affordable and Mid-Income Housing (SWAMIH investment fund) has been created for funding stalled projects.
- SWAMIH investment fund will provide last mile funding to the stressed affordable and middle-income housing projects in the country.
- It has been created for funding stalled projects that are net-worth positive, including those projects that have been declared as Non-Performing Assets (NPAs) or are pending proceedings before the National Company Law Tribunal under the Insolvency and Bankruptcy Code.
- It was first announced on November 06, 2019 by the Finance Minister as a proposal to set up a ‘Special Window’ in the form of Alternative Investment Fund to provide priority debt financing for the completion of stalled housing projects.
- SBICAP Ventures, an arm of SBI Capital Markets, is entrusted by the government to manage this AIF.
- The Sponsor of the Fund is the Secretary, Department of Economic Affairs, Ministry of Finance, Government of India on behalf of the Government of India.

Requirement

Current Connect

- Several real estate projects have suffered due to a combined effect of two changes in the real estate sector.
- On one hand, incremental launches and slow sales have increased unsold inventory in each project while that effect has then got compounded by the fact that consumer preference is now towards completed projects rather than under construction projects.
- This preference has developed as consumers are largely avoiding taking project completion risk and instead are more inclined to completed projects.
- SWAMIH Investment Fund has been formed to complete construction of stalled, brownfield, RERA registered residential developments that are in the affordable housing / mid-income category, are net-worth positive and requires last mile funding to complete construction.

Scheme for Integrated Textile Park (SITP)

- Recently, the government has proposed to set up Mega Textile Park by Ministry of Textiles.
 - India's textiles industry contributed seven per cent of the industry output (in value terms) in FY19.
 - It contributed two per cent to the GDP of India and employed more than 45 million people in FY19.
 - Textiles industry has around 4.5 crore employed workers including 35.22 lakh handloom workers across the country.
- Scheme for Integrated Textile Park is a demand driven scheme in which the prospective entrepreneurs can send their proposals to the Government, after completion of stipulated conditions as per guidelines.
- The scheme was launched in 2005 and it aims to provide industry with state of the art world-class infrastructure facilities for setting up their textile units.
- The infrastructure facilities under SITP for setting up of textile units are developed in a Public-Private-Partnership (PPP) model.
- To boost the textile sector of India the government is implementing SITP model.
- Under SITP, Government of India will provide grant upto 40% of project cost with ceiling limit of Rs 40 crore for each park.
- Also, centre will provide grant upto 90% of the project cost for first two projects (each) in the States of Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Tripura, Sikkim, Himachal Pradesh, Uttarakhand and Union Territory of Jammu & Kashmir and Union Territory of Ladakh.
- The Special Purpose Vehicle (SPV) will be formed by the representatives of local industry, Financial Institutions, State Industrial and Infrastructural Corporations and other agencies of State and Central Governments registered as a Corporate Body under the Companies Act.
- The government is considering a plan to set up 1,000-acre mega textile parks as it revamps the Scheme for Integrated Textile Park (SITP) whose slow progress is attributed to delay in obtaining land and other statutory clearances from state governments and slow fund mobilisation by the textile parks.

Other initiatives taken by Government of India are

- Knitting and Knitwear Sector: In order to boost production in knitting and knitwear clusters, Government has launched a separate scheme for development of Knitting and Knitwear Sector to boost production in knitting and knitwear cluster at Ludhiana, Kolkata and Tirupur.
- Government is implementing Amended Technology Up-gradation Fund Scheme (ATUFS) for technology up-gradation of the textile industry to incentivize production with an outlay of Rs.17, 822 crore during 2016-2022. It is expected to attract investment of Rs.1 lakh crore and generate 35.62 lakhs employment in the textile sector by 2022.

Current Connect

- National Handloom Development Programme, Comprehensive Handloom Cluster Development Scheme, Handloom Weaver Comprehensive Welfare Scheme and Yarn Supply Schemes under which financial assistance is provided for raw material purchase, looms and accessories, design innovation, product diversification, infrastructure development, skill upgradation, marketing of handloom products & loans at concessional rate etc. for enhancing production and boost the textile sector.
- National Handicrafts Development Programme (NHDP) and Comprehensive Handicraft Cluster Development Schemes aims at holistic development of handicrafts clusters through integrated approach by providing support on design, technology up-gradation, infrastructure development, market support etc.
- Silk Samagra – An integrated Scheme for development of silk industry with components of research & development, transfer of technology, seed organization and coordination, market development, quality certification and export.
- North East Region Textile Promotion Scheme (NERTPS) for promoting textiles industry in the NER by providing infrastructure, capacity building and marketing support to all segments of textile industry.

Way Forward

- The key to restoring the glory of Indian textile industry lies in its productive workforce, safe work environment and the use of latest technology. According to the ‘Vision, Strategy and Action Plan for Indian Textile and Apparel Sector’, taking all innovative steps in partnership with industry will create additional 35 million jobs in the textile sector by 2024-25.

Gig Economy and Gig Works

Context

- The new Code on Social Security allows a platform worker to be defined by their vulnerability — not their labour, nor the vulnerabilities of platform work.
- In the gig economy, workers take up short-term contracts or freelance work and get paid for the gigs they do. There is no formal contract that is signed with the employee. This makes them vulnerable as there is no social security net.
- An estimated 56% of new employment in India is being generated by the gig economy companies across both the blue-collar and white-collar workforce.
- The three new labour codes passed by Parliament recently acknowledge platform and gig workers as new occupational categories in the making, in a bid to keep India’s young workforce secure as it embraces ‘new kinds of work’, like delivery, in the digital economy.
- The Code on Social Security, 2020, platform workers are now eligible for benefits like maternity benefits, life and disability cover, old age protection, provident fund, employment injury benefits, and so on.

Digital technologies fundamentally change how people work and one of the key transformations in the future of work is the rise of the so-called ‘gig economy’. Central to the gig economy are so-called ‘gigs’, i.e. temporary and often short-term jobs, which can be found through digital labour platforms that connect job providers and job seekers. The ride-hailing giants Uber and Ola are prominent examples of such platforms, with their on-demand taxi services having become widely popular. Other examples include Swiggy and Zomato.

Present scenario:

- ❖ Conventional labour rights are absent and legal recourse in matters of payment, task assignment etc. limited.
- ❖ The government or courts cannot pull up platform companies for their pay, or working hours.
- ❖ The laws do not see them as future industrial workers.
- ❖ The language in the Code is open as it does not force the companies to contribute towards benefits or be responsible for workplace issues.

Conclusion

- As the digital technology will penetrate more and more in the Indian market system more and more gig jobs and free-lancing job will be created at several levels.

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Given the fact that the share of such jobs will only keep on increasing it is high time that the government should come up with a framework for them and they should be reflected in government policies.

- As they are more vulnerable to market forces and lack social security net the government needs to assure a robust social security so that the sector could attract more job seekers and can become an engine of job creation.

National Program and Project Management Policy Framework

- NITI Aayog and Quality Council of India launched the 'National Program and Project Management Policy Framework' (NPMPF), envisaged to bring radical reforms in the way infrastructure projects are executed in India.
- NPMPF will help in realizing the vision of an Aatmanirbhar Bharat by building a stronger India with quality infrastructure; where the focus will be reducing costs and waste material keeping in mind the environment and ecology.
- It will recognize the program and project management tools and techniques for mega projects like Bharatmala and Sagarmala.
- The use and adoption of such techniques and practices to incorporate innovative financing with hybrid annuity models are already underway.
- This framework aims to formulate radical reforms in the way large and mega infrastructure projects are managed in India, with an action plan to:
 1. Adopt a program and project management approach to infra development.
 2. Institutionalize and promote the profession of program and project management and build a workforce of such professionals.
 3. Enhance institutional capacity and capability of professionals.
- A self-paced learning system, rigorous and comprehensive exam at each level with continued professional development will serve as pillars of the framework.
- To ensure this, initiative maintains its momentum and makes an impact on projects being planned and implemented. Currently, a capability development program to create awareness around program and project management, as well as to provide capsule training for mission-critical projects, is imperative to increase the uptake and adoption of the practice.

International Arbitration Centre

- Making India as the hub of International Arbitration has been the aim of Indian Government. Setting up of an independent an autonomous regime for institutionalized domestic and international arbitration is a step in this direction.
- The benefits of institutionalized arbitration will be manifold for the Government and its agency and to the parties to a dispute.
- The Bill provides for setting up of an independent an autonomous body for institutional arbitration and to acquire and transfer the undertakings of International Centre For Alternative Dispute Resolution (ICADR) to New Delhi International Arbitration Centre (NDIAC)w.e.f a specified date 2nd March, 2019.
 - The government of India constituted a High-Level Committee (HLC), headed by Mr. Justice B.N. Srikrishna, former Judge of the Supreme Court of India in the year 2017. The HLC recommended that the Government may take over the International Centre for Alternative Dispute Resolution (ICADR), an existing institution which has been established in the year 1995 using the public funds and develop it as an Institution of National Importance.
 - The President promulgated an Ordinance namely "The New Delhi International Arbitration Centre Ordinance, 2019" on 2nd March, 2019. In view of the provisions of the Article 107 (5) and 123 (2) of the Constitution, the New Delhi International Arbitration Centre Bill, 2019 was proposed in the Parliament which replaced the New Delhi International Arbitration Centre Ordinance, 2019.

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- It creates an independent and autonomous regime for institutionalized domestic and international arbitration and establishing India as an International Hub of Arbitration.
- NDIAC, headed by a Chairperson, who has been a Judge of the Supreme Court or a Judge of a High Court or an eminent person, having special knowledge and experience in the conduct or administration of arbitration, law or management, to be appointed by the Central Government in consultation with the Chief Justice of India.

Aims and objectives of NDIAC:-

- bring targeted reforms to develop itself as a flagship institution for conducting international and domestic arbitration
- provide facilities and administrative assistance for conciliation, mediation and arbitral proceedings;
- maintain panels of accredited arbitrators, conciliators and mediators both at national and international level or specialists such as surveyors and investigators;
- facilitate conducting of international and domestic arbitrations and conciliation in the most professional manner;
- provide cost effective and timely services for the conduct of arbitrations and conciliations at Domestic and International level;
- promote studies in the field of alternative dispute resolution and related matters, and to promote reforms in the system of settlement of disputes; and
- Co-operate with other societies, institutions and organisations, national or international for promoting alternative dispute resolution.

China's Negative Yield bonds

- China sold negative-yield debt for the first time, and this saw a high demand from investors across Europe. As yields in Europe are even lower, there was a huge demand for the 4-billion euro bonds issued by China.
 - Negative Yield Bonds are debt instruments that offer to pay the investor a maturity amounts lower than the purchase price of the bond.
 - These are generally issued by central banks or governments, and investors pay interest to the borrower to keep their money with them.

Why do investors buy negative yield bonds?

- Negative-yield bonds attract investments during times of stress and uncertainty as investors look to protect their capital from significant erosion.
- At a time when the world is battling the Covid-19 pandemic and interest rates in developed markets across Europe are much lower, investors are looking for relatively better-yielding debt instruments to safeguard their interests.

Reasons for the high demand of negative yield bonds

- The fact that the 10-year and 15-year bonds are offering positive returns is a big attraction at a time when interest rates in Europe have dropped significantly.
- As against minus —0.15% yield on the 5-year bond issued by China, the yields offered in safe European bonds are much lower, between —0.5% and —0.75%.
- While the majority of the large economies are facing a contraction in their GDP for 2020-21, China is one country that is set to witness positive growth in these challenging times i.e. its GDP expanded by 4.9% in the third quarter of 2020.

Key factors responsible for high demand

- The massive amount of liquidity injected by the global central banks after the pandemic began that has driven up prices of various assets including equities, debt and commodities.
- Many investors could also be temporarily parking money in negative-yielding government debt for the purpose of hedging their risk portfolio in equities.
- In case the fresh wave of the Covid-19 pandemic leads to further lockdowns of economies, then there could be further negative pressure on interest rates, pushing

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yields down further, and leading to profits even for investors who put in money at the current juncture.

- Global central banks have injected an estimated more than \$10 trillion of liquidity through various instruments in the financial system — which is finding its way into various assets in the economy.

Production linked incentive scheme

- The PLI scheme focuses on incentivising firms to grow fast. Some of these incentives are meant to help industries where India already has a comparative advantage, like auto components; others for industries where India has the potential to become a world leader, like food; and most importantly, the PLI scheme is for sectors where India has an uncomfortable dependence on Chinese imports. The scheme will make Indian manufacturers globally competitive, attract investment and enhance exports.
- Financial outlays have been allocated over a five-year period for the 10 sectors, and the aim of the scheme is to provide a boost to the Indian manufacturing sector, promote exports and make India an integral part of the global supply chain.
- The sectors include automobiles and auto components, pharmaceutical drugs, advanced chemistry cells (ACC), capital goods, technology products, textile products, white goods, food products, telecom and speciality steel.
- A scheme for a few sectors is at best a short- or medium-term fix. In the long run, an economy can become competitive only when sectors can die and be born.

HOW DOES THE INCENTIVE WORK

It is a kind of subsidy to the sector

Is a direct payment from the budget to goods made in India	Amount varies from sector to sector	Is based on disadvantage /disability faced by a sector
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Resources get reallocated to sectors that see higher productivity growth. New sunrise sectors that grew in India, such as pharma or IT, did so without any special sectoral support from the government.

WHAT THE SCHEME SEEKS TO ACHIEVE

- Make domestic mfg competitive & efficient**
- Create economies of scale**
- Make India part of global supply chain**
- Attract investment in core mfg & cutting edge tech**
- Competitive mfg would in turn lift exports**

HOW WILL IT WORK

Template for schemes already exists	Rolled out for mobiles, pharma and medical devices
Will be implemented by concerned ministry/dept	
Final proposals to be approved by the Cabinet	Savings from PLI of one sector can be used to fund others
Any new sector will require fresh approval	

If the PLI scheme works and helps in incentivising production, then this would be quite an achievement.

- However, analysts have pointed out that for even these sectors to be competitive, the incentives should be temporary, lest they slow down long-term growth in the sector, instead of accelerating it.
- Also, the sectors that don't get an incentive are now at a comparative disadvantage, and the government should work doubly hard to improve the business, tax and policy environments in which all businesses can benefit.

Ponzi Schemes

- A Ponzi scheme is a fraudulent investing scam which generates returns for earlier investors with money taken from later investors. This is similar to a pyramid scheme in that both are based on using new investors' funds to pay the earlier backers.
 - Ponzi scheme is named after Charles Ponzi, who used to dupe investors and became notorious for using the technique in the 1920s.
- The scheme is dependent on maximizing profit from new investors. The scheme leads victims to believe that profits are coming from product sales or other means, and they remain unaware that the later investors are the source of their returns.
- What makes them attractive is the promise of high returns in short period. The people who run such schemes try to win the trust of their investors by conducting various seminars in five starhotels, offering holiday packages and gifts to relatively new investors on old investor's money.
- Often an investor is given a target to associate certain number of new investors in order to claim their money or to gain any package or gift.

Government measures to stop such schemes

- The Banning of Unregulated Deposit Schemes Bill, 2019 was introduced in Lok Sabha by the Minister of Finance in 2019. The Bill provides for a mechanism to ban unregulated deposit schemes and protect the interests of depositors. It also seeks to amend three laws, i.e., the Reserve Bank of India Act, 1934, the Securities and Exchange Board of India Act, 1992 and the Multi-State Co-operative Societies Act, 2002.
- The bill seeks to prevent unregulated entities from collecting deposits and duping the poor and the gullible of their hard earned savings, such as Ponzi schemes. The Bill covers previously existing gaps in legislation that had been exploited by various parties to siphon large amounts of money away from small investors.
- The Parliament also passed the Chit Funds (Amendment) Bill, 2019. It will streamline operations of collective investment schemes or chit funds, with the aim to protect investors that primarily comprises economically weaker sections of the society.
- Better regulation and banning some of the schemes is the first step.

National Infrastructure Pipeline

- The National Infrastructure Pipeline (NIP) is a group of social and economic infrastructure projects in India over a period of five years with an initial sanctioned amount of ₹102 lakh crore (US\$1.4 trillion). The pipeline was first made public by the Prime Minister of India during his 2019 Independence Day speech.
- The NIP fund has been revised to Rs 111 lakh crore on infrastructure projects by the year 2024-25.
- At present the framework of NIP includes 39% investment by the central government, 40% investment by states and 21% by the private sector.
- Under the programme, investments worth Rs 25 lakh crore are envisaged in the energy sector, Rs 16 lakh crore is envisaged in irrigation, rural agriculture and food processing, 20 lakh crore is envisaged in the highways sector, Rs 16 lakh crore each in mobility and railways and an investment of Rs 14 lakh crore is envisaged on digital infra among others.
- The government constituted a task force under AtanuChakraborty, to study the prospect of National Infrastructure Project.
 - The task force has also recommended setting up of the following three committees: Committee to monitor NIP progress and eliminate delays. Steering Committee at each ministry level to track implementation. Steering Committee in DEA for raising financial resources for the NIP.

Way Forward

- Infrastructure is the lifeline of a flourishing economy as it is responsible for establishing effective and efficient forward and backward linkages, storage facilities,

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communication channels etc. Thus National Infrastructure Project is an ambitious step in right direction which will help India to boost its economic potential.

Bad Bank

- The banking sector, led by the Indian Banks Association, had recently submitted a proposal for setting up a bad bank to the finance ministry and the RBI.

Why

- The Corona Virus pandemic will have negative effect on growing NPAs. This soaring NPA will affect bank's balance sheet and their function of lending will get affected because they will have to maintain healthy Capital Adequacy Ratio.
- Various analysts suggest that India may undergo a phase of recession during post-Covid. To tackle this upcoming challenge, the banking industry has proposed the setting up of a government-backed bad bank.
- A bad bank buys the bad loans and other illiquid holdings of other banks and financial institutions, which clears their balance sheet.
- This was based on an idea proposed by a panel on faster resolution of stressed assets in public sector banks headed by former PNB Chairman Sunil Mehta.

Benefits

- Banks can better focus on lending: High level of non-performing assets (NPAs) makes the lending difficult for banks, as they have to keep supplementary capital (CAR) as per Basel Accord. The NPA reduces its capital base i.e. money available for lending and the resulting losses erode depositor confidence — the lifeblood of any bank.
- Banks themselves hesitate to lend money because they may fall into Prompt Corrective Action of RBI. Thus there is slump in investment which in turn affects the GDP, job creation and the economic development.
- Bad bank absorbs NPAs of all Banks, will ease the provisioning requirement by the banks and help them to get on with business as usual. Also these banks work as Asset Reconstruction Company having expertise in managing and selling NPAs.
- The creation of a bad bank allows the segregation of a bank's good assets from its bad assets. This allows investors to assess its financial health with greater clarity and for banks to grow financially.
- Further a government-led initiative may make it more attractive opportunity for investors to invest their money.

Not a solution to underlying problem

- Creation of bad banks shifts NPAs from one government pocket to another. It does not deal with the main problem-creation of NPAs.
- Without required reforms in the banking sectors, the banks will continue lending in previous manner creating new NPAs.
- Thus more concerted reforms are required in the banking sector. Insolvency and Bankruptcy Code like reforms in Banking sector and reducing government interference in public sector banks will go a long way to address the real issues.

Off Budget Borrowing

- One of the most sought-after details in any Union Budget is the level of fiscal deficit. It is essentially the gap between what the central government spends and what it earns. In other words, it is the level of borrowings by the Union government.
- This number is the most important metric to understand the financial health of any government's finances. As such, it is keenly watched by rating agencies — both inside and outside the country. That is why most governments want to restrict their fiscal deficit to a respectable number.
- One of the ways to do this is by resorting to “off-budget borrowings”. Such borrowings are a way for the Centre to finance its expenditures while keeping the debt off the books — so that it is not counted in the calculation of fiscal deficit.

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What are the off-budget Borrowings?

- Off-budget borrowings are loans that are taken not by the Centre directly, but by another public institution which borrows on the directions of the central government. Such borrowings are used to fulfil the government's expenditure needs.
- But since the liability of the loan is not formally on the Centre, the loan is not included in the national fiscal deficit. This helps keep the country's fiscal deficit within acceptable limits.
- As a result, as a Comptroller and Auditor General report of 2019 points out, this route of financing puts major sources of funds outside the control of Parliament. Such off-budget financing is not part of the calculation of the fiscal indicators despite fiscal implications.
- Every year, the Finance Minister announces the quantum of funds that will be raised by the government by borrowing from the market. This amount and the interest due on it is reflected in the government debt.

How are off-budget borrowings raised?

- The government can ask an implementing agency to raise the required funds from the market through loans or by issuing bonds. For example, food subsidy is one of the major expenditures of the Centre.
- Other public sector undertakings have also borrowed for the government. For instance, public sector oil marketing companies were asked to pay for subsidised gas cylinders for PradhanMantriUjjwalaYojana beneficiaries in the past.
- Public sector banks are also used to fund off-budget expenses. For example, loans from PSU banks were used to make up for the shortfall in the release of fertiliser subsidy.

Faceless Tax Assessment Scheme

- The government's faceless tax assessment scheme, an attempt to remove individual tax officials' discretion and potential harassment for income tax payers, has managed to deliver about 24,000 final orders since its introduction in August 2020.
- The government recently launched 'Transparent Taxation - Honoring the Honest' platform in order to "reform and simplify our tax system."
- Under faceless scrutiny assessment, a central computer picks up tax returns for scrutiny based on risk parameters and mismatch and then allots them randomly to a team of officers.
- This allocation is reviewed by officers at another randomly selected location and only if concurred, a notice is sent by the centralised computer system.
- All such notices need to be responded to electronically without the requirement of visiting a tax office or meeting any official.

Features

- Selection is done through system using data analytics and artificial intelligence;
- Abolition of territorial jurisdiction;
- Automated random allocation of cases;
- Central issuance of notices with document identification number (DIN);
- No physical interface and need to visit income tax office;
- Team-based assessments and review;
- Draft assessment order in one city, review in another and finalisation in the third city

Exceptions

- Cases relating to serious fraud, major tax evasion, sensitive and search matter
- International Tax
- Black Money Act and benami property

Advantages of the Faceless Assessment

- **Faceless assessment reduced chances of corruption:**e-Assessment would almost eliminate person-to-person contact in the Tax Department for greater transparency in assessment procedures.

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- **Saves time and efforts:** Since assessment procedures are electronic it saves travelling time for assessee, also it saves effort to find jurisdiction/place of assessing officers.
- This is the future as cloud storage and paperless offices are growing: Taxpayers can access/view all the documents that they might have submitted during the assessment period. Complete information related to all the submissions is saved in the e-Filing portal account which can be accessed any time for future reference. And risk like loss of files or damage to files are avoided due to e-Assessment.
- **Cost effective for the Government:** Since assessment proceedings are paperless, it makes this initiative an environment-friendly project.
- **Assessment will be handled by two officers:** E – assessment of a taxpayer will now be handled by two officers, instead of the current system involving a single assessing officer, deputation of two officials for one assessment case will aid in increased level of monitoring.

Disadvantages of the Faceless Assessment

- **Traditional offices face trouble in uploading of voluminous documents:** Traditional offices which do not have sufficient infrastructure find difficulties in uploading voluminous documents.
- **Difficult to explain the subject entirely in submission without physical demonstration:** When submission is complex in nature at that time assessee need to give physical presence at the Income Tax office to explain the case to assessing officers.
- **Officers make conclusions when they don't understand the submissions:** Many times, because of complex nature of business assessing office find difficulties in understanding documents submitted by assessee, due to which officer conclude the assessment based on his understanding.
- **Technical glitches on the portal delays the submission process:** It is possible sometimes speed of Internet is not good because some technical problems or excess load over Income Tax website, due to which assessee find difficulties in uploading documents at e-filing portal.
- **Size of the file is restricted to 5 MB:** Submission size of a single file is maximum 5 MB. Assesses have come with complaints that documents are larger in size and not getting uploaded. When it is suggested to assessee that upload documents after dividing files, then it becomes an added burden on the assesses.
- **Number of documents are restricted to 10 per submission:** When submission size is voluminous in nature at that time assessee needs to attach multiple documents but due to restriction on attachment assessee cannot submit whole documents on e-filing portal.

Agricultural Policies in India

- In the context of the three contentious agricultural reform bills, the discussions regarding what kind of agricultural policies does Indian agriculture need are taking rounds among the media and intellegentia.

What kind of agriculture policies does India need?

- According to the experts, India needs to frame an optimal agri-food policy to address both short-run and long-term challenges. Such a policy must have at least four touchstones which can be discussed as below:
- It should be able to produce enough food, feed and fibre for its large population. In this regard, the best step is to invest in R&D for agriculture, and its extension from laboratories to farms and irrigation facilities. It is believed that developing countries should invest at least one per cent of their agri-GDP in agri-R&D and extension. India invests about half.
- It should do so in a manner that not only protects the environment — soil, water, air, and biodiversity — but achieves higher production with global competitiveness. This can be done by switching from the highly subsidised input price policy (power, water, fertilisers) and MSP/FRP policy for paddy, wheat and sugarcane, to more income support policies linked to saving water, soil and air quality.

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- It should enable seamless movement of food from farm to fork, keeping marketing costs low, save on food losses in supply chains and provide safe and fresh food to consumers. This segment has been crying for reforms for decades, especially with respect to bringing about efficiency in agri-marketing and lowering transaction costs.
- Consumers should get safe and nutritious food at affordable prices. The public distribution of food, through PDS, relies on rice and wheat, and that too at more than 90 per cent subsidy over costs of procurement, stocking and distribution, is not helping much to reduce the hardships in agriculture.

Agri Reform Bills	Pros	Cons
The Farmers' Produce Trade and Commerce (Promotion and Facilitation) Bill, 2020	<ul style="list-style-type: none"> • Permits the sale of produce outside the Agricultural Produce Market Committee (APMC) mandis. • No cess or levy outside the mandis will be charged to farmers. • Permits interstate trade of agricultural produce. 	<ul style="list-style-type: none"> • The state's income from the respective mandis would be lost. While the bill proposes to abolish the middleman, farmers across various states believe that the scheme would lead to the end of Minimum Support Price (MSP) regime.
The Farmers (Empowerment & Protection) Agreement of Price Assurance and Farm Services Bill, 2020	<ul style="list-style-type: none"> • This policy encourages 'contract farming' wherein farmers enter into direct contracts with buyers who want to purchase farm produce by removing intermediaries appointed by the state APMC. 	<ul style="list-style-type: none"> • Given that companies might be more interested in dealing with groups of farmers and not with individual farmers, the probability of conflicts will increase. • Dealing with an agent is much better from a business point of view.
The Essential Commodities (Amendment) Bill, 2020	<ul style="list-style-type: none"> • It deregulates manufacturing, storing, and selling of a range of food products, including cereals, pulses, edible oils, and onions, except in rare situations. • It can bring in new investments from FDI and large companies in infrastructure provisions, e.g., cold storage. 	<ul style="list-style-type: none"> • If prices of perishables increase by 100% or non-perishables by 50%, the Act can be invoked. • This legalises hoarding effectively, which can be devastating for prices of vital commodities such as vegetables and pulses.

Conclusion

- Thus, the steps by the present government to reform agriculture through the bills is a much-needed activism to bring out the change in the present stagnant scenario. However, the consultation process should be all inclusive and the concerns of even the last farmer in the line should also be addressed as this sector still employs nearly half of the working population in India. But at the same time, it should also be made sure that, government takes the prudent decision without getting lured by the temptations of populism and political pressures.

Shadow Entrepreneurs

- Recently, it has been observed that there is the global rise of shadow entrepreneurship in education and other sectors such as finance (for easy loans), the betting economy (online games) and healthcare (e-pharmacies). Given the potential perverse consequences of shadow entrepreneurship in the long run for consumer welfare, regulation is needed to monitor quality of services.
- Shadow entrepreneurs are individuals who manage a business that sells legitimate goods and services but they do not register their businesses.
- This means that they do not pay tax, operating in a shadow economy where business activities are performed outside the reach of government authorities.
- Researchers have found that a large number of shadow entrepreneurs are operating in India who aren't registering their businesses with official authorities, hampering economic growth.

Current Connect

- Experts say the shadow economy results in loss of tax revenue, unfair competition to registered businesses and also poor productivity – factors which hinder economic development.
- The study says that business activities conducted by informal entrepreneurs can make up more than 80% of the total economic activity in developing countries.
- As these businesses are not registered it takes them beyond the reach of the law and makes shadow economy entrepreneurs vulnerable to corrupt government officials.
- Types of businesses include unlicensed taxicab services, roadside food stalls and small landscaping operations.
- It is also found that the quality of economic and political institutions has a substantial effect on entrepreneurs registering their businesses around the world.
- Understanding shadow economy entrepreneurship is incredibly important for developing countries because it is a key factor affecting economic development.
- Government policies could play a big role in helping shadow economy entrepreneurs' transition to the formal economy.
- This is important because shadow economy entrepreneurs are less likely to innovate, accumulate capital and invest in the economy, which hampers economic growth.
- The researchers suggest that shadow entrepreneurs are highly sensitive to the quality of the political and economic institutions.
- Informal entrepreneurs trade legal products and services, yet do not apply for business registration or file any incorporation documents with government authorities. The phenomenon of informal entrepreneurship is seen as a potential driver of job growth and economic development, especially in developing countries.
- Where proper economic and political frameworks are in place, individuals are more likely to become 'formal' entrepreneurs and register their business, because doing so enables them to take advantage of laws and regulations that protect their company such as trademarking legislation.

Conclusion

- Informal sector entrepreneurship, poverty, and inequality are conditioned by a country's economic and political institutions. Non-inclusive political and economic institutions can engender and perpetuate inequality and aggravate poverty. The institutional qualities of a society and its economy — such as economic freedom, the presence of policies that condition the operation of private sector, and institutions regulating the balance of political power and the structure of the bureaucratic system — play an important role in either facilitating or inhibiting economic growth and alleviating poverty.

Types of economic recovery

- An economic recovery is when an economy is bouncing back from a recession and starting to expand again. Economies move in phases and, once they have contracted and fallen into a recession, they eventually enter a stage of recovery before starting the cycle again.
- The recovery starts when the recession bottoms out and ends once the economy has recovered all the gains that were lost. It then gives way to a new era of expansion and a fresh peak.
- There are two key types of indicators to track in order to judge the state of the economy and where it is headed: lagging and leading indicators. The key difference between the two is that leading indicators can be used to help predict market movements, while lagging indicators confirm trends that are already taking place.
 - The main lagging indicator to watch is gross domestic product (GDP), as this is what most countries use to measure the size of the overall economy.
 - Other lagging indicators of economic recovery include jobs data to examine the condition of a country's employment, and the consumer price index (CPI) that tracks movements in the price of goods and inflation.

Current Connect

- For investors and traders, leading indicators are far more important. This is because they can be used to predict where the economy is headed and to provide an edge to your strategy.
- Lagging indicators are great for confirming what has happened but provide very limited insight to aide your own predictions.

Types of economic recovery

- **V-shaped recession and economic recovery:** A V-shaped recession and economic recovery is all about speed and sharpness. There can be a sharp contraction in the economy before it experiences an equally sharp recovery to pre-recession levels. This is treated as the best-case scenario for any economy that enters a recession as it quickly recovers without any complications.
- **U-shaped recession and economic recovery:** A U-shaped recovery sees an economy experience a sharp fall into a recession like the V-shaped scenario, but a more gradual and slower recovery to pre-recession levels. This means the economy remains depressed for a longer period, possibly for several years, before growth starts to pick up again.
- **W-shaped recession and economic recovery:** W-shaped recessions throw up surprises and are also known as ‘double-dip’ recessions. This is because, at first, it can look like an economy is undergoing a V-shaped recovery before it plunges into a second, often smaller, contraction before fully recovering to pre-recession levels.
 - Markets are likely to be more volatile under a W-shaped recovery than any of the other letters on this list. Investors and traders can be under the illusion that the economy is about to recover only to find there is another dip.
- **L-shaped recession and economic recovery:** An L-shaped recession and recovery is seen as the worst-case scenario. Although the economy returns to growth it is at a much lower base than pre-recession levels, which means it takes much longer to fully recover. This can happen if there is lacklustre investment levels, low levels of economic growth and a slow revival in employment.
- **K-shaped recession and economic recovery:** A K-shaped recovery is one in which the performance of different parts of the economy diverges like the arms of the letter "K." Economic performance of different sectors, industries, and groups within an economy always differ to some extent, but in a K-shaped recovery some parts of the economy may see strong growth while others continue to decline. Unlike other letter-shaped descriptors, which focus on large aggregates, a K-shaped recovery is described in terms of data broken out across different parts of the economy. The meaning of a K-shaped recovery really depends on the choice of how to disaggregate data across the economy.

Budget 2021-22

- The Finance Minister recently presented the Union Budget 2021-22 in the Lok Sabha.
- Budget is a constitutionally-mandated annual exercise by the government.
- The Constitution refers to the budget as the –annual financial statement“ that has been dealt with in Article 112 of the Constitution.

The budget contains:

- Estimates of revenue and capital receipts;
- Ways and means to raise the revenue;
- Estimates of expenditure;
- Details of the actual receipts and expenditure of the closing financial year and the reasons for any deficit or surplus in that year; and
- Economic and financial policy of the coming year, that is, taxation proposals, prospects of revenue, spending programme and introduction of new schemes/projects.
- Since 2017, the Union Budget has usually been presented on the first of February, every year. Before that, it used to be presented on the last day of February.

Current Connect

- Revenue budget includes the government's revenue receipts and expenditure. There are two kinds of revenue receipts - tax and non-tax revenue.
- Capital Budget includes capital receipts and payments of the government. Capital expenditure is the expenditure on development of machinery, equipment, building, health facilities, education etc.
- Fiscal deficit is incurred when the government's total expenditure exceeds its total revenue.

Highlights

The Budget proposals for this financial year rest on six pillars —

1. health and well-being
2. physical and financial capital and infrastructure
3. inclusive development for aspirational India
4. reinvigorating human capital,
5. innovation and R&D
6. Minimum Government, Maximum Governance

Health and Sanitation:

- A new scheme, titled PM AtmaNirbharSwasthya Bharat Yojana, to be launched to develop primary, secondary and tertiary healthcare.
- Mission POSHAN 2.0 to improve nutritional outcomes across 112 aspirational districts.
- Operationalisation of 17 new public health units at points of entry.
- Modernising of existing health units at 32 airports, 15 seaports and land ports.
- JalJeevan Mission Urban aimed at better water supply nationwide.
- Strengthening of Urban Swachh Bharat Mission.

Education:

- 100 new Sainik Schools to be set up.
- 750 Eklavya schools to be set up in tribal areas.
- A Central University to come up in Ladakh.

Infrastructure:

- Vehicle scrapping policy to phase out old and unfit vehicles – all vehicles to undergo fitness test in automated fitness centres every 20 years (personal vehicles), every 15 years (commercial vehicles).
- Highway and road works announced in Kerala, Tamil Nadu, West Bengal and Assam.
- National Asset Monetising Pipeline launched to monitor asset monetization process.
- National Rail Plan created to bring a future ready Railway system by 2030.
- 100% electrification of Railways to be completed by 2023.
- Metro services announced in 27 cities, plus additional allocations for Kochi Metro, Chennai Metro Phase 2, Bengaluru Metro Phase 2A and B, Nashik and Nagpur Metros.
- National Hydrogen Mission to be launched to generate hydrogen from green power sources.
- Recycling capacity of ports to be doubled by 2024.
- Gas pipeline project to be set up in Jammu and Kashmir.
- PradhanMantriUjjwalaYojana (LPG scheme) to be extended to cover 1 crore more beneficiaries.

Tax:

- No IT filing for people above 75 years who get pension and earn interest from deposits.
- Reopening window for IT assessment cases reduced from 6 to 3 years. However, in case of serious tax evasion cases (Rs. 50 lakh or more), it can go up to 10 years.
- Affordable housing projects to get a tax holiday for one year.
- Compliance burden of small trusts whose annual receipts does not exceed Rs. 5 crores to be eased.

Current Connect

- Duty on various products like copper scrap, naphtha, cotton etc., has been reduced.
- Custom duty on gold and silver to be rationalised.
- Agriculture infrastructure and development cess proposed on certain items including urea, apples, crude soyabean and sunflower oil, crude palm oil, kabulichana and peas.

Economy and Finance:

- Fiscal deficit stands at 9.5% of the GDP; estimated to be 6.8% in 2021-22.
- The nominal GDP is estimated to grow at a rate of 14.4% in 2021- 22. In Budget 2020-21, GDP was estimated to grow at 10%, which was revised to -13%.
- Proposal to allow States to raise borrowings up to 4% of GSDP this year.
- A Unified Securities Market Code to be created, consolidating provisions of the SEBI Act, Depositories Act, and two other laws.
- Proposal to increase FDI limit from 49% to 74%.
- An asset reconstruction company will be set up to take over stressed loans.
- Deposit insurance increased from Rs 1 lakh to Rs 5 lakh for bank depositors.
- Proposal to decriminalise Limited Liability Partnership Act of 2008.
- Two PSU bank and one general insurance firm to be disinvested this year.
- An IPO of LIC to debut this fiscal.
- Strategic sale of BPCL, IDBI Bank, Air India to be completed.

Agriculture:

- Agriculture infrastructure fund to be made available for APMCs for augmenting their infrastructure.
- 1,000 more Mandis to be integrated into the E-NAM market place.
- Five major fishing hubs, including Chennai, Kochi and Paradip, to be developed.
- A multipurpose seaweed park to be established in Tamil Nadu.

Employment:

- A portal to be launched to maintain information on gig workers and construction workers.
- Social security to be extended to gig and platform workers.
- Margin capital required for loans via Stand-up India scheme reduced from 25% to 15% for SCs, STs and women.

Analytica

- There were speculations that some new tax like COVID cess will be introduced or surcharge on income tax will be increased. But the government did not propose any new tax or any increase in existing tax rates. The government maintained a status quo, which signals a stability in tax regime in these turbulent times – and, is a welcome move.
- The government announced several measures for the benefit of individual and small / medium taxpayers and to ease their compliance burden. For instance, senior citizens (75 years or above) earning pension and interest income have been exempted from filing tax return.
- Taxpayers will now be provided with pre-filled tax returns which will even include details of capital gains from listed securities, dividend income, and interest from banks, post office, etc.
- All this has been made possible due to extensive investment made by the government in technology and process automation in the last few years, such as e-filing of tax and other returns, annual information reports, specified transaction reports, faceless assessment, appeal, etc.
- Thus, to bring certainty in income tax proceedings at the earliest – the government has proposed to curtail the time period spent in processing of tax returns, completing assessment, etc. by 3 months.
- Also, with the recent success of faceless assessment / appeal, the government even proposes to make tax tribunals faceless, jurisdiction-less and more efficient - though, there could be some hiccups.

Current Connect

- This technological advancement is bearing fruits for taxpayers as well. It has been proposed to reduce the time limit for re-opening of assessment from 6 years to 3 years, subject to certain conditions. This is a welcome move and means that taxpayers won't have the sword of re-assessment hanging over their neck for a prolonged period.
- The government announced a significant step to form a Dispute Resolution Committee for small and medium taxpayers having income up to INR 50 lacs and tax adjustment up to INR 10 lacs.
- This shall go a long way and help prevent new tax disputes and settle issues at the initial stage itself. In times to come, the government may think to expand the ambit of the Committee to cover large taxpayers as well.
- As regards large corporates, the government proposes to do away with the Authority for Advance Rulings and replace it with Board for Advance Rulings (BFAR) as an alternative headed by Revenue officials, in times to come, it may be used by taxpayers as a faster route to reach High Court.
- The government also stood firm on its commitment to BEPS project and continued with Equalization Levy (EQL), in spite of investigations by its largest trading partner i.e., USA.
- The government went on to clarify range of aspects related to EQL applicable on nonresidents at the rate of 2%.
 - In order to provide certainty, it is being expressly clarified that transactions in the nature of royalty or fees for technical services taxable under the income-tax law (read with applicable double taxation treaty), would not be liable for EQL.
 - It is also proposed to clarify on what would construe an 'online sale of goods or services'. It has now been explicitly expanded to almost all transactions having some element of digital nature. Thus, non-resident taxpayers should carefully analyse intra-group / third-party transactions.
- The tax and non-tax measures announced by the government and with technology at their side - will go a long way and prove to be a stepping stone to make India an Atmanirbhar Bharat and realise the dream of building a US\$ 5 trillion economy.

Fifteenth Finance Commission

- The 15th Finance Commission submitted its report for FY 2020-21.
- The Finance Commission is a constitutional body under Article 280 of the constitution.
- It is formed by the President of India at the expiration of every fifth year or at such earlier time as the President considers necessary to give suggestions on centre-state financial relations.
- The Parliament may by law determine the qualifications which shall be requisite for appointment as members of the Commission and the manner in which they shall be selected.
- The duty of the Commission to make recommendations to the President as to —
 - the distribution between the Union and the States of the net proceeds of taxes which are to be, or may be, divided between them under this Chapter and the allocation between the States of the respective shares of such proceeds;
 - the principles which should govern the grants-in-aid of the revenues of the States out of the Consolidated Fund of India;
 - the measures needed to augment the Consolidated Fund of a State to supplement the resources of the Panchayats in the State on the basis of the recommendations made by the Finance Commission of the State;
 - the measures needed to augment the Consolidated Fund of a State to supplement the resources of the Municipalities in the State on the basis of the recommendations made by the Finance Commission of the State;
 - any other matter referred to the Commission by the President in the interests of sound finance.

Current Connect

- The 15th Finance Commission (Chair: Mr. N.K. Singh) was required to submit two reports.
- The first report, consisting of recommendations for the financial year 2020-21, was tabled in Parliament in February 2020.
- The final report with recommendations for the 2021-26 period was tabled in Parliament on February 1, 2021.

Key Recommendations

- Decrease in the devolution of taxes to states: The share of states in the centre's taxes is recommended to be decreased from 42% during the 2015-20 period to 41% for 2020-21. The 1% decrease is to provide for the newly formed union territories of Jammu and Kashmir, and Ladakh from the resources of the central government.

Criteria for devolution:

Criteria	14 th FC (2015-20)	15 th FC (2020-21)	15 th FC (2021-26)
Income Distance	50.0	45.0	45.0
Area	15.0	15.0	15.0
Population (1971)	17.5	-	-
Population(2011)#	10.0	15.0	15.0
Demographic	-	12.5	12.5
Performance			
Forest Cover	7.5	-	-
Forest and Ecology	-	10.0	10.0
Tax and fiscal efforts*	-	2.5	2.5
Total	100	100	100

Note: #14th FC used the term –demographic change| which was defined as Population in 2011. *The report for 2020-21 used the term –tax effort|, the definition of the criterion is same.

- Income distance: Income distance is the distance of a state's income from the state with the highest income. Income of a state has been computed as average per capita GSDP during the three-year period between 2016-17 and 2018-19. A state with lower per capita income will have a higher share to maintain equity among states.
- Demographic performance: The Commission used only 2011 population data for its recommendations (as per ToR).
- The Demographic Performance criterion has been introduced to reward efforts made by states in controlling their population. It will be computed by using the reciprocal of the total fertility ratio of each state, scaled by 1971 population data. States with a lower fertility ratio will be scored higher on this criterion.
- Forest and ecology: This criterion have been arrived at by calculating the share of the dense forest of each state in the aggregate dense forest of all the states.
- Tax and fiscal efforts: This criterion has been used to reward states with higher tax collection efficiency. It is measured as the ratio of the average per capita own tax revenue and the average per capita state GDP during the three years between 2016-17 and 2018- 19.
- Grants-in-aid: Over the 2021-26 period, the following grants will be provided from the centre's resources:
- Revenue deficit grants: 17 states will receive grants worth Rs 2.9 lakh crore to eliminate revenue deficit.

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- Sector-specific grants: Sector-specific grants of Rs 1.3 lakh crore will be given to states for eight sectors: (i) health, (ii) school education, (iii) higher education, (iv) implementation of agricultural reforms, (v) maintenance of PMGSY roads, (vi) judiciary, (vii) statistics, and (viii) aspirational districts and blocks. A portion of these grants will be performance-linked.
- State-specific grants: The Commission recommended state-specific grants of Rs 49,599 crore. These will be given in the areas of: (i) social needs, (ii) administrative governance and infrastructure, (iii) water and sanitation, (iv) preservation of culture and historical monuments, (v) high-cost physical infrastructure, and (vi) tourism. The Commission recommended a high-level committee at state-level to review and monitor utilisation of state-specific and sector-specific grants.
- Grants to local bodies: The total grants to local bodies will be Rs 4.36 lakh crore (a portion of grants to be performance-linked) including: (i) Rs 2.4 lakh crore for rural local bodies, (ii) Rs 1.2 lakh crore for urban local bodies, and (iii) Rs 70,051 crore for health grants through local governments. The grants to local bodies will be made available to all three tiers of Panchayat- village, block, and district.
- The health grants will be provided for: (i) conversion of rural sub-centres and primary healthcare centres (PHCs) to health and wellness centres (HWCs), (ii) support for diagnostic infrastructure for primary healthcare activities, and (iii) support for urban HWCs, sub- centres, PHCs, and public health units at the block level.
- Grants to local bodies (other than health grants) will be distributed among states based on population and area, with 90% and 10% weightage, respectively.
- The Commission has prescribed certain conditions for availing these grants (except health grants). The entry-level criteria include: (i) publishing provisional and audited accounts in the public domain and (ii) fixation of minimum floor rates for property taxes by states and improvement in the collection of property taxes (an additional requirement after 2021-22 for urban bodies).
- No grants will be released to local bodies of a state after March 2024 if the state does not constitute State Finance Commission and act upon its recommendations by then.
- Disaster risk management: The Commission recommended retaining the existing cost-sharing patterns between the centre and states for disaster management funds. The cost- sharing pattern between centre and states is: (i) 90:10 for north-eastern and Himalayan states, and (ii) 75:25 for all other states. State disaster management funds will have a corpus of Rs 1.6 lakh crore (centre's share is Rs 1.2 lakh crore).

Fiscal Roadmap

- Fiscal deficit and debt levels:
 - The Commission suggested that the centre bring down fiscal deficit to 4% of GDP by 2025-26. For states, it recommended the fiscal deficit limit (as % of GSDP) of: (i) 4% in 2021-22, (ii) 3.5% in 2022-23, and (iii) 3% during 2023-26. If a state is unable to fully utilise the sanctioned borrowing limit as specified above during the first four years (2021-25), it can avail the unutilised borrowing amount (calculated in rupees) in subsequent years (within the 2021-26 period).
 - Extra annual borrowing worth 0.5% of GSDP will be allowed to states during first four years (2021-25) upon undertaking power sector reforms including: (i) reduction in operational losses, (ii) reduction in revenue gap, (iii) reduction in payment of cash subsidy by adopting direct benefit transfer, and (iv) reduction in tariff subsidy as a percentage of revenue.
 - The Commission observed that the recommended path for fiscal deficit for the centre and states will result in a reduction of total liabilities of: (i) the centre from 62.9% of GDP in 2020-21 to 56.6% in 2025-26, and (ii) the states on aggregate from 33.1% of GDP in 2020-21 to 32.5% by 2025-26.
 - It recommended forming a high-powered inter-governmental group to: (i) review the Fiscal Responsibility and Budget Management Act (FRBM), (ii) recommend a new FRBM framework for centre as well as states, and oversee its implementation.

Current Connect

- Off-budget borrowings: The Commission observed that financing capital expenditure through off-budget borrowings detracts from compliance with the FRBM Act. It recommended that both the central and state governments should make full disclosure of extrabudgetary borrowings. The outstanding extra-budgetary liabilities should be clearly identified and eliminated in a time-bound manner.
- The statutory framework for public financial management: It recommended forming an expert group to draft legislation to provide for a statutory framework for sound public financial management system. It observed that an overarching legal fiscal framework is required which will provide for budgeting, accounting, and audit standards to be followed at all levels of government.
- Tax capacity: The Commission noted that tax revenue is far below the estimated tax capacity of the country (around 17.5% of GDP in 2018-19 of centre & State). Further, India's tax capacity has largely remained unchanged since the early 1990s. The Commission recommended:
 - Broadening the tax base
 - Streamlining tax rates
 - Increasing capacity and expertise of tax administration in all tiers of the government.
- GST: The Commission highlighted some challenges with the implementation of the Goods and Services Tax (GST). These include-
- Large shortfall in collections as compared to original forecast- It suggested that the structural implications of GST for low consumption states need to be considered.
 - High volatility in collections
 - Accumulation of large integrated GST credit
 - Glitches in invoice and input tax matching
 - Delay in refunds
- The continuing dependence of states on compensation from the central government (21 states out of 29 states in 2018-19) for making up for the shortfall in revenue is a concern. It suggested that the structural implications of GST for low consumption states need to be considered.

Other Recommendations

- Funding of defence and internal security: A dedicated non-lapsable fund called the Modernisation Fund for Defence and Internal Security (MFDIS) will be constituted to primarily bridge the gap between budgetary requirements and allocation for capital outlay in defence and internal security. The fund will have an estimated corpus of Rs 2.4 lakh crore over the five years (2021-26). Of this, Rs 1.5 lakh crore will be transferred from the Consolidated Fund of India. Rest of the amount will be generated from measures such as disinvestment of defence public sector enterprises, and monetisation of defence lands.
- Health: States should increase spending on health to more than 8% of their budget by 2022. Primary healthcare expenditure should be two-thirds of the total health expenditure by 2022. Centrally sponsored schemes (CSS) in health should be flexible enough to allow states to adapt and innovate. Focus of CSS in health should be shifted from inputs to outcome. All India Medical and Health Service should be established.
- Centrally-sponsored schemes (CSS): A threshold should be fixed for annual allocation to CSS below which the funding for a CSS should be stopped (to phase out CSS which outlived its utility or has insignificant outlay). Third-party evaluation of all CSS should be completed within a stipulated timeframe. Funding pattern should be fixed upfront in a transparent manner and be kept stable.

Analytica

- The commission has partly met criticism that sole reliance on the 2011 population figures would discriminate against states such as Kerala that have a better record of controlling population growth and reducing their share in the national population.

Current Connect

- It has continued with the practice of providing some states with revenue deficit grants to take make up for shortfalls in receipts relative to projected expenditures as a result of the horizontal devolution formula, with Rs. 2.95 lakh crore allocated to 17 states.
- Reflecting its bias towards the centre, while the 15th FC does not take account of the revenue loss the centre's policies have resulted in, it has included in its formula for determining the sharing of devolved resources among the states a new tax-effort criterion, captured by the three-year average of per-capita own tax revenues and Per-Capita Gross State Domestic Product (GSDP).
- The 15th FC's failure to critically examine the tax record of the centre is reflected quite starkly in its position, or the absence of one, on the centre's growing reliance on cesses and surcharges to subvert the awards of past FCs and make up for the fiscal losses it (the centre) suffers on account of its neoliberal manoeuvres.
- Since revenues from cesses and surcharges are not required to be shared with the states, an increasing reliance on them reduces the share of the centre's tax revenues that accrue to the states.
- Besides this implicit endorsement of central manoeuvres that reduce the volume of resources transferred to the states, the 15th FC's report has changed the terms of transfer in ways that erode the policy independence of the state government, increases the room for central interference in the determination of state-level priorities and advances a neoliberal economic agenda.
- The two instruments used for this purpose are
 - to increase the share of resources transferred to the states and local bodies that are tied to areas, sectors or schemes;
 - linking transfers to performance criteria that are clearly aimed at imposing neoliberal policies on the states.
- Grants to local bodies is one of the measures adopted by FCs to ensure adequate devolution to lower levels. However, disbursement of an overwhelming proportion of this sum has been made conditional and tied. While some of these actions may be desirable, this amounts to depriving states and local bodies of their right to determine their priorities and using statutory devolution as a means of privileging and imposing the centre's priorities and pet schemes on the states.
- The 15th FC has not acceded to the demand of the states that they be permitted to borrow larger sums to meet their immediate fiscal strain, and do so without being subjected to conditions.
- The 15th FC has also accepted the centre's suggestion to set up a non-lapsable dedicated fund to support defence and internal security modernisation. Given the centre's claim that the states should share the burden of defence and security, this could open the door to diverting a part of the states' share of resources to financing this facility.

Foreign Contribution Act and contention on NGO Funding

- The FCRA regulates foreign donations and ensures that such contributions do not adversely affect internal security.
- First enacted in 1976, it was amended in 2010 when a slew of new measures were adopted to regulate foreign donations.
- The FCRA is applicable to all associations, groups and NGOs which intend to receive foreign donations.
- It is mandatory for all such NGOs to register themselves under the FCRA. The registration is initially valid for five years and it can be renewed subsequently if they comply with all norms.
- Registered associations can receive foreign contribution for social, educational, religious, economic and cultural purposes. Filing of annual returns, on the lines of Income Tax, is compulsory.
- In 2015, the MHA notified new rules, which required NGOs to give an undertaking that the acceptance of foreign funds is not likely to prejudicially affect the sovereignty

Current Connect

and integrity of India or impact friendly relations with any foreign state and does not disrupt communal harmony.

- It also said all such NGOs would have to operate accounts in either nationalised or private banks which have core banking facilities to allow security agencies access on a real time basis.
- In 2019, MHA had amended FCRA rules where it said that even persons prohibited to receive foreign funds such as journalists, politicians, members of the judiciary —are allowed to accept foreign contribution from their relatives| if the amount does not exceed ₹1 lakh. Any such transaction above ₹1 lakh will have to be informed to MHA.
- Until a decision is taken, the association cannot receive any fresh donation and cannot utilise more than 25% of the amount available in the designated bank account without permission of the MHA.
- The MHA can cancel the registration of an organisation which will not be eligible for registration or grant of ‘prior permission’ for three years from the date of cancellation.

Highlights

- As per the existing rules, all banks have to report to the Central government within 48 hours, the —receipt or utilisation of any foreign contribution| by any NGO, association or person whether or not they are registered or granted prior permission under the FCRA.
- Last September, the FCRA was amended by Parliament and a new provision that makes it mandatory for all NGOs to receive foreign funds in a designated bank account at the State Bank of India’s New Delhi branch was inserted.
- The Ministry has laid out a series of guidelines and charter to make the NGOs and the banks comply with the new provisions.
- The charter for the banks said, —It may be noted that foreign contribution has to be received only through banking channels and it has to be accounted for in the manner prescribed. Any violation by the NGO or by the bank may invite penal provisions of the FCRA, 2010.|
- It added that —donations given in Indian rupees (INR) by any foreigner/foreign source including foreigners of Indian origin like OCI or PIO cardholders| should also be treated as foreign contribution.
- Recently the National Investigation Agency (NIA) registered a case against Sikhs for Justice (SFJ), a foreign based group that advocates secessionist and pro-Khalistani activities in India.
- NIA summoned 40 people, all associated with the ongoing farmers agitation, to join the probe in the case where it alleged that large amounts of funds being collected by Khalistani terrorist outfits are being sent through NGOs to pro-Khalistani elements based in India.
- MHA also said down —good practices| to be followed by NGOs in accordance with standards of global financial watchdog- Financial Action Task Force (FATF).
- It asked NGOs to inform the Ministry about —suspicious activities| of any donor or recipient and —take due diligence of its employees at the time of recruitment.|
- The Ministry of Home Affairs (MHA) has asked chartered accountants (CAs) to ensure that foreign funds are received and utilised by NGOs (non-governmental organisations) —within the four corners of law.
- The FCRA, 2010, states that a CA should certify if an association or an NGO has utilised foreign contribution received for the purposes it was registered for and the annual statements are to be uploaded on the FCRA portal.

Conclusion

- The need of FCRA is felt for the regulation of foreign contribution and foreign hospitality and for the (i) the sovereignty and integrity of India; or (ii) public interest; or (iii) freedom or fairness of election to any Legislature; or (iv) friendly relations with any foreign State; or (v) harmony between religious, racial, social, linguistic or regional groups, castes or communities.

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- If we look into the cases like Greenpeace; the Delhi High Court had accepted the Writ Petition of Greenpeace by directing the MHA to state a full-proved reason. On the same footing, the Hon'ble High Court in the case of Association for Democratic Reforms & Anr vs. Union of India & Ors (W.P.(C) 131/2013), found that leading political parties had received funds in violation of the Foreign Contribution (Regulation) Act (FCRA)।
- The Supreme Court has held if a provision is capable of both use and abuse, and then, it is violative of Article 14 of the Constitution. Right from 1958 the Supreme Court in Ramkrishan Dalmia's case has said that any provision made by the legislation cannot be such that it is both capable of use as well as abuse. The FCRA has both pros and cons, but we need to analyse as to how to interpret the provision so that the 'National Agenda' should be maintained.

NPA and Asset Reconstruction Company

Context

- Recently, it was proposed in the budget that the Asset Reconstruction Company (ARC), which will have an Asset Management Company (AMC) to manage and sell bad assets, will look to resolve stressed assets of Rs 2-2.5 lakh crore that remain unresolved in around 70 large accounts.

Non-Performing Assets (NPAs)

- It is a loan or advance for which the principal or interest payment remained overdue for a period of 90 days.
- The coronavirus pandemic has had a devastating impact on banks and financial institutions around the world as the global economic crisis has led to a rise in defaults and bad loans. The situation is particularly serious for Indian banks that are already struggling to cope with rising bad loans.
- A lot of the loans currently classified as NPAs originated in the mid-2000s, at a time when the economy was booming and business outlook was very positive.
- But as economic growth stagnated following the global financial crisis of 2008, the repayment capability of these corporations decreased.
- This contributed to what is now known as India's Twin Balance Sheet problem, where both the banking sector (that gives loans) and the corporate sector (that takes and has to repay these loans) have come under financial stress.
- Further, recently there have also been frauds of high magnitude that have contributed to rising NPAs. Although the size of frauds relative to the total volume of NPAs is relatively small, these frauds have been increasing, and there have been no instances of high-profile fraudsters being penalised.
- Some of the factors leading to the increased occurrence of NPAs are external, such as decreases in global commodity prices leading to slower exports.
- The measures taken to resolve and prevent NPAs can broadly be classified into two kinds –
 - regulatory means of resolving NPAs per various laws (like the Insolvency and Bankruptcy Code (IBC))
 - remedial measures for banks prescribed and regulated by the RBI for internal restructuring of stressed assets.
- The IBC was enacted in May 2016 to provide a time-bound 180-day recovery process for insolvent accounts (where the borrowers are unable to pay their dues).
- Proceedings under the IBC are adjudicated by the Debt Recovery Tribunal for personal insolvencies, and the National Company Law Tribunal (NCLT) for corporate insolvencies.

Asset reconstruction company (ARC)

- It is a specialized financial institution that buys the NPAs or bad assets from banks and financial institutions so that the latter can clean up their balance sheets. Or in other words, ARCs are in the business of buying bad loans from banks.
- ARCs clean up the balance sheets of banks when the latter sells these to the ARCs. This helps banks to concentrate in normal banking activities.

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- Banks rather than going after the defaulters by wasting their time and effort, can sell the bad assets to the ARCs at a mutually agreed value.
- The Securitization and Reconstruction of Financial Assets and Enforcement of Security Interest (SARFAESI) Act, 2002; enacted in December 2002 provides the legal basis for the setting up ARCs in India.
- An ARC may issue bonds and debentures for meeting its funding requirements. But the chief and perhaps the unique source of funds for the ARCs is the issue of Security Receipts.
- As per the SARFAESI Act, Security Receipts is a receipt or other security, issued by a reconstruction company to any Qualified Institutional Buyers (QIBs) for a particular scheme. The Security Receipt gives the holder (QIB) a right, title or interest in the financial asset that is bought by the ARC. These SRs issued by ARCs are backed by impaired assets.
- Asset Reconstruction Company Limited (ARCIL) was the first ARC in India.
- According to an ASSOCHAM report, the average recovery rate for ARCs in India is around 30% of the principal and the average time taken is between four to five years.
- But after 2014, the performance of ARCs in settling the NPAs became below par. Especially in the recent periods, ARCs became underperformers in the context of the present rising tide of bad assets.

Analytica

- The ARC proposed in the Budget will be set up by state-owned and private sector banks, and there will be no equity contribution from the government.
- While the government will not provide any direct equity support to the ARC, it may provide sovereign guarantee that could be needed to meet regulatory requirements.
- The transfer of stressed assets to the ARC will happen at net book value, which is value of assets minus provisioning done by banks against these assets. The bank will get 15 per cent cash and 85 per cent security receipts against bad debt that will be sold to the ARC.
- This structure will reduce the load of stressed assets on the bank balance sheet and look to resolve these bad debts in a market-led way.
- It is a huge relief the government is not going to fund the proposed AMC that will house the bad assets of banks before they are sold to buyers like alternative Investment Funds (AIF).
- A bad bank is a bad idea at any time, even in these difficult circumstances, but had the government capitalised the AMC, it would have amounted to a bailout creating a moral hazard.
- From all appearances, the idea is to capitalise the AMC with the capital provisions that banks have already set aside for the bad loans and then transfer the loan exposures seems to be a good way to do it since it would not cost the banks growth capital; the shareholding of each of the banks in the ARC would be proportional to the stressed assets that they transfer.
- The advantage of pooling the toxic loans is that it would be easier to negotiate with a prospective buyer. Else, it takes consortiums forever to come to a decision with one bank or another dragging its feet. The experience with ARCIL and other ARC has been bad.

The Maritime Sector

- According to the Ministry of Shipping, around 95% of India's trading by volume and 70% by value is done through maritime transport.
- India has 12 major and 205 notified minor and intermediate ports.
- The Indian ports and shipping industry play a vital role in sustaining growth in the country's trade and commerce.
- India is the sixteenth largest maritime country in the world with a coastline of about 7,517 kms.
- The Indian Government has allowed Foreign Direct Investment (FDI) of up to 100% under the automatic route for port and harbour construction and maintenance

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projects. It has also facilitated a 10-year tax holiday to enterprises that develop, maintain and operate ports, inland waterways and inland ports.

Recent updates:

- Capacity of major ports have increased from 870 million tonnes in 2014 to 1550 million tonnes today.
- Indian ports now have measures such as: Direct port Delivery, Direct Port Entry and an upgraded Port Community System (PCS) for easy data flow. Indian ports have reduced waiting time for inbound and outbound cargo.
- Mega ports with world class infrastructure are being developed in Vadhavan, Paradip and Deendayal Port in Kandla.
- Domestic waterways are found to be cost effective and environment friendly ways of transporting freight. Therefore, the government aims to operationalise 23 waterways by 2030.
- Steps are also being taken to introduce urban water transport systems in key states and cities such as Kochi, Mumbai, Gujarat and Goa.
- The Government of India is also focusing on the domestic ship building and ship repair market. To encourage domestic shipbuilding approval has been given to the Shipbuilding Financial Assistance Policy for Indian Shipyards.
- The Sagar-Manthan: Mercantile Marine Domain Awareness Centre was also launched at the summit. It is an information system for enhancing maritime safety, search and rescue capabilities, security and marine environment protection.
- The Sagarmala project for promoting port led development was announced by the Government in 2016. As part of the Programme, more than 574 projects at a cost of 82 billion US Dollars or Rs 6 lakh crores have been identified for implementation during 2015 to 2035. Under the National Perspective Plan for Sagarmala, six new mega ports will be developed in the country.
- Ship repair clusters will be developed along both coasts by 2022. Domestic ship recycling industry will also be promoted to create 'Wealth from Waste'. India has enacted Recycling of Ships Act, 2019 and agreed to the Hong Kong International Convention.
- In November 2020, the Ministry of Shipping was renamed as the Ministry of Ports, Shipping and Waterways.

What needs to be done?

- Increased investments together with the 'Make in India' impetus can increase the sector's contribution to GDP and trade volumes.
- The government has launched a number of major initiatives such as the Sagarmala project, ports modernization and Inland Waterways & Coastal Shipping development. The increasing public-private partnership in response to these initiatives adds to the vibrancy of the sector and is a clear sign of resurged interest in its potential.
- While the positive signs of progress in the sector have opened up massive opportunities, they have also exposed bottlenecks to progress.
- It is crucial to unblock these bottlenecks and capitalise on the opportunities to give direction to the country's maritime sector.

Conclusion

- As it grows to be one of the major economies in the world, India will require a vibrant and strong maritime industry for economic as well as strategic reasons.
- There are many factors conducive to the development of a robust and sustainable maritime sector. Finally, it will depend on how the different stakeholders utilise the opportunities presented to them to transform the sector into an engine of growth for India.

MSME Sector in India

- The Micro Small and Medium Enterprises (MSMEs) sector is a major contributor to the socio-economic development of the country.

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- In India, the sector has gained significant importance due to its contribution to Gross Domestic Product (GDP) of the country and exports.
- The sector has also contributed immensely with respect to entrepreneurship development especially in semi-urban and rural areas of India.
- According to the provisions of Micro, Small & Medium Enterprises Development (MSMED) Act, 2006 the Micro, Small and Medium Enterprises (MSME) are classified in two classes i.e. Manufacturing Enterprises and Service Enterprises. For details, refer box.
- The Indian MSMEs sector contributes about 29% towards the GDP through its national and international trade.
- MSME Ministry has four statutory bodies namely, Khadi and Village Industries Commission (KVIC), Coir Board, National Small Industries Corporation Limited (NSIC), National Institute for Micro, Small and Medium Enterprises, (NI-MSME), Mahatma Gandhi Institute for Rural Industrialisation (MGIRI).

Challenges in the MSME Sector

- **Infrastructure bottlenecks:** MSMEs are inadequately equipped with necessary support systems which not only impede their day-to-day business operations but also their future growth prospects. MSMEs need to shed their inhibition to adopt new technologies; accept e-payments; and foster in-house innovation which will help them manage their businesses digitally and compete globally.
- **Lack of expertise and Competition:** Lack of expertise in product development, designing, packaging and marketing strategy due to their small size add up to the pressure of adapting to the changing environment around them. The strategy for MSMEs should be to gradually expand in size and reduce the dependence on the incentive structure provided by the Government. Their aim should be eventually to compete on a global scale.
- **Access to Credit and Formalisation:** Credit disbursement to this sector has remained sluggish in recent periods. As many MSMEs mainly operate in the informal space, assessing their creditworthiness can be difficult due to information asymmetry, particularly with respect to the financial performance of their businesses. Due to their small-scale operations, MSMEs are not able to raise risk capital. They are also unable to take advantage of most of the Government schemes which are mostly based on digital infrastructure and require beneficiaries to have some form of digital identity and presence.
- **Delayed Payments:** MSMEs often face the problem of delayed payments, affecting their cash flow and working capital availability. Most of the time, delay in realisation of such receivables increases their operating cycle and reduces their ability to procure new orders or fulfil the existing ones.

Government Policies for MSME Sector

- In October 2020, the Ministry of MSME in a major initiative onboarded the latest IT tools of Artificial Intelligence (AI) and Machine Learning (ML) for providing assistance and solutions to MSMEs. The ministry has implemented AI & ML on its robust Single Window System 'Champions'.
- UdyogAadhaar Memorandum: UdyogAadhaar Memorandum (UAM) is a one-page online registration system for MSMEs based on self-certification. The information sought is on a self-certification basis and no supporting documents are required at the time of online filing of UAM.
- MSME DataBank: MSME DataBank enables the Ministry of MSME to streamline and monitor the schemes and pass on the benefits directly to MSMEs. It is helpful for MSME units that can update their enterprise information as and when required without visiting any government office and updating information about their products/services.
- My MSME: In order to facilitate the enterprises to enjoy benefits of various schemes, the MSME office launched a web-based application module in the form of a mobile app called My MSME. This allows enterprises to make their applications and check for schemes on their mobile phone using the app.

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- MSME Sampark: Launched in 2018, the MSME Sampark portal is a digital platform wherein jobseekers and recruiters can register themselves for mutual beneficial interactions.
- Digital Payment: As part of the Digital India initiative, the Ministry of MSME has taken numerous initiatives to digitally enable the entire MSME ecosystem all MSME offices have been digitally empowered, efforts have been taken to spread awareness on the benefits of digital mode of payment such as BHIM, UPI and Bharat QR Code.
- To encourage local production, the government is working on policies to increase MSME exports and lower imports. In addition, Rs. 200 crore (US\$ 28.4 million) scheme has been sanctioned to set up 12 technology centres, which are expected to be completed by 2021.

Way Forward

- As the MSME sector holds immense potential, the need is to have a right set of policies and enabling framework which guide and support MSMEs to effectively handle their existing problems and venture into new areas.
- With increased availability of data from several sources, including GSTN, income tax, credit bureaus, etc., it is now possible to appraise the MSME loan proposals expeditiously by doing due diligence online.
- Emergence of FinTech companies has made it possible to assess credit worthiness of MSMEs by utilising unexplored data sources such as digital transaction trails, data generated through e-commerce sites, etc.
- Public Credit Registry (PCR) can fundamentally address the information asymmetry that impedes access to credit for micro and small entrepreneurs. The PCR has been envisaged as a database of core credit information. The registry would play crucial role in reducing credit gap in the segment.
- MSMEs should be integrated with global value chains (GVC) to remain competitive as it offers unique opportunity to become technologically and digitally empowered. Being part of GVC would enable MSMEs to produce quality goods and services which will have greater acceptability in the global market.

Agricultural Export

- India's export of Agricultural and allied commodities shows an impressive increase of 18.49 per cent during 2020-2021.
- India has consistently maintained trade surplus in the agricultural products over the years. India's agricultural and allied exports during 2019-20 were Rs. 2.52 lakh Crores and imports were Rs. 1.47 lakh Crores.
- Even, during the difficult time of Pandemic, India took care not to disturb the world food supply chain and continued to export. The export of Agri and allied commodities during Apr,2020 - Feb,2021 were Rs. 2.74 lakh Crore as compared to Rs. 2.31 Crore in the same period last year indicating an increase of 18.49%.
- The commodities which posted significant positive growth in exports were wheat, Other Cereals, Rice (other than Basmati), Soya meal, Spices, Sugar, Raw Cotton, Fresh Vegetable, Processed Vegetables, and Alcoholic Beverages etc.
- Despite COVID-19, balance of trade in agriculture has favourably increased during April, 2020 – Feb, 2021 to Rs. 132,579.69 Crore as against Rs. 93,907.76 Crore during the same period in 2019-20.
- A dynamic nation of around 1.3 billion consumers with rising discretionary incomes, changing food patterns, vast farming area, diverse agriculture and a large population dependent on agriculture has propelled India to the world's centre stage as a big consumer market and also as a key supplier of food products.
- It has often been suggested that an essential element of "Make in India" has to be "Bake in India", i.e. a renewed focus on value addition and on processed agricultural products.
- Challenges, however, are aplenty; from low farm productivity to poor infrastructure to global price volatility to market access. The vision of the present government to double

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farmer's income by 2022 would require a series of interventions to improve production and productivity, better price realization for farm produce, along with economizing the cost of production. There has been a long felt need for a dedicated agricultural export policy in India.

- The Agriculture Export Policy is framed with a focus on agriculture export oriented production, export promotion, better farmer realization and synchronization within policies and programmes of Government of India.
- It is required to have a "Farmers' Centric Approach" for improved income through value addition at source itself which will help to minimize losses across the value chain.
- India needs to have farmer-oriented strategy to achieve the twin objective of food security and a prominent agriculture exporter of the world.

India's Agriculture Export Policy- Objectives

- To diversify our export basket, destinations and boost high value and value added agricultural exports including focus on perishables.
- To promote novel, indigenous, organic, ethnic, traditional and non-traditional Agri products exports.
- To provide an institutional mechanism for pursuing market access, tackling barriers and deal with sanitary and phytosanitary issues.
- To strive to double India's share in world agri exports by integrating with global value chain at the earliest.

Conclusion

- Major items of current agri-export basket are under threat due to ground water depletion and restrictive domestic policies.
- Export clusters may be successful if high class infrastructure in built and trade policies remain predictable and stable
- Key to exports lies in domestic policies on subsidies, trade and infrastructure
- India unlikely to pose any serious threat to dominant players on global scene given the nature of its export regime.

Indian Startup Ecosystem

- India has the 3rd largest startup ecosystem in the world; expected to witness YoY growth of a consistent annual growth of 12-15%
- India has about 50,000 startups in India in 2018; around 8,900 – 9,300 of these are technology led startups 1300 new tech startups were born in 2019 alone implying there are 2-3 tech startups born every day.
- The pace of growth in the startup ecosystem has increased to 15% year-on-year in 2018, while the growth of the number of incubators and accelerators has grown to 11%
- Significantly, the number of women entrepreneurs stood at 14%, up from 10% and 11% in the previous two years
- Startups in the country have been able to create an estimated 40,000 new jobs over the year, taking the total jobs in the start-up ecosystem to 1.6-1.7 lakh
- Bangalore has been listed within the world's 20 leading startup cities in the 2019 Startup Genome Project ranking. It is also ranked as one of the world's five fastest growing startup cities.

Issues and Challenges of Startups

- Financial resources: Availability of finance is critical for the startups and is always a problem to get sufficient amounts. The requirement starts increasing as the business progresses. Scaling of business requires timely infusion of capital. A 2016 report paints a gloomy picture with 85% of new company's reportedly underfunded indicating potential failure.
- Revenue generation: Several startups fail due to poor revenue generation as the business grows. The challenge is not to generate enough capital but also to expand and sustain the growth.

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- Team members: Assembling a good team is the first major requirement, failure to have one sometimes could break the startup.
- Supporting infrastructure: There are a number of support mechanisms that play a significant role in the lifecycle of startups which include incubators, science and technology parks, business development centers etc.
- Creating awareness: In markets, Startups fail due to lack of attention to limitations in the markets. The environment for a startup is usually more difficult than for an established firm due to uniqueness of the product.
- Regulations: Starting a business requires a number of permissions from government agencies. Although there is a perceptible change, it is still a challenge to register a company. Regulations pertaining to labor laws, intellectual property rights, dispute resolution etc. are rigorous in India.
- Lack of mentorship: Lack of proper guidance and mentorship is one of the biggest problems that exist in the Indian startup ecosystem.

Opportunities for Startups in India

- India's Large Population: The population of India is a huge asset for the country. This unique demographic advantage will offer a great opportunity to any startup. Various infrastructure issues and the bottom- of the- pyramid market would provide huge opportunities for the startups.
- Change of Mind Set of Working Class: Traditional career paths will be giving way to Indian startup space. Challenging assignments, good compensation packages would attract talented people to startups. Also, it is seen that several high-profile executives are quitting their jobs to start or work for startups.
- Huge Investments in Startups: Huge investment in Indian startups from foreign and Indian investors is taking place. India is the most sought-after destination for investments.

Government Initiatives

- Start-Up India: This initiative provides three-year tax and compliance breaks intended for cutting government regulations and red tapism.
- Mudra Yojana: Through this scheme, startups get loans from the banks to set up, grow and stabilize their businesses.
- SETU (Self-Employment and Talent Utilization) Fund: Government has allotted Rs 1,000 Cr in order to create opportunities for self-employment and new jobs mainly in technologydriven domains.
- E-Biz Portal: Government launched e-biz portal that integrates 14 regulatory permissions and licenses at one source to enable faster clearances and improve the ease of doing business in India.
- Royalty Tax: Indian government has reduced the royalty tax paid by businesses and startup firms from 25 per cent to 10 per cent.

Conclusion

- While in the country like India, government alone cannot fulfill the employment opportunities, so individuals need to come forward to help themselves, given the viable business atmosphere by the government. Adam Smith, an 18th century economist and author, in his book Wealth of Nations has talked about the "Invisible Hand" that Individuals pursuing their best self Interest would result in greater overall good to the society. If India wants to mark its presence in the global arena, this Invisible hand would be none other than our budding entrepreneurs and start-ups which can make the elephant dance again.

Growth of the Core Sectors

- The Eight Core Industries comprise 40.27 per cent of the weight of items included in the Index of Industrial Production (IIP).

Impact of the Covid-19 Pandemic on Core Sector Industries in India

- The production of eight Core industries has been adversely affected by the Covid-19 pandemic and associated disruptions in demand and supply of goods and services.

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- Some of the demand side factors responsible for drop in production are decline in private final consumption expenditure and gross fixed capital expenditure, uncertainty in business sentiments, etc.
- The imposition of nationwide lockdown to contain the outbreak of Covid-19 pandemic was a major supply side factor responsible for drop in the core sector growth.
- Industrial growth depends on a number of factors including structural, external, fiscal and industrial factors.
- The sudden outbreak of COVID-19 has severely impacted some of the major economies of the world, viz. USA, European Union, UK and Japan.
- In India too, various sectors were affected due to the nation-wide lockdown. However, after the lockdown was relaxed, improvement has been witnessed in several sectors of the economy.
- After a steep decline in March and April 2020, the overall growth rate of production of eight core industries started showing signs of recovery since May 2020.

Steps taken by the Government

- The National Infrastructure Pipeline is expected to significantly boost infrastructure and spur growth impulses in the economy
- Make in India, PradhanMantri Gram SadakYojana, PradhanMantriAwaasYojana – Gramin, PM AwaasYojana (Urban), Swachh Bharat Mission, JalJeevan Mission to provide ‘HarGharJal’ as well as other infrastructure and housing schemes will stimulate the production and sale of cement, steel, and other construction materials resulting in multiplier effect on the economy.
- As part of Atmanirbhar Bharat Abhiyan, a Production Linked Incentive (PLI) scheme has been announced to enhance production of ‘Speciality Steel’, incorporating four different product categories.
- In the Coal Sector, amendments in the Coal Mines (Special Provisions) Act, 2015 was made through the Mineral Laws (Amendment) Act, 2020. A total of 11 coal blocks are allocated under Mines and Minerals (Regulation and Development) (MMDR) Act. Successful auction done for 19 out of the of 38 coal mines for commercial mining in June-2020.
- For enhancing production of oil and gas, Government has approved major reforms in exploration and licensing policy to enhance exploration activities, attract domestic and foreign investment in unexplored/unallocated areas of sedimentary basins and accelerate domestic production of oil and gas from existing fields.
- The Integrated Power Development Scheme (IPDS) has been approved to facilitate state utilities to ensure quality and reliable 24x7 power supply in the urban areas with a total outlay of Rs 32,612 crores.
- Further, the country has already accomplished two major landmarks in rural electrification arena: (i) 100 per cent village electrification under DeenDayalUpadhyaya Gram JoytiYojana, and (ii) universal household electrification under ‘PradhanMantriSahajBijliHarGharYojana’ (Saubhaagya).
- To boost domestic manufacturing, industrial production and GDP growth, Production Linked Incentive (PLI) Scheme in 13 key sectors, under the aegis of AatmaNirbhar Bharat, have been announced for enhancing India’s manufacturing capabilities and exports. PLI Schemes for medical devices; mobile phones; electronic components; pharmaceutical drugs; telecom and network equipment; and electronic technology products have been notified.
- In the Union Budget 2021-22, with a view to promote domestic manufacturing, announcements have been made on setting up seven Mega Investment Textiles Parks (MITRA) over the next 3 years with plug-and-play facilities, rationalization of customs duty structure across sectors and for a Scrappage Policy to phase out old and unfit commercial vehicles.
- Announcement of structural reforms such as deregulation of the agricultural sector, change in definition of MSMEs, commercialization of coal mining, higher FDI limits in defence and space sector, development of Industrial Land/ Land Bank and Industrial Information System, revamp of Viability Gap Funding scheme for social infrastructure,

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new power tariff policy and incentivizing States to undertake sector reforms as part of the Aatmanirbhar Package.

- To contain surge in imports of non-essential commodities, corrective steps such as increase in basic customs duty or through other non-tariff measures like issue of Quality Control Orders have been taken. One District One Product Scheme has also been launched to realize the true potential of a district.

Fertilizer Subsidy in India

- The government has recently announced a 137% increase in the subsidy on diammonium phosphate (DAP), from Rs 511.55 to Rs 1,211.55 per 50-kg bag.
- DAP is the second most commonly used fertiliser in India, with its sales of 119.13 lakh tonnes (lt) in 2020-21 next only to the 350.42 lt of urea.
- Farmers normally apply this fertiliser just before or at the time of sowing, as it is high in phosphorus (P) that stimulates root establishment and development – without which plants cannot grow to their normal size or will take too long to mature.
- DAP contains 46% P and 18% nitrogen (N).
- Internationally, the cost of the raw materials used to make DAP, as well as the cost of the finished product, has risen manifold.
- Potash and phosphoric acid have only a few big players and very few mines in the world, which control production and prices. Raw material demand has also increased this year, with better agricultural production sentiment
- Potash and rock phosphate are almost non-available in India, and almost every non-urea fertiliser input is imported. Such high DAP prices of \$500-550 per tonne were last seen in 2012-13, while ammonia had hit \$450 per tonne in 2015.

Need of Government Intervention

- The government provides fertilisers such as urea and DAP to farmers at subsidised prices via manufacturers and importers.
- While urea subsidy varies from time to time, in order to keep its selling price constant amid market fluctuations, non-urea fertiliser subsidy such as that for DAP, NPK and MOP fertilisers, is given on a per-tonne basis to companies, which means final prices can vary.
- With the price of urea remaining unchanged at Rs 268/bag since 2012, the DAP price hike could have resulted in farmers increasing urea usage, affecting soil health.
- In addition, the rising costs would have resulted in the government having to increase crops' minimum support prices, thus spiking food inflation.

Criticism of the Move

- According farmers unions, this indirect subsidy is not in favour of farmer but instead will benefit industry.
- They are demanding for DBT (direct bank transfer) to farmers for all agriculture inputs, including organic manure. According to them, direct subsidy should be per acre, per farmer.
- Unions have called upon the Centre to provide such support for organic fertilisers as well which are not harmful for either human or environment.

Remittance in India amidst Pandemic: World Bank report

- According to a World Bank report, India received over USD83 billion in remittances in 2020, a drop of just 0.2 per cent from the previous year, despite a pandemic that devastated the world economy.
- China, which received USD 59.5 billion in remittances in 2020 against USD 68.3 billion the previous year, is a distant second in terms of global remittances for the year gone by, as per the latest World Bank data.
- India and China are followed by Mexico (USD42.8 billion), the Philippines (USD34.9 billion), Egypt (USD29.6 billion), Pakistan (USD26 billion), France (USD24.4 billion) and Bangladesh (USD21 billion).

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- In neighbouring Pakistan, remittances rose by about 17 per cent, with the biggest growth coming from Saudi Arabia, followed by the European Union countries and the United Arab Emirates.
- In Bangladesh, remittances also showed a brisk uptick in 2020 (18.4 per cent), and Sri Lanka witnessed remittance growth of 5.8 per cent.
- The resilience of remittance flows is remarkable. Remittances are helping to meet families' increased need for livelihood support.
- However, the relatively strong performance of remittance flows during the COVID-19 crisis has also highlighted the importance of timely availability of data.
- Given its growing significance as a source of external financing for low- and middle-income countries, there is a need for better collection of data on remittances, in terms of frequency, timely reporting, and granularity by corridor and channel.

Subsidies to spur EV demand

- Electric two-wheeler makers recently termed as “a phenomenal move” the government’s decision to increase subsidy for such vehicles by 50% under the FAME II scheme saying it would be a game changer in the adoption of ecofriendly vehicles.
- The Centre recently made a partial modification of the Faster Adoption and Manufacturing of Electric Vehicles in India Phase II, including increasing the demand incentive for electric twowheelers to ₹15,000 per KWh from an earlier uniform subsidy of ₹10,000 per KWh for all EVs, including plug-in hybrids and strong hybrids except buses.
- In the latest modification, the department of heavy industries also capped incentives for electric two-wheelers at 40% of the cost of vehicle, up from 20% earlier.
- In April 2019, NITI Aayog, the federal think tank, published a report titled “India’s Electric Mobility Transformation”, which pegs EV sales penetration in India at 70 percent for commercial cars, 30 percent for private cars, 40 percent for buses, and 80 percent for two- and three- wheelers by 2030
- These targets, if achieved, could lead to a net reduction of 14 exajoules of energy and 846 million tons of CO2 emissions over the deployed vehicles’ lifetime.
- This will help India fulfil its global commitments to lower carbon emissions and increase use of cleaner sources of energy and transportation as required by the Nationally Determined Contributions (NDCs) under the United Nations Framework Convention on Climate Change (UNFCCC).

Steps Taken by the Government

- National Electric Mobility Mission Plan 2020 (NEMMP): It was launched in 2013 by the Department of Heavy Industry (DHI) as a roadmap for the faster manufacture and adoption of EVs in India.
- FAME Phase I:
 - As part of the NEMMP 2020, the Faster Adoption and Manufacturing of Hybrid and Electric Vehicles in India (FAME India) Scheme was notified in April 2015, to promote the manufacture of electric and hybrid vehicle technology.
 - It has mainly focused on four aspects – demand creation, technology platform, pilot projects, and charging infrastructure.
 - For demand creation, incentives have mainly been disbursed in the form of reduced purchase prices.
- FAME Phase II:
 - Launched in 2019 for a period of three years, this scheme has an outlay of US\$1.36 billion to be used for upfront incentives on the purchase of EVs as well as supporting the development of charging infrastructure.
 - FICCI has asked for continuation of FAME II till 2025, along with short-term booster incentives to enhance demand.

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- Ministry of Power: It has clarified that charging EVs is considered a service, which means that operating EV charging stations will not require a license. It has also issued a policy on charging infrastructure to enable faster adoption of EVs.
- Ministry of Road Transport and Highways: It has announced that both commercial as well as private battery-operated vehicles will be issued green license plates. It has also notified that all battery operated, ethanol-powered, and methanol-powered transport vehicles will be exempted from the commercial permit requirement.

Challenges faced by EV industry

- Insufficient charging infrastructure: In 2019, there were only 650 charging stations in India as against over 0.3 million in China. Lack of sufficient charging infrastructure is one of the primary reasons why customers often refrain from purchasing EVs.
- Limited options: Since it is still a budding industry in India, customers have a very limited range of products to choose from. Increased investment in the sector will make it more competitive in due time and this will help create further demand.
- Lower mileage: Since the industry is young, there is immense scope for R&D. As of today, EVs in India are not cost competitive to an average customer as internal combustion engine (ICE) vehicles prove to be more cost effective
- Higher dependency on imports: Reliance on imports of battery as well as other components is also one of the factors adding to the cost of EVs in India.
- High costs:
 - Along with the range anxiety (kms/charge), another major concern among the potential customers is the current high price of EVs.
 - As compared to lower-end (internal combustion engine) ICE cars, electric cars in the same segment tend to be more expensive.

Conclusion

- Ultimately, the scope of India's EV market growth rests on availability of capital for original equipment manufacturers, battery manufacturers, and charge point operators as well as improvements to infrastructure and diversified options for consumers.
- Realizing India's EV ambition will also require an estimated annual battery capacity of 158 GWh by FY 2030, which provides huge investment opportunities for investors. Enabling policy support measures are a critical need at this juncture.
- The government appears to be aware of this; it has been rolling out incentives to boost market demand in priority segments like electric two-wheelers, and localizing production of key components like ACC battery storage through the PLI scheme.

Financing facility under 'Agriculture Infrastructure Fund'

- The Union Cabinet in July 2020 has approved a new pan India Central Sector Scheme called Agriculture Infrastructure Fund.
- The scheme aims to provide a medium - long term debt financing facility for investment in viable projects for post-harvest management Infrastructure and community farming assets through interest subvention and financial support.
- Under the scheme, Rs. One Lakh Crore will be provided by banks and financial institutions as loans to Primary Agricultural Credit Societies (PACS), Marketing Cooperative Societies, Farmer Producers Organizations (FPOs), Self Help Group (SHG), Farmers, Joint Liability Groups (JLG), Multipurpose Cooperative Societies, Agri-entrepreneurs, Startups, Aggregation Infrastructure Providers and Central/State agency or Local Body sponsored Public Private Partnership Project.

Recent Modifications

- Eligibility has now been extended to State Agencies/APMCs, National & State Federations of Cooperatives, Federations of Farmers Producers Organizations (FPOs) and Federations of Self Help Groups (SHGs).

Current Connect

- At present Interest subvention for a loan upto Rs. 2 crore in one location is eligible under the scheme. In case, one eligible entity puts up projects in different locations then all such projects will be now be eligible for interest subvention for loan upto Rs. 2 crore.
- However, for a private sector entity there will be a limit of a maximum of 25 such projects. This limitation of 25 projects will not be applicable to state agencies, national and state federations of cooperatives, federations of FPOs and federation of SHGs.
- Location will mean physical boundary of a village or town having a distinct LGD (Local Government Directory) code. Each of such projects should be in a location having a separate LGD code.
- For APMCs, interest subvention for a loan upto Rs. 2 crore will be provided for each project of different infrastructure types e.g. cold storage, sorting, grading and assaying units, silos, et within the same market yard. APMC markets are setup to provide market linkages and create an ecosystem of post-harvest public infrastructure open to all farmers.
- The power has been delegated to Minister of Agriculture & Farmers Welfare to make necessary changes with regard to addition or deletion of beneficiary in such a manner so that basic spirit of the scheme is not altered.

Benefits

- All loans under this financing facility will have interest subvention of 3% per annum up to a limit of Rs. 2 crore. This subvention will be available for a maximum period of seven years.
- Further, credit guarantee coverage will be available for eligible borrowers from this financing facility under Credit Guarantee Fund Trust for Micro and Small Enterprises (CGTMSE) scheme for a loan up to Rs. 2 crore. The fee for this coverage will be paid by the Government.
- In case of FPOs the credit guarantee may be availed from the facility created under FPO promotion scheme of Department of Agriculture, Cooperation & Farmers Welfare (DACFW).
- Moratorium for repayment under this financing facility may vary subject to minimum of 6 months and maximum of 2 years.

Central Bank Digital Currency (CBDC)

- The Reserve Bank of India (RBI) is examining use cases of a central bank digital currency (CBDC) and is also looking at a phased implementation strategy.

What is CBDC

- It is the digital form of a country's fiat currency that is also a claim on the central bank. Instead of printing money, the central bank issues electronic coins or accounts backed by the full faith and credit of the government.
- This new type of currency is still early in its development. Most countries are still only starting to explore the idea, such as the U.S. form of a digital dollar. A few ambitious countries, including China with its digital yuan and South Korea, have already finished a demo and are piloting the technology. But a CBDC has yet to be deployed on a large scale.
- Each country exploring a CBDC has its own approach. Several CBDCs are based on the same general principles and blockchain technology underlying Bitcoin, the original cryptocurrency.
- A CBDC offers three main elements:
 - A digital currency
 - Issued by the central bank
 - Universally accessible
- CBDCs are categorized into two different proposals based on the targeted users:
 1. Retail Central Bank Digital Currency
 2. Wholesale Central Bank Digital Currency

Features

- CBDCs are digital, but with a different technological makeup. They are generally proposed to reengineered money from the ground up, with many borrowing from Bitcoin's underlying technology with distributed ledger technology (DLT).
 - In order to keep track of money, banks need to store financial records, such as how much money a person has and what transactions they've made, in a ledger.
 - Instead of one central database storing all the financial records of people, DLT is composed of several copies of this transaction history, each stored and managed by a separate financial entity, and usually managed from the top by the country's central bank. These financial entities share DLT together in a distributed manner.
- Lower costs and higher efficiency- Advocates claim that because of the way CBDCs are structured under the hood, they could lead to lower costs for transferring money. The idea is that with a CBDC, financial entities are more connected, making a smoother way to move money around than the disjointed financial system that's in place today.
- Tracking payments- DLTs give a full record of all the transactions. Some governments, such as China, which is known for its extensive surveillance apparatus, will potentially want to use this financial information to keep tighter tabs on its citizens.

Why issue a CBDC?

- If a country issues a CBDC, its government will consider it to be legal tender, just like fiat currencies; both CBDC and physical cash would be legally acknowledged as a form of payment and act as a claim on the central bank or government.
- A central bank digital currency increases the safety and efficiency of both wholesale and retail payment systems. On the wholesale side, a central bank digital currency facilitates quick settlement of retail payments.
- It could improve the efficiency of making payments at the point of sale or between two parties (p2p).
- No physical coins or notes are available to individuals in a digital society, and all money is exchanged in a digital format. If a country intends to become a cashless society, a digital currency with government / central bank backing is a credible alternative.
- The pressure for governments to adopt a CBDC is strong, as the market for private e-money is on the rise. If it becomes mainstream, beneficiaries are at a disadvantage because e-money providers aim to maximize their profits instead of the general public's. Issuing a CBDC would give governments an edge over the competition from private e-money.
- In addition to domestic transactions, the current cross-jurisdiction payments' model depends heavily on central banks operating the real-time gross settlement (RTGS) infrastructure within which all local banks' obligations must settle.
- Since time lags exist in cross-border payments, participating parties are exposed to settlement and credit risk. A CBDC is available around the clock, while privacy is taken into account to eliminate counterparty credit risk.

Challenges

- Citizens could pull too much money out of banks at once and purchase CBDCs, triggering a run on banks.
- Centralizing, through the government, a system designed to be private may produce backlash from users and create cybersecurity risks.
- Regulatory processes are not updated to deal with the new forms of money and need to be made more robust before adopting this technology.
- National Security Implications of a CBDC-For Ex.- Right now, the United States is able to monitor and regulate most digital payment flows of dollars all over the world. But new payment systems could limit the ability of policymakers to track cross-border flows. In the long term, the absence of US leadership and standards setting can have

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geopolitical consequences, especially if China maintains its first-mover advantage in the development of CBDCs.

Countries experimenting with CBDCs

- China: Digital Yuan- The People's Bank of China is one of the first central banks to develop a CBDC. They deployed a special task force in 2014 to research and implement a digital Yuan. It gained traction in 2020 when China announced the testing of a CBDC prototype. As per reports, the Chinese digital Yuan will impact the \$27 trillion payment market in China.
- Sweden: e-krona- In 2017, the world's oldest bank, Swedish Riksbank, began its CBDC project called e-krona. E-krona intends to offer a robust alternative in case of emergency or turmoil of private payment service providers, thereby ensuring the Swedish payment system remains stable.
- Bahamas: Sand Dollar- In 2019, the Bahamas also began their CBDC project called "Sand Dollar" — it was fully deployed in October 2020. Each Sand Dollar constitutes an additional digital variant to the Bahamian dollar, which is, in turn, kept at a 1:1 peg with 1 US dollar. The project delivers inclusive access to financial services and regulated payments.

Way Forward

- Given the considerable efforts and attention that central banks are dedicating to central bank digital currencies, they will become a reality soon.
- Introducing CBDCs to the world will help boost crypto adoption as people will have access to the platforms to convert cryptocurrencies into legal tenders. Moreover, it will also help in the financial inclusion of the bankless population.
- CBDCs will have far-reaching implications on the future of finance, including the buying and selling of digital assets and securities.
- Implementation of CBDCs will rely on the foundations of a dedicated legal framework to facilitate the transparency, distribution, and issuance of a digital form of money by global governments.
- As regulators and central banks take concrete steps in the direction of establishing CBDCs, the world will begin to embrace digital currencies as a standard.

National Monetisation Pipeline

- Union Minister for Finance and Corporate Affairs recently launched the asset monetisation pipeline of Central ministries and public sector entities: 'National Monetisation Pipeline (NMP Volumes 1 & 2)'.
- Union Budget 2021-22 has identified monetisation of operating public infrastructure assets as a key means for sustainable infrastructure financing.
- NMP aims to provide a medium-term roadmap of the programme for public asset owners; along with visibility on potential assets to private sector.

Framework

- The pipeline has been prepared based on inputs and consultations from respective line ministries and departments, along with the assessment of total asset base available therein
- Monetization through disinvestment and monetization of non-core assets have not been included in the NMP. Further, currently, only assets of central government line ministries and CPSEs in infrastructure sectors have been included.
- Process of coordination and collation of asset pipeline from states is currently ongoing and the same is envisaged to be included in due course
- The framework for monetisation of core asset monetisation has three key imperatives as shown in the adjoining figure.
- It includes selection of de-risked and brownfield assets with stable revenue generation profile with the overall transaction structured around revenue rights.
- The primary ownership of the assets under these structures, hence, continues to be with the Government with the framework envisaging hand back of assets to the public authority at the end of transaction life.

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- Considering that infrastructure creation is inextricably linked to monetisation, the period for NMP has been decided so as to be co-terminus with balance period under National Infrastructure Pipeline (NIP).
- The aggregate asset pipeline under NMP over the four-year period, FY 2022-2025, is indicatively valued at Rs 6.0 lakh crore. The estimated value corresponds to ~14% of the proposed outlay for Centre under NIP (Rs 43 lakh crore). This includes more than 12 line ministries and more than 20 asset classes.
- The sectors included are roads, ports, airports, railways, warehousing, gas & product pipeline, power generation and transmission, mining, telecom, stadium, hospitality and housing.
- The assets and transactions identified under the NMP are expected to be rolled out through a range of instruments. These include direct contractual instruments such as public private partnership concessions and capital market instruments such as Infrastructure Investment Trusts (InvIT) among others.
- The choice of instrument will be determined by the sector, nature of asset, timing of transactions (including market considerations), target investor profile and the level of operational/investment control envisaged to be retained by the asset owner etc.
- As an overall strategy, significant share of the asset base will remain with the government.
- These will include streamlining operational modalities, encouraging investor participation and facilitating commercial efficiency, among others. Real time monitoring will be undertaken through the asset monetisation dashboard, as envisaged under Union Budget 2021-22, to be rolled out shortly
- The end objective of this initiative to enable ‘Infrastructure Creation through Monetisation’ wherein the public and private sector collaborate, each excelling in their core areas of competence, so as to deliver socio-economic growth and quality of life to the country’s citizens.

Analytica

- Asset monetisation, based on the philosophy of Creation through Monetisation, is aimed at tapping private sector investment for new infrastructure creation. This is necessary for creating employment opportunities, thereby enabling high economic growth and seamlessly integrating the rural and semi-urban areas for overall public welfare.
- The strategic objective of the programme is to unlock the value of investments in brownfield public sector assets by tapping institutional and long-term patient capital, which can thereafter be leveraged for further public investments.
- NMP is envisaged to serve as a medium-term roadmap for identifying potential monetisation- ready projects, across various infrastructure sectors.
- The NMP is aimed at creating a systematic and transparent mechanism for public authorities to monitor the performance of the initiative and for investors to plan their future activities.
- New models like Infrastructure Investment Trusts & Real Estate Investment Trusts will enable not just financial and strategic investors but also common people to participate in this asset class thereby opening new avenues for investment.

Challenges before NMP

- Among the key challenges that may affect the NMP roadmap are: lack of identifiable revenues streams in various assets, level of capacity utilisation in gas and petroleum pipeline networks, dispute resolution mechanism, regulated tariffs in power sector assets, and low interest among investors in national highways below four lanes.
- The slow pace of privatisation in government companies including Air India and BPCL, and less-than-encouraging bids in the recently launched PPP initiative in trains, indicate that attracting private investors interest is not that easy.

Conclusion

- Idea behind the NMP looks promising but successful and timely implementation holds the key. Private-public investment structures depict the lucrative idea, but they must

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be modelled to also generate social value. In today's world, there are no shortcuts to sustainable development.

National Single Window System

- The government recently launched the much-awaited national single-window system for investors and businesses. The portal will integrate the existing clearance systems of the Centre and states.
- According to the Government, the single-window portal will become a “one-stop-shop” for approvals and clearances.
- It will enable obtaining approvals as well as clearances needed by investors, entrepreneurs, and businesses in India.
- As per the latest updates, the portal hosts approvals across 18 central departments and nine states. Another 14 central departments and five states will be added by December 2021.
- This move is considered as freedom from bureaucracy and from windows within windows. According to Government, this is a big step towards ease of doing business and ease of living.
- The platform will do away with the need for multiple applications across various portals. An investment proposal typically requires a bunch of approvals and clearances across various states and government departments. However, all approvals will still be needed. But solutions will be there at the click of a mouse through end-to-end facilitation.
- This would bring transparency, accountability and responsiveness in the ecosystem and all information will be available on a single dashboard.

Comprehensive Handicrafts Cluster Development Scheme (CHCDS)

- Ministry of Textiles has approved continuation of Comprehensive Handicrafts Cluster Development Scheme (CHCDS) with a total outlay of Rs 160 crore. The scheme will continue up to March 2026.
- CHCDS aims to create world-class infrastructure that caters to the business needs of the local artisans & SMEs to boost production and export.
- The main objective of setting up these clusters is to assist the artisans & entrepreneurs to set up world-class units with modern infrastructure, latest technology, and adequate training and human resource development inputs, coupled with market linkages and production diversification.
- Under CHCDS key provisions are:
 - Soft interventions like Baseline Survey and Activity Mapping, Skill Training, Improved Tool Kits, Marketing events, Seminars, Publicity, Design workshops, Capacity Building, etc will be provided to SMEs.
 - Hard interventions like Common Facility Centers, Emporiums, Raw Material Banks, Trade Facilitation Centers, Common Production Centers, Design and Resource Centers will also be granted.
- The integrated projects will be taken up for development through Central/State Handicrafts Corporations/Autonomous, Body-Council-Institute/Registered Co-operatives/ Producer company of artisans/Registered SPV, having good experience in handicrafts sector
- The focus will be on integration of scattered artisans, building their grass root level enterprises and linking them to SMEs in the handicrafts sector to ensure economies of scale.
- The mega handicraft clusters having more than 10,000 artisans will be selected for overall development under this scheme.

Significance

- It would be beneficial particularly for artisans and micro-entrepreneurs based in small towns and rural areas to ultimately enhance their livelihood as well.

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- With the extension of this scheme, these businesses are likely to expand and enhance production with the help of technology and market support.
- A cluster approach would certainly help them improve the quality of their products and sell more.

Analytica

- The Handicrafts Sector plays a significant & important role in the country's economy. It provides employment to a vast segment of crafts person in rural & semi urban areas and generates substantial foreign exchange for the country, while preserving its cultural heritage.
- Handicrafts have great potential, as they hold the key for sustaining not only the existing set of millions of artisans spread over length and breadth of the country, but also for the increasingly large number of new entrants in the crafts activity.
- As per Invest India, the domestic textiles and apparel sector has a 5 per cent share in India's GDP and 12 per cent in export earnings. Textile handicraft products included bags, shawls, saris, home decor items, etc.
 - It is the second largest employment generator after agriculture.
- Handicrafts is a labor intensive sector with high potential of employment for poorer section of the society in rural areas.
- It is economically important because of low capital investment, high value addition and negligible import content and high potential for export earnings.

Constraints:

- The Handicraft sector has, however, suffered due to its very nature of being unorganized, with the additional constraints of low capital, poor exposure to new technologies, absence of market intelligence, and a poor institutional framework.
- This scheme can also help boost exports of textile handicrafts as the demand for such products from India is worldwide but there is a lack of platforms that can enable these products to grow internationally.

Major Government Initiatives:

- **Production Linked Incentive (PLI) scheme:** The government in September this year had approved the Production Linked Incentive (PLI) scheme for the textile sector.
 - It will attract large investment in the sector to further boost domestic manufacturing, especially in the manmade fibre (MMF) segment and technical textiles.
 - It will make sector globally competitive, attract investment; ensure efficiencies; enhance exports and make India an integral part of the global supply chain.
- Scheme for Capacity Building in Textile Sector (**SAMARTH**) was approved towards addressing the skill gap in textile sector and also to supplement the efforts of textile industry in providing gainful and sustainable employment to the youth.

GI tags

About

- The World Intellectual Property Organisation defines a GI as “a sign used on products that have a specific geographical origin and possess qualities or a reputation that are due to that origin”.
 - GIs are typically used for agricultural products, foodstuffs, wine and spirit drinks, handicrafts, and industrial products.
- Internationally, GIs are covered as an element of intellectual property rights under the Paris Convention for the Protection of Industrial Property.
- They are also covered under the Trade Related Aspects of Intellectual Property Rights (TRIPS) Agreement.
- In India, Geographical Indications registration is administered by the Geographical Indications of Goods (Registration and Protection) Act of 1999.
 - This Act is administered by the Controller General of Patents, Designs and Trade Marks, who is the Registrar of Geographical Indications.

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- The Geographical Indications Registry is located at Chennai.
- ‘Darjeeling tea’ was the first GI-tagged product in India, gaining its label in 2004.

Highlights

- A GI tag provides a better market for these products and prevents misuse of the name.
- A GI registration is given to an area, not a trader, but once a product gets the registration, traders dealing in the product can apply for selling it with the GI logo.
- Authorised traders are each assigned a unique GI number.
- GIs are also expected to boost or revive the items whose production has declined.
- GI tagging is a potential tool to drive food quality and safety, considering the scale of India’s unorganised food processing industry. It helps in the implementation of a better food system that can be traced back to the producer for its authenticity.

Analytica

- **Benefitslocal communities:** GI protection has wider positive benefits, especially for local communities. In particular, it encourages the preservation of biodiversity, local know-how and natural resources. And this is where India can do well.
- **Economic and soft power:** Multiple benefits flow from a strong GI ecosystem, which can be a wellspring of economic and soft power. It will automatically resolve the three fraught India issues of poor pay for talent, low female participation in the labour force, and urban migration.
- It will convert talent into entrepreneurship with gig workers, and create a “passion” economy, that is, a new way for individuals to monetise their skills and scale their businesses exponentially. It removes the hurdles associated with freelance work to earn a regular income from a source other than an employer.
- The labour-intensive nature of GI offers the best solution to boosting the employment-to-population ratio in India, an abysmal 43 per cent compared with the 55 per cent global average.
 - Monetising artisanal work done at home will increase India’s low female labour force participation rate, which at 21 per cent in 2019 was half the 47 per cent global average.
- **Reverse urban migration:** The hyper-localised nature of GI offers solutions to reverse urban migration and conserve India’s ancient crafts, culture and food.
- A rejuvenation of MSMEs, which account for 31 per cent of India’s GDP and 45 per cent of exports, will follow.
- An estimated 55.80 million MSMEs employ close to 130 million people; of this, 14 per cent are women-led enterprises and 59.5 per cent are rural.
- Another revenue-earner, GI tourism, is typically a by-product of a strong GI ecosystem.

Way forward

- **Need to address some challenges:** Because GI businesses are micro, it is necessary to address the challenges of capacity-building, formal or easy access to credit, forming marketing linkages, research and development, product innovation and competitiveness in both domestic and international markets. The groundwork for MSME access to formal credit has already been done with the new Account Aggregator data-sharing framework.
- **Digital platforms:** With the shift to digital platforms, the distribution margins of these gate keepers or mandi agents must be competitive so they do not act as countervailing agents by getting into similar businesses or product lines which will erode GI producer incomes.
 - As seen from the experience of the new farm laws, this will be a task for the central and state governments; they must ensure the transition without breaking down too many existing linkages.
- **Establishment of local GI cooperative bodies or associations:** They can be nationally managed by a GI board under the auspices of the Department for the

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Promotion of Industry and Internal Trade (DPIIT), the Ministry of Commerce department which should be tasked with developing this new sector.

- **Digital literacy:** Finally, a required skill for GI producers is digital literacy. It is an opportunity for India to redefine the future of work using automation, technology and artificial intelligence while simultaneously enhancing and adorning the country's talented local work force.

Conclusion

- The Indian GI economy can be a platform for India to showcase to the world a model for ethical capitalism, social entrepreneurship, de-urbanisation, and bringing women to the workforce, on the back of a robust digital system. It encompasses the concept of trusteeship, as advocated by Mahatma Gandhi and more recently, by Prime Minister Narendra Modi at the UN. It is truly Made in India.

PM Gati Shakti

- Recently, the Prime Minister has launched the ambitious PM Gati Shakti-National Master Plan for multi-modal connectivity, with the aim of coordinated planning and execution of infrastructure projects to bring down logistics costs.
- The Gati Shakti plan has three main components, all focused on domestic coordination.
 - It seeks to increase information sharing with a new technology platform between various ministries at the Union and state levels.
 - It focuses on giving impetus to multi-modal transportation to reduce logistics' costs and strengthen last-mile connectivity in India's hinterland or border regions.
 - An analytical decision-making tool to disseminate project-related information and prioritise key infrastructure projects. This aims to ensure transparency and time-bound commitments to investors.
- It will subsume the Rs 110 lakh crore National Infrastructure Pipeline (NIP), which was launched by the PM in 2019.
 - Its integration with the National Infrastructure Plan will help in resolving the historical problem of delay in project implementation and sporadic development and utilisation of national infrastructure.
- It will incorporate the infrastructure schemes of various Ministries and State Governments like Bharatmala, Sagarmala, inland waterways, dry/land ports, UDAN etc. Economic Zones like textile clusters, pharmaceutical clusters, defence corridors, electronic parks, industrial corridors, fishing clusters, agri zones will be covered to improve connectivity & make Indian businesses more competitive.
- It will also leverage technology extensively including spatial planning tools with ISRO imagery developed by BiSAG-N (Bhaskaracharya National Institute for Space Applications and Geoinformatics).

The Gati Shakti digital platform:

- The plan involves the creation of a common umbrella platform through which infrastructure projects can be planned and implemented with coordination between various ministries/departments on a real-time basis.
 - It will bring together 16 Ministries including Railways and Roadways for integrated planning and coordinated implementation of infrastructure connectivity projects.
 - It will help in removing long-standing issues such as disjointed planning, lack of standardisation, problems with clearances, and timely creation and utilisation of infrastructure capacities.

PM Gati Shakti Master Plan is based on six pillars:

1. **Comprehensiveness** by including all the existing and planned activities of various Ministries and departments under one umbrella.
2. **Prioritization** by cutting across sectoral interactions

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3. **Optimisation** with a focus on ensuring optimum usage of resources and removing overlapping expenditure/plans.
4. **Synchronization** so that the work of various Ministries does not happen in standalone silos.
5. **Analytical** with all data available of plans /schemes in one place for a proper analysis and
6. **Dynamic** with all Ministries and departments able to visualize and monitor progress across projects.

Expected Outcomes

- The scheme will help map the existing and proposed connectivity projects. In addition, there will be a great deal of transparency about how the country's many regions and industrial centres are connected, particularly in terms of last-mile connection.
- Make in India will benefit tremendously from a comprehensive and integrated transportation connectivity plan that integrates various forms of transportation.
- It will assist India in becoming the world's business capital.

Challenges related to PM Gati Shakti:

- **State government participation:** In taking the Gati Shakti initiative forward, it is important to make the states of India full stakeholders since most development activity takes place at the level of states.
 - The Centre will need to devise political interventions and ways to coax and incentivise state government participation and cooperation.
- **Credit concerns:** Although the government had taken up 'strong' banking sector reforms and the Insolvency and Bankruptcy Code had yielded about Rs. 2.4 lakh crore of recoveries on bad loans, there are concern about tepid credit offtake trends.
 - Banks give credit off-takes to help businesses acquire financing for future projects through the promise of future income and proof of an existing market.
- **Lack of Demand:** There is a lack of private and investor demand in the post-Covid-19 scenario.
- **Structural Difficulties:** Project execution is extremely sluggish by global standards due to land acquisition delays and legal issues. In terms of land access and environmental clearances, obtaining permissions is very complex; also, current litigation in court slows infrastructure development.

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- It will build Next Generation Infrastructure which improves Ease of Living as well as Ease of Doing Business.
- It will create multiple employment opportunities and give a boost to the economy. Also, it will boost India's self-confidence to move towards the goal of self-reliance or 'Atm Nirbhar Bharat'.
- This investment initiative will boost the post-pandemic economy and improve the country's indigenous production of technologies to reduce dependency on other nations.
- It will improve the global competitiveness of local products by cutting down the logistics costs and improving the supply chains, and also ensure proper linkages for local industry & consumers.
- It will provide the public and business community information regarding the upcoming connectivity projects, other business hubs, industrial areas and surrounding environment.
- This will enable the investors to plan their businesses at suitable locations leading to enhanced synergies.
- It will address the past issues through institutionalizing holistic planning for stakeholders for major infrastructure projects. Instead of planning & designing separately in silos, the projects will be designed and executed with a common vision.
- As JAM [Jan Dhan, Aadhar, Mobile] trinity revolutionised the access of government facilities to the people, PM Gati Shakti will do the same for the field of Infrastructure.
- The use of digital technologies to map infrastructure facilities has been lacking in India, and with the availability now of relevant data and satellite information, the

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launch of such a portal catapults the country towards a modern infrastructure process system.

Way Forward

PM Gati Shakti is a positive step forward. However, it must address structural and macroeconomic stability problems that have arisen as a result of excessive government spending. Thus, it is imperative that this initiative is underpinned by a stable and predictable regulatory and institutional framework.

Geospatial Energy Map of India

- NITI Aayog in collaboration with Indian Space Research Organisation (ISRO) has developed a comprehensive Geographic Information System (GIS) Energy Map of India with the support of Energy Ministries.
- It provides a holistic picture of all energy resources of the country.
- It enables visualisation of energy installations such as conventional power plants, oil and gas wells, petroleum refineries, coal fields and coal blocks, district-wise data on renewable energy power plants and renewable energy resource potential, etc through 27 thematic layers.

Geographic Information System(GIS)

A geographic information system (GIS) is a computer system for capturing, storing, checking, and displaying data related to positions on Earth's surface.

Geospatial mapping

Geospatial mapping is a type of spatial analysis techniques that typically employs software capable of rendering maps processing spatial data, and applying analytical methods to terrestrial or geographic datasets, including the use of geographic information systems.

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- The map attempts to identify and locate all primary and secondary sources of energy and their transportation/transmission networks to provide a comprehensive view of energy production and distribution in a country.
- It aimed at integrating energy data scattered across multiple organizations and to present it in a consolidated, visually appealing graphical manner.
- It leverages latest advancements in web-GIS technology and open-source software to make it interactive and user friendly.
- GIS-mapping of energy assets will be useful for ensuring real-time and integrated planning of energy sector of India, given its large geographical distribution and interdependence.
 - It will be advantageous to all concerned stakeholders and will help in accelerating the policy-making process.
 - It will be useful in planning and making investment decisions.
 - It will also aid in disaster management using available energy assets.

Conclusion

- The GIS Energy map has the potential to facilitate India's achievement of Sustainable Development Goal (SDG) 7 which is to ensure access to affordable, reliable, sustainable, and modern energy for all. It can thereby help build energy Swaraj, and a foundation for sustainable development in the country.

Global Minimum Tax Deal

- Recently, a global deal to ensure big companies pay a minimum tax rate of 15% and make it harder for them to avoid taxation has been agreed by 136 countries. The deal would cover 90% of the global economy.
- The deal aims to prevent large firms from booking profits in low-tax countries like Ireland regardless of where their clients are, an issue that has become ever more pressing with the rise of "Big Tech" giants that can easily do business across borders.
 - Apart from low-tax jurisdictions, the proposals are tailored to address the low effective rates of tax shelled out by some of the world's biggest corporations,

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- including Big Tech majors such as Apple, Alphabet and Facebook, as well as those such as Nike and Starbucks.
- These companies typically rely on complex webs of subsidiaries to Hoover profits out of major markets into low-tax countries such as Ireland, the British Virgin Islands, the Bahamas, or Panama.
- Out of the 140 countries involved, 136 supported the deal, with Kenya, Nigeria, Pakistan and Sri Lanka abstaining for now.

Highlights

- The global minimum tax rate would apply to overseas profits. Governments could still set whatever local corporate tax rate they want, but if companies pay lower rates in a particular country, their home governments could “top-up” their taxes to the minimum rate, eliminating the advantage of shifting profits.
- The global minimum tax rate would apply to overseas profits of multinational firms with 750 million euros (\$868 million) in sales globally.
- The decisions effectively ratify the OECD’s two-pillar package that aims to ensure that large multinational enterprises (MNEs) “pay tax where they operate and earn profits”.
 - **Pillar One** aims to ensure a fairer distribution of profits and taxing rights among countries with respect to the largest MNEs, including digital companies. This would entail reallocation of some taxing rights over MNEs from their home countries to markets where they have business and earn profits, regardless of whether firms have a physical presence there.
 - **Pillar Two** seeks to put a floor on competition over corporate income tax, through a global minimum corporate tax rate that countries can use to protect their tax bases.
- The agreement calls for countries to bring it into law in 2022 so that it can take effect by 2023. Countries that have in recent years created national digital services taxes will have to repeal them.
- This implies that India will have to withdraw its equalisation levy (introduced in 2016) that it imposes on overseas digital companies.

Analytica

- India was “proactively engaging” with foreign governments with a view to facilitating and enhancing exchange of information under Double Taxation Avoidance Agreements, Tax Information Exchange Agreements and Multilateral Conventions to plug loopholes.
- The minimum tax and other provisions aim to put an end to decades of tax competition between governments to attract foreign investment.
 - The economists expect that the deal will encourage multinationals to repatriate capital to their country of headquarters, giving a boost to those economies.

Why a global minimum tax?

- With budgets strained after the COVID-19 crisis, many governments want more than ever to discourage multinationals from shifting profits – and tax revenues – to low-tax countries regardless of where their sales are made.
 - The OECD estimates the minimum tax will generate \$150 billion in additional global tax revenues annually.
 - According to the Tax Justice Network report, India’s annual loss due to corporate tax abuse is estimated at over \$10 billion.
- Increasingly, income from intangible sources such as drug patents, software and royalties on intellectual property has migrated to these jurisdictions, allowing companies to avoid paying higher taxes in their traditional home countries.

Challenges

- The plan impinges on the right of the sovereign to decide a nation’s tax policy. A global minimum rate would essentially take away a tool countries use to push policies that suit them.
- Also, bringing in laws by next year so that it can take effect from 2023 is a tough task.

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- The deal has also been criticised for lacking teeth: Groups such as Oxfam said the deal would not put an end to tax havens.

Conclusion

- The two-pillar solution will ensure that once again, the world will be global, at least in following the principles of taxation rather than following territorial laws.

RCEP and India

Why India did not join?

- India has trade deficits with 11 of the 15 RCEP countries, and some experts feel that India has been unable to leverage its existing bilateral free trade agreements with several RCEP members to increase exports.
- Its decision was to safeguard the interests of industries like agriculture and dairy and to give an advantage to the country's services sector.
- India's fears that there were "inadequate" protections against surges in imports.
- India was unable to ensure countermeasures like an auto-trigger mechanism to raise tariffs on products when their imports crossed a certain threshold.
- India felt the agreement would force it to extend benefits given to other countries for sensitive sectors like defence to all RCEP members.
- RCEP also lacked clear assurance over market access issues in countries such as China and non-tariff barriers on Indian companies.
- The China Factor- Escalating tensions and huge trade deficit with China are a major reason for India's decision.

Arguments in favour

- Unless we address the structural issues that impact Indian competitiveness, our domestic industry will find it difficult to leverage any FTA to its advantage.
- Those who support India's decision argue that while RCEP may theoretically offer India new opportunities for exports and integration with Pan-Asian production networks, we have a lot of work to do internally before we are in a position to make the most of free-trade deals.
- India's stance on the deal also comes as a result of learnings from unfavourable trade balances that it has with several RCEP members, with some of which it even has FTAs.
- Study shows that while there has been growth rate in both imports from and exports to these FTA partners, the utilisation rate of FTAs both for India and its partners has been "moderate" across sectors, which covers pacts with Sri Lanka, Afghanistan, Thailand, Singapore, Japan, Bhutan, Nepal, Republic of Korea and Malaysia
- By staying out of RCEP, India has strengthened incentives to decouple supply-chains that incorporate China, and encourage these to redepoly around India and ASEAN.

Arguments Against

- There are concerns that India's decision would impact its bilateral trade ties with RCEP member nations, as they may be more inclined to focus on bolstering economic ties within the bloc.
- The move could potentially leave India with less scope to tap the large market that RCEP presents as the countries involved account for over 2 billion of the world's population.
- India's decision could impact the Australia-India-Japan network in the Indo-Pacific.
- It could potentially put a spanner in the works on informal talks to promote a Supply Chain Resilience Initiative among the three.
- The RCEP is now seen paving the way for lowering trade barriers for member nations at a time when the pandemic poses a challenge to global commerce.
- For India, the withdrawal will result in a loss of 1.2% of the nation's projected GDP in 2030, according to a paper by Peterson Institute for International Economics.

Other Alternatives Available for India

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- India, as an original negotiating participant of RCEP, has the option of joining the agreement without having to wait 18 months as stipulated for new members in the terms of the pact.
- The possible alternative that India may be exploring is reviews of its existing bilateral FTAs with some of these RCEP members as well as newer agreements with other markets with potential for Indian exports. Over 20 negotiations are underway.
- There is also a growing view that it would serve India's interest to invest strongly in negotiating bilateral agreements with the US and the EU, both currently a work in progress.
- That India offers a far more flexible labour market now than in the past will only redouble the speed with which global manufacturing supply chains begin to centre around India.

US Withdrawal from Afghanistan and Taliban

Impact on India

- The first risk has to do with terrorism. While the U.S.-Taliban agreement states that the Taliban will prevent terrorist outfits from operating on Afghan soil, there is little clarity on how the agreement will be verified and enforced.
- The second risk has to do with the growing influence of Pakistan's Inter-Services Intelligence Directorate, which shares an undeniable link with the Taliban, especially the Haqqani group.
- The third risk to India's long-term interests in Afghanistan has to do with the increasing political instability in Kabul.
- After the Taliban's seized the power in Afghanistan, the political and diplomatic choices have become limited. This has raised many uncertain questions and doubt in India as well. Concern related to regional stability as well as terrorist propaganda in India (J&K). In this case, India has limited choices according to political strategists and diplomats like-
 - It has to protect its investments, prevent Afghanistan from becoming another safe haven for anti-India terrorist groups.
 - Direct talks and engagement with the Taliban.
 - Work with other countries like USA and other likeminded countries in Europe as well as engagement in UN for long-term stability in the country.
 - India should engage with other regional countries like Russia, Iran & China to establish peace in Afghanistan.

Way Forward for India

- **Broader Diplomatic Engagement:** India should consider appointing a special envoy dedicated to Afghan reconciliation. The envoy can ensure that Indian views are expressed at every meeting, broaden engagement with the Afghan government and other political actors, and reach out to certain Taliban representatives.
- **Continued Training and Investments:** India should provide more military training to Afghan security forces and invest in longer-term capacity-building programs. It should actively support and invest in the National Directorate of Security (for example, by providing training and sharing intelligence). Finally, given the continued levels of violence and the impact of the coronavirus on the Afghan economy, India should expand its development assistance.
- **Working with and Through Others:** India should look to broaden its engagements with Iran and Russia, explore opportunities for cooperation (as limited as they might be) with China, and find common ground with the United States on Afghanistan's future. This does not mean forcing competing interests to align; it means investing in a wider diplomatic initiative with the view to carve out areas of convergence.

The U.N. Advisory Committee on Administrative and Budgetary Questions (ACABQ)

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- The Advisory Committee on Administrative and Budgetary Questions (ACABQ) is a subsidiary of the General Assembly responsible for "expert examination of the programme budget of the United Nations". Established by a UN General Assembly resolution in 1946. The Advisory Committee is an expert Committee of sixteen Members elected by the General Assembly for a period of three years, on the basis of a broad geographical representation.

Major functions of ACABQ

- To examine and report on the budget submitted by the Secretary-General to the General Assembly;
- To advise the General Assembly concerning any administrative and budgetary matters referred to it;
- To examine on behalf of the General Assembly the administrative budgets of the specialized agencies and proposals for financial arrangements with such agencies;
- To consider and report to the General Assembly on the auditors' reports on the accounts of the United Nations and of the specialized agencies.

Issues related to UN Budgeting

- The UN has faced financial difficulties and it has been forced to cut back on important programs in all areas, even as new mandates have arisen.
- Many member states have not paid their full dues and have cut their donations to the UN's voluntary funds. For example: The Trump administration suspended all funding for the UN Population Fund starting in 2017; UNAIDS and the WHO also experienced significant cuts, losing about 30 percent and 20 percent of their U.S. funding, respectively, in 2018

Calls for reform in UN Financial administration

- Many proposals for UN reform call for
 - Better budgeting
 - Better financial oversight
 - More efficient use of funds.
- The UN should seek Alternative Financing (not just dues and voluntary contributions) to fund its programs. A global tax on currency or financial transactions, a carbon tax or taxes on the arms-trade might provide such revenue. But states are jealous of their taxing powers and not keen to transfer such authority to the UN.

IBSA Women's Forum Meeting

- **IBSA**- The India-Brazil-South Africa (IBSA) Trilateral Cooperation Forum is a unique platform which brings together India, Brazil and South Africa, three large democracies and major economies from three different continents. All three partners are developing pluralistic, multi-cultural, multi-ethnic, multi-lingual and multi-religious nations.
- Established in June 2003, IBSA is a coordinating mechanism amongst three emerging countries, three multi ethnic and multicultural democracies, which are determined to
 - contribute to the construction of a new international architecture
 - bring their voice together on global issues
 - deepen their ties in various areas
- IBSA is committed to inclusive sustainable development, in pursuit of the well-being for their citizens and those from the other developing nations.
 - The principles, norms and values underpinning the IBSA Dialogue Forum are participatory democracy, respect for human rights, the Rule of Law and the strengthening of multilateralism. IBSA lays efforts in the South-South cooperation beyond the conventional areas of exchange of experts and training.
 - **The meeting and output**- the Forum discussed key issues that contribute towards the transformation of women's lives; by highlighting initiatives, policies and best practices for gender inclusive economy for transformation as well as for

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elimination of gender based discrimination and violence against women, which in the coming time will help not only in understanding each other's systems and programmes but will also carve a strategic roadmap to promote gender equality agenda for achieving sustainable development goals.

India-Bangladesh

Background of India-Bangladesh relations

- India and Bangladesh share historical, civilizational and cultural ties; Bengali, which is spoken in both countries, is a strong bond. Humanitarian approach has been the foundation of the bilateral relationship, and at the same time celebrating shared heritage and culture bonds the two countries.
- Even after it broke away from Pakistan to emerge an independent country in 1971, trans-border links remained severed, a reflection of the deeply troubled bilateral ties between India and Bangladesh in the period between 1975 and 1996.
- It was only after the Awami League came to power in Bangladesh in 1996 that bilateral ties began improving. Bilateral relations have generally been warm, especially when the Awami League has been in power in Bangladesh.

India-Bangladesh Bilateral ties in recent times

- **50 year of Bangladesh's Liberalization:** The year 2021 marks the golden jubilee of the Bangladesh Liberation War as well as it marks the 50 years of bilateral diplomatic ties between India and Bangladesh.
- **India's vaccine policy:** During the Covid-19 Pandemic, India's vaccine policy had played a leadership role in South Asian region. India has sent 20 lakh doses of vaccine to Bangladesh which germinated as cordial relationship in the heart of Bangladeshi people.
- **Regional Connectivity:** The newly restored railway link between Chilahati (Bangladesh) and Haldibari (India). In this sequence the frequency of two passenger train, Maitri Express and Bandhan Express has increased.
Feni Bridge (MaitreeSetu) connecting Subroom (Tripura) and Ramgarh (Bangladesh).
BBIN: Bangladesh Bhutan India Nepal- Initiative is a sub-regional architecture of countries in Eastern South Asia for **Motor Vehicle Agreement(MVA)**, a sub region of South Asia.
- **Defence Agreement:** The second edition of **India-Bangladesh CORPAT 'Bangosagar' exercise, Regional Commanders meeting** of Coast Guards, and the third Annual Defense Dialogue.
- **Energy:**
Dorjilung hydropower project in Bhutan: India and Bangladesh both are participating in construction of this project. It paved the way of future export of electricity from Bhutan to Bangladesh and India.
India is collaborating with Russia to establish **Rooppur nuclear plant** in Bangladesh (1st atomic energy plant).
- **Trade:** Bangladesh is India's biggest trade partner in South Asia and India is the second biggest trade partner of Bangladesh.
- **Development Partnership:** High Impact Community Development Projects (HICDPs) constitute an active pillar of India's development assistance.
- **India Bangladesh Land Boundary Agreement (IB-LBA):** The Land Boundary Agreement (LBA) is one classic example, which was a major milestone in developing bilateral cooperation and ensuring regional security
- **India-Bangladesh cultural Relations:** The year 2021 commemorating the fiftieth anniversary of the Liberation War and the establishment of diplomatic relations between India and Bangladesh. The Indira Gandhi Cultural Centre (IGCC) in Dhaka plays an important role in celebration of common cultural links between the two countries.

Concerns: -

- However, India has failed to address Bangladesh's concerns over river water sharing; an agreement on sharing of the waters of the River Teesta remains elusive.

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- While the question of illegal immigration from Bangladesh to India has dogged bilateral relations for decades. The Modi government's enactment of the Citizenship Amendment Act (CAA) and plans to implement the National Register of Citizens (NRC) has triggered apprehension over an impending exodus of Bengali-speaking people from Assam to Bangladesh.
- Pursuit of policies harmful to Bangladesh and derisive remarks about Bangladeshis by Indian ministers have severely undermined public goodwill for India in Bangladesh.
- Growth of pockets of radicalism if the repatriation of the Rohingya refugees are delayed further is a possibility. The lingering of the issue may hamper peace and stability of the region.
- The two countries have not allowed these issues to hijack the feelings of bonhomie and friendship and has always emphasized on amicably resolving their differences.
- The Chinese game of seeking to influence India's neighbours has been visible in Bangladesh too, through measures like enhancing the list of products for duty-free access into its markets and providing massive loans for development projects.

Connecting to Thrive: Challenges and Opportunities of Transport Integration in Eastern South Asia (World Bank report)

- Seamless movement of vehicles between the two neighbouring countries for trade could raise India's national income by eight per cent and Bangladesh's by 17 per cent; provide faster and cheaper access to products from Northeast and boost real income in states such as West Bengal, Uttar Pradesh and Maharashtra.
- A "broad trust deficit throughout the region" was a major reason behind lack of seamless transport between the two countries, the report found that it is about 15-20 per cent less expensive for a company in India to trade with a company in Brazil or Germany, than with a company in Bangladesh, despite the two neighbours being party to an international motor vehicles agreement.

External Affairs Minister- describing the country as a "key neighbour" and a "valued partner" not only "in South Asia but also in the broader Indo-Pacific region".

- **PM-** India-Bangladesh are enjoying the Golden chapter "**SonaliAdhyay**" of their relationship as it was said by the Prime Minister of India during the virtual meet during the Covid-19 pandemic. As Prime Minister of India said that the Bangladesh is the important pillar of not only India's 'Neighbourhood First Policy' but also Act East Policy.

Conclusion

- During the recent India-Bangladesh virtual summit, PM described Bangladesh as "a major pillar" of India's "neighbourhood first" policy. New Delhi will have to do much more than merely providing road and rail routes to improve people-to-people contact between India and Bangladesh. Close cooperation between India and Bangladesh, the two growing economies of South Asia, could significantly contribute to the peace and development of the region.

Refugee Crisis in Bangladesh

- Bangladesh started moving a second group of Rohingya Muslim refugees to a low-lying Bhasan Char island in the Bay of Bengal, despite opposition from rights groups worried about the new site's vulnerability to floods.

India's approach towards the refugee crisis

- Geopolitics, security and economic interests and humanitarian concerns were key in moulding India's Rohingya response during this phase.
- In the second phase, apart from geopolitics, humanitarian concerns and non-interference in internal affairs, two other factors appeared to have driven the Indian approach—the growing security concerns and the need for diplomatic balancing between Bangladesh and Myanmar.
- Delhi's approach in the third phase was probably driven by the need to find a role for itself in finding a resolution to the crisis by strengthening its quiet diplomacy. The phase began soon after China stepped in with its "three-step solution" to the Rohingya

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crisis and the subsequent signing of the repatriation agreement between Bangladesh and Myanmar. Delhi's assessment perhaps was shaped by its calculation that any delay in stepping up its role might allow other players to leverage the situation for geopolitical gains, at the cost of its own interests.

- Lack of a national policy framework on refugees has complicated India's handling of the Rohingya crisis.
- Three issues emerge from the above analysis of the two views on India's Rohingya approach.
 1. The way India has handled the Rohingya crisis has raised questions on its democratic credentials.
 2. India's reservations in taking the lead may have already undermined its regional and global leadership aspirations.
 3. The approach may have served short-term security goals, but concentration of thousands of desperate people in the neighbourhood could create a fertile breeding ground for radicalisation.

Conclusion

- At the national level, India needs to ensure that no Rohingya refugee in India is deported back to Myanmar until it is safe to do so. At the same time, ensuring basic amenities in refugee camps will be critical.
- At the bilateral level, while maintaining a constructive engagement with Myanmar, Delhi has to convey to the Myanmar that the only solution to the Rohingya crisis is the safe return of the refugees to Myanmar. Towards this end, India has operationalised the MOU on Rakhine State Development Programme signed in December 2017.
- On a regional level, Delhi may use BIMSTEC as platform to strengthen the grouping's growing security cooperation with the member states and offer financial assistance to the BIMSTEC Secretariat to play a role in humanitarian assistance and socio-economic development in Bangladesh and Myanmar.
- Such a symbolic gesture may provide an opportunity for Delhi to stress the role of cooperation among the BIMSTEC members and create a precedent on how the sub-regional grouping approaches bilateral issues affecting its member-states.

India-Bhutan Bilateral Relations

Context

- MOU was signed on Cooperation in the areas of Environment. It will facilitate exchange of experiences, best practices and technical know-how through both public and private sectors and shall contribute to sustainable development.

India-Bhutan relations in recent times

- Diplomatic relations between India and Bhutan were established in 1968 with the establishment of a special office of India in Thimphu.
- The basic framework of India-Bhutan bilateral relations is the Treaty of Friendship and Cooperation signed in 1949 between the two countries and revised in February 2007.
- India and Bhutan share a unique and time tested bilateral relationship, characterized by utmost trust, goodwill and mutual understanding.
- Government of India has consistently supported the socio-economic development of Bhutan. Hydro-power cooperation between the two countries is an example of win-win cooperation.
- Key areas of cooperation include agriculture and irrigation development, ICT, health, industrial development, road transport, energy, civil aviation, urban development, human resource development, capacity building, scholarship, education and culture.
- India is Bhutan's largest trading partner.
- There is a Joint Group of Experts (JGE) on flood management between India and Bhutan to discuss/ assess the probable causes and effects of the recurring floods and erosion in the southern foothills of Bhutan and adjoining plains in India.

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- There are vibrant cultural exchanges between the two countries. A number of Bhutanese pilgrims travel to holy Buddhists sites in India. Reflecting the special nature of the relationship, the two countries share an open border with regular exchange of travellers in both directions for work, tourism, shopping, medical care etc.
- There are about 60,000 Indian nationals living in Bhutan, employed mostly in the hydroelectric power and construction industry. In addition, between 8000 and 10,000 daily workers enter and exit Bhutan every day in border towns.

Irritants in India Bhutan Relations

- The hydropower projects where delays in constructing and commissioning in Bhutan by Indian companies have led to the country's burgeoning national debt.
- India's power-surplus status and the advent of other renewable energies like wind and solar power will make it more difficult for Bhutan to ensure that its hydropower sector becomes profitable. And unless India finds ways to help, it will be accused of the same sort of "debt-trapping" that China is accused of today.
- The goods and services tax still hurts Bhutanese exporters, and demonetisation has left lasting scars on the banking system.
- The biggest issue between India and Bhutan will remain how to deal with China. The Doklam crisis has brought home many realities for the Bhutanese establishment. One of the most important factor is that Doklam, which has long been discussed as part of a possible "package solution" to the Bhutan-China border dispute, could become a point of India-China conflagration, with Bhutan becoming a hapless spectator in the middle

Conclusion

- Keeping Bhutan by its side has become very important for India's foreign policy. India should take any socio economic and diplomatic step possible to keep Bhutan on its ambit, like it recently did with the new trade route. India should be able to make Bhutan contemplate on their embarkment upon the road of model friendship and cooperation, with peace and consensus, even amidst hostility and conflicts in and around the region.

India-Australia Relations

Context- Inaugural 2+2 Ministerial Dialogue

The relationship

- In a virtual summit in June 2020, at which the two sides elevated their relationship to a **Comprehensive Strategic Partnership (CSP)**. The Australian foreign minister during a recent statement to the press said that the 2+2 dialogue is a direct result of the elevation of the relationship. Both the countries have convergence on the importance of advancing their shared objective of an open, free, prosperous and rules-based Indo-Pacific region, in line with India's increasing engagement in the Indo-Pacific region through the Indo-Pacific Oceans' Initiative and Australia's Indo-Pacific approach and Pacific Step-Up.

Recent Trends in Bilateral Relationship

- Australia-India relations have been improving for several years, but relations have seen a dramatic shift in the last couple of years, evident in the number of high-level engagements between the two sides.
- With worsening relations between India and China as well as Australia and China in recent years, both New Delhi and Canberra have been realigning their interests and partners, and those connections will likely grow manifold in the coming years.
- After many years, Australia was finally invited back to the Malabar naval exercise last year. For Australia, even as the U.S. security alliance remains central to their security, Canberra has been expanding its Asian partnerships in the Indo-Pacific.
- India, for its part, long avoided taking sides between the U.S. and China. While Sino-Indian relations have been in trouble for several years, the Galwan confrontation in 2020 brought the relationship to an all-time low. As a result, India has decided to

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- pursue closer strategic engagements with a number of like-minded partners in the Indo-Pacific, especially Australia.
- Australia has also seen more than its fair share of bullying behaviour from China, much of it because Morrison asked for an independent inquiry into the origins of the COVID-19 pandemic in April 2020.
 - Since then, China has engaged in severe economic and trade coercive practices against Australia, targeting everything from barley, beef, seafood, wheat, and wine to coal, cotton, copper, education, and timber. Thus, experts believe that, augmented Australia-India ties within bilateral, trilateral, quadrilateral, and other minilaterals and multilateral institutions are a reality that is unlikely to slow down for the foreseeable future.
 - The convergence of strategic interests in ensuring an Indo-Pacific order that is free of hegemonic and muscular policies is a glue that will bind India and Australia further in the coming years.
 - The two will likely also expand their partnership both in pursuing strategic partnerships and thematic ones like supply chain resilience initiative.

India – United Arab Emirates

Context

- India and UAE have formally launched negotiations on the India-United Arab Emirates Comprehensive Economic Partnership Agreement (CEPA). Looking to build on the progress made by both countries under the Comprehensive Strategic Partnership signed in 2017; both countries expressed a desire to reach a mutually beneficial economic deal. Both countries emphasized that CEPA will create new jobs, raise living standards, and provide wider social and economic opportunities in both nations.

A Glance at India-UAE Relationship

- The UAE is currently India's third-largest trading partner with bilateral trade in 2019/2020 valued at USD 59 billion.
- The UAE is also India's second-largest export destination after the US, with exports valued at approximately USD 29 billion in 2019-2020.
- India was the UAE's second-largest trading partner in 2019, with bilateral non-oil trade valued at USD 41 billion.
- The UAE is the eighth-largest investor in India, having invested USD 11 billion between April 2000 and March 2021, while investment by Indian companies in the UAE is estimated to be over USD 85 billion.
- India's major exports to the UAE include petroleum products, precious metals, stones, gems and jewellery, minerals, food items such as cereals, sugar, fruits and vegetables, tea, meat, and seafood, textiles, engineering and machinery products, and chemicals.
- India's top imports from the UAE include petroleum and petroleum products, precious metals, stones, gems and jewellery, minerals, chemicals and wood and wood products.
- India imported USD 10.9 billion of crude oil from the UAE in 2019-2020.

Quadrilateral Economic forum launched

- India, Israel, the United Arab Emirates (UAE) and the United States decided to launch a new Quadrilateral economic forum. The grouping had decided to establish an international forum for economic cooperation.
- The first quadrilateral meeting between India, Israel, the UAE and the US decided to ensure:
 - Closer cooperation on increasing trade,
 - Enhancing cooperation in maritime security and global public health,
 - Joint infrastructure projects in transportation and technology

Benefits for India

- India has always supported peace and stability in West Asia which is considered as India's extended neighbourhood. The new "Quad" will give India the flexibility to engage more freely with Israel and India's partners in the Gulf region.

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- This platform strengthens India's strategic desire to adopt a regional foreign policy strategy towards West Asia, transcending its bilateralism.

Challenges for India

- As part of US' plan to tackle China in East Asia, it is reducing its presence in West Asian region. This is leading to redrawing of the West Asia's traditional equations.
- It is believed that many conflicts of West Asia could intensify amid growing regional rivalries. Hence, India should be careful not to get sucked into these conflicts.
- Iran has a very good relation with India while it shares hostile relation with the US, UAE and Israel. In this context, the current groping might be seen as an anti-Iran bloc.

India – USA Relations

India-US Trade issues and challenges

- In general, India has relatively high average tariff rates, especially in agriculture.
- India's recent tariff hikes, including on cell phones and other telecommunication goods, went from 0% originally to 15-20%. The United States and several other countries requested to join various WTO dispute consultations against India related to its technology tariffs, also questioning its compliance with the WTO Information Technology Agreement (ITA).
- India opposes the 25% steel and 10% aluminium national security-based "Section 232" tariffs that the Trump Administration imposed in 2018.
- After India lost its eligibility for a U.S. trade preference program, India imposed higher tariffs of 10% to 25%, affecting about \$1.32 billion of U.S. exports (2019 data), such as nuts, apples, chemicals, and steel. The two sides are challenging each other's tariffs in the WTO.
- Effective June 2019, President Donald Trump removed India from GSP, a U.S. trade and development program, for failure to provide "equitable and reasonable" market access. GSP provides nonreciprocal, duty-free tariff treatment to certain products imported from qualifying developing countries.
- The United States and India are competitive in certain services industries. Barriers to U.S. firms' market access include India's limits on foreign ownership and local presence requirements. A key issue for India is U.S. temporary visa policies, which affect Indian nationals working in the United States.
- In a country-wise section on Digital Service Tax (DST), a Section 301 investigation on India's DST, which began in June last year, is highlighted by the report.
- Sanitary and phyto-sanitary (SPS) barriers in India limit U.S. agricultural exports. The United States questions the scientific and risk-based justifications of such barriers. Each side also sees the other's agricultural support programs as market-distorting; India's view of its programs from a broad food security lens complicates matters.
- The two sides differ on how to balance IP protection to incentivize innovation and support other policy goals, such as access to medicines, including for COVID-19 treatments and vaccines.
- India remained on the Priority Watch List of the U.S. 2020 Special 301 report, which cited India's insufficient progress in addressing IP challenges and noted concerns over India's treatment of patents, high IP theft rates, and lax trade secret protection.

Bilateral Engagement

- **Regional Integration:** Both India and the United States are absent from the Indo-Pacific region's two major trade pacts. India negotiated, but opted not to join, the Regional Comprehensive Economic Partnership (RCEP), signed by China and 14 other countries in November 2020. India cited concerns about RCEP's fairness and balance, and reportedly also was concerned about the effects of opening its markets to Chinese exports. The United States withdrew from the proposed Trans Pacific Partnership (TPP) in 2017.

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- India also has long sought to join the Asia-Pacific Economic Cooperation (APEC), composed of the United States, China, and 19 other economies, but its willingness to make sufficient economic reforms to join is uncertain.
- **WTO:** The United States and India often have opposing stances in the WTO, whose future direction is unclear amid debate over institutional reforms and negotiations. With India's growing integration in the global economy, some policymakers have called on India, like China, to be a more responsible stakeholder in the rules-based global trading system.
- They blame India for impeding WTO progress on issues such as e-commerce customs duties and fisheries subsidies. India previously blocked the Trade Facilitation Agreement (TFA), which ultimately entered into force in 2017, until a compromise was reached on treatment of certain food security programs.

Way Forward

- India continues to seek a “totalization agreement” to coordinate social security protection for workers who split their careers between the two countries.
- India is eager for more technology-sharing and co-production initiatives, while the United States urges more reforms in India's defence offsets policy and higher FDI caps in its defence sector.
- India-USA needs to work closely on areas where they find relative convergence of interests while trying to find effective ways to cooperate on others.
- Mutual interest has led to a positive new chapter in Indo-US relationship. India must prioritise its own interests and not become dependent.
- Concurrently, urgent structural reforms are required in international multilateral institutions to address the aspirations of the majority from Asia and Africa, instead of only pandering to the whims of the developed world or being a puppet of China. India will require US support to become a part of these rule-making institutions.

Conclusion

- Over-dependence on the US will always have the downside of being left in the lurch when its interests have been served. Therefore, pragmatism demands that we give primacy to our national interests in this evolving relationship, and not burn our bridges elsewhere.

Freedom of Navigation Operations

Context

- The US Navy announced that their warship has sailed 130 nautical miles inside India's exclusive economic zone (EEZ), without any intimation to India.
- **UNCLOS**- India ratified the UNCLOS in 1982, the US is not a signatory.
- Simple transit is permitted to all countries within the territorial jurisdiction but, as per the UNCLOS, no military operation or economic activity is permitted without the permission of the littoral nation.
- USA- Freedom of Navigation Operations(FONOPs) are operations by U.S. naval and air forces that reinforce internationally-recognized rights and freedoms by challenging excessive maritime claims. FONOPs reaffirm the US policy of exercising and proclaiming its navigation and over flight rights and freedoms across the globe.

India's View	USA's View
<ul style="list-style-type: none"> • India cited that that 7th fleet patrol in India's EEZ is violation of Indian domestic law. • India follows UNCLOS, and the convention doesn't authorize other States to conduct operation in EEZ and on continental shelf, military exercise in particular those involving the 	<ul style="list-style-type: none"> • U.S. defends its actions saying they were in compliance with international laws. • India's claim to EEZ is fickle with international law i.e.- UNCLOS. • FONOP upheld the rights, freedoms, and lawful uses of the

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<p>use of weapons or explosives, without the consent of the littoral state.</p> <ul style="list-style-type: none"> • In case of any kind of “military manoeuvres” in Indian EEZ that nations need to seek India’s permission and not if they are simply transiting through. • The term military ‘manoeuvres’ is not defined anywhere. 	<p>sea recognized in international law by challenging India’s excessive maritime claims.</p> <ul style="list-style-type: none"> • As per USA, India wants prior consent for military exercises or manoeuvres in its EEZ or continental shelf.
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Why India did not react on such assertion by USA navy?

- Indian observers have come to accept U.S. FONOPs as an instrument Washington’s military and diplomatic toolkit that gives U.S. navy leverage in the contest with China in the South China sea. However, India has the concern that overlooking such moves by USA can give China an excuse to have greater naval presence in the Indian ocean.

QUAD and India

Why is QUAD significant for its members?

- The quadrilateral template had established a successful track record as a vehicle for addressing issues of regional concern. (Example- Rule of law and democracy in Myanmar).
- Destabilization in the region has led to a growing convergence in foreign policies among the four states, with a focus on securing a free and open Indo-Pacific, taking joint action against terrorism, and promoting a rules-based system.
- For the US, the early push for the Quad engagement is part of USA (Joe Biden)’s promise that “America is back” in terms of global leadership, reaffirming regional alliances, and taking on the growing challenge from China.
- Due to maritime tensions with China, trade, and telecommunication issues, Australia and Japan are keen on taking the Quad partnership to deeper levels of cooperation.
- It will also provide a boost for India’s pharmaceutical prowess, opportunities for technology partnerships, and more avenues for regional cooperation on development projects and financing infrastructure.
- Quad presents an opportunity for these four democracies to work as a group & with other countries on economics, technology, climate & security.

Challenges

- Ideological and geographic bounding has naturally led to contrasting presumptions about the intent and future of the Quad: that it is the genesis of an “Asian NATO,” that it is a network to contain the rise of China, or that it is simply a disparate grouping of countries that will never unite behind a common strategic vision.
- India, given its own ties with China, sensitivities over ongoing LAC disengagement talks, and its other multilateral commitments at the BRICS and SCO groupings, also displayed caution in the Quad engagement.
- For Japan and Australia, China remains the biggest trading partner, a relationship that will only grow once the 15-nation RCEP gets operationalized. In this context, it would be difficult for Quad members’ countries like Japan and Australia to strategically align with the US and India.

Conclusion

- Quad will now remain an important pillar of stability in the region. All the members must take actionable steps forward to deepen the Quad’s reach and scope as a mechanism for dialogue and security in the Indo-Pacific. Quad may not be a full-scale alliance yet, but a new “mini-lateral” is taking shape. If Quad emerges as an economic powerhouse, it will be beneficial to the entire region.
- To make the Indo-Pacific a free, stable and secured zone is not the job of one nation only; cooperation among all the stakeholders is a must. Thus, in the era of complex interdependence, QUAD can prove itself as a successful case study for achieving its

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desired outcomes across varied range of issues in utmost dignified manner in coming future.

- **Indian Prime Minister on QUAD-** he firmly believed that the grouping of four countries would act as a “**force for global good**” and ensure peace and prosperity in the Indo-Pacific as well as the entire world.

Non-Alignment, Quad & Great Power Triangle and India

- Delhi’s growing strategic partnerships with the US and Europe have begun to end India’s prolonged alienation from the West.
- The new geography of the Indo-Pacific and the emerging Quad coalition—comprising of Australia, India, Japan and the United States—are widely seen as a profound discontinuity in the evolution of India’s international relations.
- Even as India reframes its foreign policy away from the traditional framework of non-alignment, it has a big task in persuading Asian nations on the merits of the Indo-Pacific and the Quad. For there are deep anxieties across Asia about the potential for confrontation between the Quad and China.
- Many in the region have embraced the language of non-alignment in coping with the new geopolitical divide in Asia. Their concerns are similar to those that Delhi had invented and popularised in the years after the Second World War.
- It is clear that the U.S. continues to view China as its principal adversary on the world stage and that it will use the Quad to challenge China in the Indo-Pacific, possibly as part of a “new Cold War”.
- U.S. animosity has encouraged China and Russia to solidify their relations. Both have condemned the Quad for “undermining global strategic stability”. Thus, the new Cold War is now being reflected in a new geopolitical binary — the Indo-Pacific versus Eurasia.
- The US, to counter intensifying strategic competition with China, needed a partner in the region and India was the logical choice. For Delhi, closer relations with Washington served its interests.

Great power triangle (US, Russia and China) and India

- The continuous calibration of India’s great power relations was not driven by abstract notions of non-alignment and strategic autonomy but on the assessment of concrete conditions confronting India. Delhi’s growing strategic partnerships with the US and Europe have begun to end India’s prolonged alienation from the West. Meanwhile, New Delhi’s own relative weight in the international system continues to increase and give greater breadth and depth to India’s foreign policy. In the last few years, India has finally overcome its historic hesitations in partnering with the US. Delhi has also intensified its efforts to woo European powers, especially France. India is also expanding its ties with middle powers like Japan, Korea and Australia. The current troubles with China seem to be an unfortunate exception to the upswing in India’s bilateral ties with global actors. Despite the current differences over Afghanistan and the Indo-Pacific, Delhi and Moscow have no reason to throw away their mutually beneficial bilateral partnership.

Way Forward

- As India has demonstrated in the great Himalayas during 2020, its own nationalism offers a powerful anti-dote to Chinese nationalism.
- To succeed in Asia, US needs to stand by the nationalist forces that have a stake in defending their territorial integrity and strategic autonomy.
- The success of the Quad depends on two important factors. One is to offer alternatives to the deepening regional economic reliance on China and the other is to buttress its formulations on the rules-based order with tangible political and security support to those nations that are at the receiving end of Chinese power.
- The key to the Indian efforts to win over the region to its point of view lies in the effective mobilisation of Asian nationalism. A close look at the evolution of India’s own non-alignment, which morphed into strategic autonomy after the Cold War,

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underlines the centrality of nationalism in navigating the shifting currents of great power relations.

- While Cold War advocates in home capitals and in the U.S. will continue to promote ever-tighter alliances, emerging powers could find salvation in “strategic autonomy” — defined by flexible partnerships, with freedom to shape alliances to suit specific interests at different times. Thus, four middle powers have the potential to make multipolarity, rather than a new Cold War, the defining characteristic of the emerging global order.

Conclusion

- Delhi has successfully managed the past flux in the great power politics; it is even better positioned today to deal with potential changes among the great powers, thanks to the size of the Indian economy — it is the sixth-largest in the world — and a more broad-based foreign policy.

India - EU Relation

The Past

- India and the European Economic Community established diplomatic relations in the 1960s, cementing it in 1983 with the establishment of the Delegation of the European Commission to New Delhi.
- The 1994 Cooperation Agreement between India and the EU opened the door for larger political and diplomatic interactions.
- The recognition of each other’s potential led to the signing of the strategic partnership in 2004 with emphasis on developing international cooperation to address issues related to multilateralism, intensification of economic interactions and furthering sustainable development.
- The signing of the strategic partnership led to the release of the first joint action plan (JAP) in 2005, which defined mutually agreed objectives and proposed a range of activities in the areas of economic, political and development cooperation.
- Despite a robust start in the 2000s, the India-EU partnership lost much of its momentum over the next decade. While India’s bilateral relations with EU member states — like Germany, France and the United Kingdom (UK) — developed substantially, it did not lead to the expected intensification of ties with the grouping. India and EU’s pre-occupation with their neighbourhoods contributed to the relations taking a backseat. This was further affected by the lack of progress in the FTA and the 2012 arrest of Italian marines, which not only affected ties between Italy and India but also led to increased tensions with the EU.
- During this period, the EU largely turned its attention to China as a key partner and larger market in Asia.
- However, the global geopolitical scenario has changed over the past few years. The uncertain US policy outlook under former President Donald Trump, the upending of the liberal multilateral order and the rise of an assertive China has led both India and EU to realise that a substantive engagement was imperative.
- Moreover, given India’s growing regional and international relevance, it is crucial for the EU to renew its focus on developing the economic, political and defense partnership.
- Also, since 2016, both India and the EU, through their various joint statements and initiatives, have intensified their partnership in crucial strategic areas, including climate change, sustainable development and military-to-military dialogue.

India-EU Trade Relations

- Trade and economics remain at the core of the India-EU partnership. Since the 1970s, India has been a beneficiary of preferential tariffs for its exports under the EU’s generalised system of preferences, which reduces import duties for almost 66 percent of product tariff lines with an aim to support various industrial sectors in the developing countries.
- In 2019-20, India’s trade with the EU stood at US\$ 104.93 billion.

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- With the establishment of an investment facilitation mechanism for EU investments in India in 2017, there is a renewed focus on facilitating ease of doing business norms for EU investors in India.
- Strategically, the EU is placing renewed attention on India, which is visible through various policy documents it has published in the past few years. In its 2018 Strategy on India document, the EU acknowledged its interest in promoting India's advancement and treating India on an equal footing.
- In 2019-20, the EU accounted for only 11 percent of India's total trade, while India accounted for only 1.9 percent of the EU's trade, illustrating the huge untapped potential in India's economic ties with the EU given the size of their respective economies.

Emerging development partnership

- In recent decades, India has shifted from being a net recipient country to a provider of development cooperation under the aegis of South-South cooperation.
- For this, India has adopted a multi-pronged outlook that includes trade, investments and cooperation agreements, leading to increased bilateral visibility and capabilities.
- Its development compact includes "capacity-building and skills transfer, concessional finance (further divided into grants and lines of credit), preferential trade, investment, and technical cooperation".
- Between 2008 and 2020, India disbursed approximately INR 61,067.58 crore (US\$ 8.35 billion) as grants and loans under various development compacts.
- India-EU development cooperation spans several decades and encompasses issues like health, education, poverty reduction, water and sanitation.
- The 2005 JAP highlighted that since 1976, the European Commission has committed 2 billion euro (US\$ 2.4 billion) in development cooperation to India and recognised that "India is itself becoming an increasingly active player in evolving development policy", reflecting the altered European view of India as an emerging economic powerhouse.
- Also, the Indian government's decision to limit the number of international donors marked a concrete step towards changing the dynamics of development cooperation with the EU.
- In 2014, the EU ended its Development Cooperation Instrument (DCI) with India; between 2007 and 2013, the total EU assistance to India through the DCI was 450 million euro (US\$ 545 million).
- Another development cooperation instrument is the European Investment Bank (EIB), which has provided loans for three different metro projects in India — 450 million euro (US\$ 545 million) for the Lucknow metro, 600 million euro (US\$ 727 million) to support two metro lines in Pune, and 500 million euro (US\$ 606 million) for Bengaluru.
- With the signing of 2019-20 JAP, the EU and India also decided to step up their cooperation in the "development of smart and sustainable urbanisation," complimenting the 'Make in India' plan that "presupposes quality and resilient infrastructural development".
- Third, the education and science and technology sectors have emerged as key areas of development cooperation. Both sides have committed themselves to cooperate further through initiatives like the Global Initiative of Academic Networks. India and the EU have also partnered on various projects related to climate change, resource efficiency, renewable energy and digital cooperation.
- India and the EU have also committed to enhance their collaboration in other countries; Roadmap 2025 lays emphasis on launching concrete trilateral/cooperation projects in pilot partner countries and to establish an India-EU Annual Review on Development partnership in third countries.
- Another key area of development cooperation is the 2030 Agenda for Sustainable Development. India and the EU are working closely on several fronts that cover the Sustainable Development Goals (SDGs) — such as the smart cities initiative (SDG 11), clean water and sanitation (SDG 6) and climate action (SDG 13).

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- The two have become key stakeholders in global efforts to combat climate change through the framework of Clean Energy and Climate Change Partnership, 2017.

Areas of Concern

- India and the EU have emerged as important stakeholders in the multilateral global system. Economic cooperation between the two sides has been grown despite the stalled FTA negotiations. Although India and the EU have not been able to tap into each other's strengths, there is tremendous opportunity to overcome long-standing differences in trade relations. Three issues will likely define their future economic trajectory — Brexit, FTA negotiations and post-COVID-19 economic recovery.
- Since 2019, India and the UK have been the top five investors in each other's economies. The UK's exit from the EU will not only have an economic implication for the grouping but for the larger world economy, and India is not immune to this phenomenon.
- India considers the UK as a gateway to continental Europe and with it exiting the EU, Indian firms will lose this advantage. Additionally, Indian firms with EU-wide operations and headquarters in the UK will likely be impacted due to the border restrictions.
- Nonetheless, Brexit could provide India the opportunity to reset its trade and economic ties with the UK and the EU. India and the UK must consider launching their own trade deal negotiations and build on the already robust bilateral economic ties.
- The proposed Broad-based Trade and Investment Agreement (BTIA) between India and EU has been stalled since May 2013 as both sides are yet to iron out differences over several issues. The BTIA is a kind of comprehensive free trade agreement being negotiated by the two sides.
- The conclusion of the BTIA will not only strengthen India and the EU's global standing but can also provide an opportunity to further integrate their partnership on various shared goals like green economy, sustainable development and resource efficiency.

Way Forward

- Negotiators from both sides must look beyond the multiple differences to focus on the complementarities. Given the reluctance to agree to the other's demands, India and the EU should begin by negotiating less difficult sectors and aim for greater cooperation in new areas like green technology and artificial intelligence, which could lead to a more balanced outcome in the talks. Multilaterally, India and the EU can work to strengthen the World Health Organisation and bring together various stakeholders, health experts and global economic institutions to prepare a coordinated approach to handle the current and any future health crisis. Intensified dialogue and deliberations, a realignment of trade policies and emerging prospects of collaboration in the post-pandemic world provide India and the EU an opportunity to transform their economic ties into a robust strategic partnership.

India-Netherlands Relations

- India and the Netherlands established diplomatic relations in 1947. Today, India and the Netherlands have strong political, economic & commercial relations, and various sectoral co-operations. Mutual exchanges at high-level have provided impetus to the multifaceted ties between India and the Netherlands further strengthening and developing the growing bilateral relationship. The trinity of Health, Agriculture and Water has been, for many years, the bedrock of close mutual collaboration between India and Netherlands. Union Minister also invited Netherlands for fruitful exchanges in the Space sector particularly in the wake of path-breaking reforms initiated by India in the recent past allowing the private sector to have a level playing field in satellite launches and space based activities.

Areas of Cooperation

- **Counter Terrorism and Cyber security:** The 1st bilateral cyber security dialogue and the 2nd India-Netherlands JWG on counter terrorism, held in December 2018 in The Hague, enhanced the scope of the bilateral dialogues on security related issues.

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- **Indo-Pacific:** The Netherlands issued its guidelines on the Indo-Pacific in 2020 which identifies India as a key partner to engage with. India welcomed the guidelines. Both sides recognise the close convergence between each other's vision for a free, open and inclusive Indo-Pacific.
- **Trade and Commercial Relations:** The Netherlands was the fifth largest investor in India for FY 2020-21 with FDI inflows of USD 2.8 billion. For the same period, the Netherlands was the third largest destination for overseas direct investment from India (approx. USD 1.22 billion). The Netherlands was India's 3rd largest trading partner in the Europe in FY 2020-2021. During FY 2020-2021, total two-way trade stood at US\$13 billion with export from India amounting to US\$ 8.85 billion and imports from the Netherlands at US\$ 4.1 billion.
- **Water Management:** Cooperation in the water sector has been enhanced by the decision to institute Strategic Partnership on Water, and upgrading of the JWG on water to Ministerial-level. India is a Delta country for the Netherlands. The Netherlands is engaged with various States and Municipalities including in the States of Uttar Pradesh, Delhi, Gujarat, Punjab, West Bengal, Tamil Nadu, Kerala, and Maharashtra. **Ports/Shipping/Inland Waterways:** The MOU in the fields of ports and maritime transport and logistics has been extended, with a special focus on research and development, shipbuilding, innovation and sustainability. The 4th Indo-Dutch Forum on Smart & Sustainable Port-Led Development was held in September 2020. Dutch companies including Port of Rotterdam and Port of Amsterdam took part in the online Maritime India Summit held in March 2021.
- **Agriculture and Food Processing:** Agriculture is a key sector of bilateral cooperation. Food (solutions in food waste, horticulture, dairy and aqua culture) was the core theme of the 6th Indo-Dutch JWG on Agriculture Cooperation held digitally in June 2021. Under Indo-Dutch Joint Agro-Action Plan, two Centres of Excellence (COE) at Baramati, Maharashtra and Wayanad, Kerala have been established. Several other COEs are in the pipelines including COEs in Talegaon, Ludhiana, Jalandhar, Srinagar and Jammu. The two sides are working to set up 25 COEs by 2025.
- **Healthcare cooperation:** JWGs have been held since 2014 under the MOU for Cooperation in the Field of Healthcare and Public Health to promote greater research collaboration in emerging health challenges associated with communicable diseases and anti-microbial resistance. Health Pilot Project have been implemented in Krishna District, Andhra Pradesh, MOU on cooperation in the area of healthcare innovation have signed between the City of the Hague and the State of Karnataka.
- **Urban Development and Smart Cities:** India and the Netherlands have signed an MOU in the field of Spatial Planning, Water Management and Mobility Management, under which cooperation in various fields including in urban development, smart city, waste-to-value projects, geospatial, innovation continue.
- **Renewable Energy:** The Netherlands signed the Framework Agreement of the International Solar Alliance (ISA) in May 2018. India is one of the convening countries of the Global Commission on Adaptation. The Netherlands joined the Coalition for Disaster Resilient Infrastructure (CDRI) in 2021. India invited the Netherlands to support CDRI's Technical Assistance Facility (TAF) for Small Island Developing States. Cooperation in the area of renewable energy continues under an MoU signed in 2014. In the virtual Dutch Trade Mission held in February 2021 solar energy, hydrogen, biofuels, energy transition and e-mobility were a core theme.
- **S&T and Space:** 2018 was the 10th anniversary of cooperation between the Netherlands and India in science and innovation. The Netherlands was India's partner country in the Technology Summit 2019 held in New Delhi. The Netherlands was partner country with India for the Global Bio India 2021 Virtual Summit which was held in March 2021. India and the Netherlands have agreed to launch two new calls on the WAH! Agenda, committing to boost their investments in science technology and innovation under the shared knowledge and Innovation agenda.
- **Indian Community and Diaspora:** The Netherlands hosts the largest Indian Diaspora on mainland Europe, including 2,00,000 strong Surinami-Hindustani community of Indian origin. Descendants up to sixth generation of the original Indian immigrants

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who had arrived in Suriname and later migrated to the Netherlands can avail OCI facility. The approximate 48,000 NRIs/PIOs are mainly businessmen, knowledge workers, professionals and students. Indian students are amongst the top 3 in terms of numbers amongst non-EU foreign students in the Netherlands.

Israel-Palestine Conflict

India-Israel-Palestine Relations in Contemporary times

- For India, which voted against the creation of Israel in historic Palestine in 1947 in the UN General Assembly, ties with Israel have transformed since the early 1990s.
- While Israel ties are on a strong footing, India cannot ignore the Palestinians for historic, moral, legal and realist reasons.
- India's Palestine policy had realist underpinnings too. India has been energy dependent on the Arab world. It cannot alienate the Arab voices or be isolated in the General Assembly, where most member-countries oppose the occupation.
- India's policy on the longest running conflict in the world has gone from being unequivocally pro-Palestine for the first four decades, to a tense balancing act with its three-decade-old friendly ties with Israel. In recent years, India's position has also been perceived as pro-Israel.
- The balancing began with India's decision to normalise ties with Israel in 1992, which came against the backdrop of the break-up of the Soviet Union, and massive shifts in the geopolitics of West Asia on account of the first Gulf War in 1990.
- The first indication of the new phase of growing relationship with Israel came with an abstention by India at the UN Human Rights Council on a resolution welcoming a report by the HRC High Commissioner.
- In February 2018, PM Modi became the first Indian Prime Minister to visit Israel. His itinerary did not include Ramallah. Thus, India had —de-hyphenated the Israel-Palestine relationship, and deals with each separately.
- This **de-hyphenation** is actually a careful balancing act, with India shifting from one side to another as the situation demands. For instance, even as it abstained at UNESCO in December 2017, India voted in favour of a resolution in the General Assembly opposing the Trump administration's recognition of Jerusalem as the Israeli capital.
- Even in the present conflict, India, a non-permanent member, attempted a delicate balancing act by reaffirming its traditional support for the Palestine cause without abandoning its new friend Israel.
- India also continues to improve ties with Arab countries, especially Saudi Arabia and the UAE, and feels vindicated by the decision of some Arab states to improve ties with Israel.

Way Forward

- There is a need for both the sides to return to the negotiating table, and giving up business as usual approach.
- Until there is a political solution to the conflict, only a strong UNRWA can bring a sense of normality into the region.

Conclusion

- Only through negotiations that end the occupation and create a viable Two-State solution, on the basis of UN resolutions, international law and mutual agreements, with Jerusalem as the capital of both States, can we hope to bring a definitive end to these senseless and costly cycles of violence.

India and UNSC

- India will sit for the eighth time in the 15-nation UNSC for the 2021-22 term as a non-permanent member. The Security Council is one of the UN's six main organs, and is aimed at maintaining international peace and security. The Security Council consists of five permanent members (China, France, Russian Federation, United Kingdom of Great Britain and Northern Ireland and United States of America) and 10 non-

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permanent members elected by the General Assembly for a term of two years. The permanent members have the veto rights whereas the non-permanent members have no veto rights.

UNSC reform necessity

- UNSC still reflects the geopolitical architecture of the Second World War.
- Expanded only once in 1963 to add 4 non-permanent members.
- Since then, the membership of the United Nations has increased from 113 to 193 without any change in the composition of the UNSC.
- No permanent member from Africa, despite 75% of work of the UNSC focused on Africa.
- Unable to respond effectively to situations of international conflict.
- Misuse of veto power by the current permanent members.
- G4 was created in the mid-2000s to voice a collective campaign of India, Germany, Japan and Brazil for UNSC expansion

What will be India's agenda?

- India's message will be to ensure "how do we let diversity flourish in a united framework, which is in many ways the United Nations itself".
- India will emphasise on a greater need for cooperation in the council, where because of paralysis of decision making, urgent requirements do not get properly focused.
- India will also underscore the importance of respect for rule of law and international law.
- India outlined counter-terrorism; peacekeeping; maritime security;
- reformed multilateralism; technology; women, youth and developmental issues, especially in the context of peace-building, as India's priorities for the UNSC tenure.
- India would be a strong voice for the developing world in the UNSC. For instance, India has
- always maintained that Africa should have a say in decisions pertaining to it and not have other countries alone decide. Similarly, India favours an Afghan led, Afghan owned and Afghan controlled process.

Issue of permanent UNSC seat for India

- India began its eighth term as a non-permanent member of the UNSC on January 1 and will remain as such for a period of two years.
- India's bid for a permanent seat at the UN Security Council has support from four of the five P5 nations, namely the US, UK, France and Russia. China is the only permanent member which is yet to officially back India's bid.
- While the U.S. has in the past backed India's bid for a permanent seat at the United Nations Security Council (UNSC), the Biden administration has continued to remain non-committal on the issue.
- The UN Security Council is composed of 15 members, including five permanent member states - China, France, Russian Federation, the United States, and the United Kingdom - and 10 non-permanent member states elected by the United Nations General Assembly (UNGA).
- Ten non-permanent members are elected to the UNSC every year for a two-year term. India's current term began on January 1 of this year and will last until December 31, 2023.
- The 10 non-permanent seats are distributed among the regions of the world: five seats for African and Asian countries (three are for Africa and two for Asia), one for Eastern European countries, two for Latin American and Caribbean countries, and the remaining two for Western European and other countries.
- The Africa and Asia Pacific group takes turns every two years to put up an Arab candidate.
- Over the course of the past several decades, especially as India has fitfully acquired economic and military power, it has campaigned vigorously for a permanent seat on

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the Security Council. And with India assuming a two-year term as a non-permanent member last month, the issue will become a major talking point soon.

- The U.N. Security Council is outdated and needs reforming, and given India 's size and its growing global standing, it should be included in the new body.
- Since the 1950s, India has witnessed a significant shift in its position in the international arena. Furthermore, the structure of the Security Council has indeed frozen the global distribution of power that existed at the end of World War II.
- Yet India's policymakers need to come up with far more compelling arguments to justify an expansion of the Security Council and India's inclusion as a permanent member. To be seriously considered for a permanent seat, India needs to demonstrate that it can bring something new to the global table.

UN Peacekeeping Operations & India

- **Indian Proposed 4 Point Framework for Protection of UN Peacekeepers at a UN dialogue**
 - Deployment of proven, cost-effective, field-serviceable technologies
 - Consistent training and capacity building of peacekeepers in field of technology
 - Ensure regular technological improvements for peacekeepers
 - Establish a sound information and intelligence foundation for ensuring early warning and mobilising a coherent and early response.

The BIMSTEC and issue of regional integration

Context

- BIMSTEC grouping finalized a major Connectivity master plan for the Bay of Bengal region.

Some key agreements signed by BIMSTEC members include

- a convention for combating terrorism, transnational organised crime and illicit drug trafficking. However, this awaits ratification.
- Another is the BIMSTEC Grid Interconnection, signed during the BIMSTEC Summit in Kathmandu, Nepal, in 2018, which aims to promote an optimal power transmission in the BIMSTEC region.
- In a recent virtual meeting of the Foreign Ministers BIMSTEC finalised a major Connectivity master plan for the Bay of Bengal region.
- The meeting also endorsed three MOUs/agreements relating to convention on Mutual Legal Assistance in Criminal matters, cooperation between diplomatic and training academies and establishment of BIMSTEC Technology Transfer Facility in Colombo.

Convergence between the nations of BIMSTEC

- Due to setbacks to the South Asian Association of Regional Cooperation (SAARC), particularly when its 2016 summit scheduled to be held in Pakistan was suspended after member countries declined to participate, BIMSTEC has emerged as the "preferred platform" for regional cooperation in South Asia.
- The Bay of Bengal has grown in strategic significance within the Indo-Pacific, especially due to the contest between India and China. What was once a region bereft of any major conflicts is now poised to become "a zone of geopolitical rivalry among major powers and of regional conflict".
- The reason small nations in the Bay of Bengal, Indian Ocean and Pacific Ocean are turning to regional blocs like BIMSTEC is because they gain higher economic dividends from regional blocks than fragmented multilateralism promoted by the World Trade Organization (WTO).
- Bangladesh views BIMSTEC as a platform to strengthen its economic development while Sri Lanka intends to fulfil its aspirations to emerge as a major trans-shipment hub for the wider Indo-Pacific region.
- For the two landlocked Himalayan member states, Nepal and Bhutan, BIMSTEC is an opportunity to get access to the Bay of Bengal. For Myanmar and Thailand, connecting

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more closely with India across the Bay is an opportunity to get access to India's consumer market and to address overdependence on China.

- For India, BIMSTEC is a platform to fulfil India's key foreign policy priorities of 'Neighbourhood First' and 'Act East.'

Challenges in regional integration

- BIMSTEC has come under scrutiny mainly due to dormancy in initial years and a stalled FTA process. In 2018, India aggressively pushed for the conclusion of a long-pending FTA among BIMSTEC nations but differences between India and Thailand over market access for professionals, duty cuts on traded goods and policy relaxation stalled the process.
- The fact that other countries in the Bay of Bengal like Malaysia, Singapore and Indonesia have not been involved even as dialogue partners has also been a point of contention.
- BIMSTEC has been slow on the come-up because unlike bodies like the EU or ASEAN, it is based on consensus-building which takes time.
- BIMSTEC has not really offered a very positive ray of hope as it has not even held its regular high level submits. The BIMSTEC established its Permanent Secretariat only after 17 years.
- Other weaknesses of BIMSTEC is a great amount of flexibility in the conduct of its process without having a proper Charter and vision documents.
- It is often said that BIMSTEC has a leadership problem as well. Speculations are that the major stakeholders, namely India, Thailand and Myanmar, may talk about BIMSTEC but they have not been enthusiastically engaged to strengthen its initiatives. Rather, they favour a closer bond with ASEAN (Association of Southeast Asian Nations). The question that arises is whether countries like Nepal, Bhutan and Sri Lanka will benefit if BIMSTEC is under the shadow of ASEAN and pro-ASEAN members.

Way Forward

- A well-established transport network is a prerequisite to reap the benefits of a free trade area, promote trade and investment, and enhance cooperation in areas such as tourism, people-to-people contact and cultural exchanges.
- Also, the concept of the "mountain economy" was brought to the discussion table by the ministerial meetings held in August 2017 in Kathmandu. It was a good initiative to integrate the mountain regions of India (including Uttarakhand, Himachal Pradesh and Northeast India) with Bhutan, Nepal and parts of Myanmar.
- There is a need to establish a BIMSTEC Permanent Working Committee (BPWC) to deal with administrative and financial matters of the Secretariat and to prepare a preliminary draft of the Charter for the organization defining a long-term vision and priorities for cooperation, to develop the Rules of Procedure (ROP) for BIMSTEC Mechanisms, and to explore the possibility of establishing a BIMSTEC Development Fund (BDF).
- Members have to clarify what additional benefit they offer to the people, including those of the landlocked Member States. For instance, how can the people of Nepal and Bhutan benefit from inland fisheries, as they don't have access to the sea.
- Unless the member states think of initiatives to engage with the common man to strengthen people-to-people relations within the region, the agenda of regional integration under BIMSTEC will also be an incomplete dream.

Conclusion

- To conclude, the big challenge before BIMSTEC is to muster public support for the regional forum as people are not very optimistic about the idea of regional integration considering the failure of SAARC to deliver on its promises. Therefore, much more focused and intensified commitment is needed to make BIMSTEC a dynamic, more effective and result-oriented organization.

Draft Arctic Policy

Current Connect

- The Government of India is in the process of formulating an Arctic Policy. India was accorded the status of an Observer to the Arctic Council in 2013, one of the thirteen countries in the world to have done so. The fact that this status was renewed in 2018 reflects India's contribution to Arctic studies and research.
- India's Arctic policy will rest on five pillars:
 - Science and research
 - Economic and human development cooperation
 - Transportation and connectivity
 - Governance and international cooperation
 - National capacity building
- This Policy shall be implemented through an Action Plan and an implementation and review mechanism based on timelines, prioritisation of activities and allocation of resources. The implementation will involve all stakeholders including academia, research community, business and industry.

Why Arctic is important for India and the world?

- The Arctic is home to almost four million inhabitants, of which approximately one-tenth are considered as indigenous people.
- The Arctic influences atmospheric, oceanographic and biogeochemical cycles of the earth's ecosystem.
- The vulnerability of the Arctic to unprecedented changes in the climate is manifested by the loss of sea ice, ice caps, and warming of the ocean and atmosphere. It will lead to lowering of salinity levels, rising temperature differential between land and oceans in the tropical regions, drying of subtropical areas and increase in precipitation at higher latitudes.
- The potential threat to biodiversity and its impact remains in the Arctic, but it is intricately connected with the subtropics and even the tropics ecosystems.
- India is particularly impacted due to the likely effect of these changes on critical aspects of national development, economic security, water security and sustainability, weather conditions and monsoon patterns, coastal erosion and glacial melting.
- Indian agriculture is heavily dependent on the monsoons. Changes in the Arctic and global ecosystem induced by melting Arctic ice, can thus be highly disruptive for India.
- The Covid-19 pandemic has shown us the scale of disruption that can be caused by pathogens. Climate change induced melting of ice bears similar portents. The thawing of permafrost soil could potentially release viruses and bacteria that have lain dormant for thousands of years, thereby increasing the propensity of pandemics.
- Arctic research will help India's scientific community to study melting rates of the third pole - the Himalayan glaciers, which are endowed with the largest freshwater reserves in the world outside the geographic poles.
- The Arctic Ocean and its surrounding landmasses have been a topic of immense interest and a high priority area of research among the global scientific fraternity as well as of importance to policy makers. India's draft Arctic Policy captures these goals while charting a way ahead that focuses on building capacities to increase our level of engagement with the region.

Vaccine passports

Context

- Israel became the first country to introduce a certification system that allows those who have been vaccinated against Covid-19 to access certain facilities and events. They are supposed to function as proof that the holder has been vaccinated against Covid-19. Another key function that vaccine passports will perform is that of digitising vaccination records across countries.

Pros and cons-

- A major difficulty in implementation will be the lack of uniformity across jurisdictions in requirement and issuance of proofs of vaccination.

Current Connect

- WHO's position that national authorities and conveyance operators should not introduce requirements of proof of Covid-19 vaccination for international travel as a condition for departure or entry, given that there are still critical unknowns regarding the efficacy of vaccination in reducing transmission.
- Moreover, in the current context, introducing a requirement of vaccination as a condition for travel has the potential to hinder equitable global access to a limited vaccine supply and would be unlikely to maximize the benefits of vaccination for individual societies and overall global health.
- In addition, there are privacy concerns of the digital data.

Vaccine Tourism v/s Vaccine Passport

- Sometimes, vaccine tourism is confused with vaccine passport, which is a more regulated practice gaining currency around the world. Recently, Seychelles announced that only vaccinated visitors from India, Pakistan and Bangladesh who have completed two weeks after their second dose are permitted to travel to and enter the island nation, with proof of COVID-19 vaccination.

International North South Transport Corridor

- India has proposed the inclusion of strategically located Chabahar Port in the International North South Transport Corridor (INSTC) that proposes to connect the country with Russia via Iran juxtaposing BRI in Eurasian region. \
- It envisions a 7,200-km-long multi-mode network of ship, rail and road route for transporting freight, aimed at reducing the carriage cost between India and Russia by about 30% and bringing down the transit time from 40 days by more than half.
- INSTC is aimed at bringing down time taken for trade between India and Russia and may also enable smoother connectivity with Eurasia and Central Asia. It is one of the key connectivity corridors in the region where Russia has proposed greater Eurasian connectivity.
- India has also welcomed the interest of Uzbekistan and Afghanistan to join the multilateral corridor project. Establishing an eastern corridor through Afghanistan would maximize its potential, which is in the interest of India's Afghan policy.

Significance of INSTC for India

- Once fully operationalized, INSTC will cut down the transportation costs of goods as well the transportation time.
- INSTC will help India to gain smooth access into Central Asia and beyond. With a hostile neighbour like Pakistan, which is situated between India and the Central Asian region, previously India was unable to extend its reach to Central Asia.
- Under India's Connect Central Asia policy, the Central Asian region has already been given a lot of prominence. With the operationalization of INSTC, India-Central Asia relationship will only strengthen. The Central Asian region is part of India's "extended neighbourhood" and of great geostrategic value to India, especially as New Delhi is trying to balance China's huge presence in the region.
- In addition, India-Russia trade relations will also get new energy with the help of INSTC.
- The INSTC is also being seen as New Delhi's answer to China's Belt and Road Initiative (BRI). China is not only India's most powerful neighbour in the region but its competitor as well in the economic arena. India's ambition to balance China will gain some traction with INSTC's operationalization.

Way Forward

- Chabahar will change the "geo-economy" of the region. Pushing the INSTC forward will now require New Delhi to pay close attention to the opportunities at hand in Central Asia. For the connectivity initiative to succeed, it would be prudent to take advantage of the existing transport initiatives in the Central Asian region. The two most important are the Organization of the Black Sea Economic Cooperation (BSEC)

Current Connect

which leans heavily towards Europe and the recent Ashgabat Agreement, which is more Central Asia-centric. Taking into account the importance of expanding trade volumes between INSTC members, fast-tracking the India-Eurasian Economic Union (EAEU) Free Trade Agreement would be a crucial next step. In the medium term improved visa facilitation for the region's businessmen and investors should also be looked into. Fostering Private Sector Involvement will be crucial to ensure the flow of investment and viability of the project.

Environment

E20 Fuel and Bio-Ethanol

About

Recently, the government has proposed the adoption of E20 Fuel standards to promote bio fuel like ethanol. It will help to cope with the issue of pollution to some extent and reduce the import oil bill.

What is E20 Fuel

- E20 is a blend of 20% ethanol with 80% of gasoline .
- Ethanol is a biofuel (bio-ethanol) and a common by-product of biomass left by agricultural feedstock such as corn, sugarcane, hemp, potato, etc.
- E20 fuel helps—
 - To emit less emission,
 - Less primary pollutants,
 - Reduced amount of carbon mono oxide and hydrocarbons.

Biofuel is a type of renewable energy source derived from microbial, plant, or animal materials. Biofuels can be solid, liquid, or gaseous.

1. Ethanol: often made from corn in the United States and sugarcane in Brazil
2. Biodiesel: sourced from vegetable oils and liquid animal fats
3. Green diesel: derived from algae and other plant sources

Ethanol Blending Programme of India:

- Ethanol Blended Petrol (EBP) programme was launched in 2003.
- The programme sought to promote the use of alternative and environment friendly fuels and to reduce import dependency for energy requirements.
- The Government directed the Oil Marketing Companies (OMCs) to sell 5% Ethanol Blended Petrol subject to commercial viability as per Bureau of Indian Standards specifications in notified 20 States and 4 UTs with effect from 2006.
- The current permissible level of blending is 10% of ethanol though India reached only 5.6% of blending.

Advantages of E20 fuel

- In long term this initiative would reduce import dependency on oil. Thus, proving economic security along with energy security.
- Adoption of E20 standards will fetch the more sustainability.
- By adopting new standards, agricultural residues/waste which otherwise are burnt by the farmers can be converted to ethanol and can fetch a price for these waste if a market is developed for the same.
- By reducing crop burning & conversion of agricultural residues/wastes to biofuels there will be further reduction in Green House Gas emissions. E20 will save twice of CO2 emissions, as compared to the present level.
- E20 initiative would encourage the demand to supply more and more agricultural residues/waste. Hence the issue of air pollution can be curbed to some extent.
- India's dependency on fossil fuels to meet its growing energy demands has been on the decline owing to their limited supply and concerns about associated pollutants.
- Having ratified the Paris Climate Agreement, this initiative would support India's commitment to transition to a low carbon economy.
- Biofuels in India are of strategic importance as it augers well with the ongoing initiatives of the Government such as Make in India, Swachh Bharat Abhiyan, Skill Development and offers great opportunity to integrate with the ambitious targets of doubling of Farmers Income, Import Reduction, Employment Generation, Waste to Wealth Creation and it would promote Indigenizing of Ethanol technologies.

Current Connect

Challenges Involved

- ✓ Currently, domestic production is not sufficient to meet the demand for bio-ethanol for blending with petrol at Indian OMCs. Any disruption in sugar mills supply chain would have a direct implications on availability of bio-ethanol, and consequently on E20 fuel.
- ✓ Sugar mills are the key domestic suppliers of bio-ethanol to OMCs, were able to supply only 57.6% of the total demand. Moreover, Sugar mills do not have the financial stability to invest in biofuel plants.
- ✓ The prices of both sugarcane and bio-ethanol are set by the central government. Sugar and Sugarcane both have political mileage; any political move would create greater disruption and can give deep blow to the initiative like E20 Fuel.
- ✓ Achieving 20% blend rate would require India to divert an extra one-tenth of its net sown area towards non-food crops.
- ✓ The diversion and use of food crop to produce bio-ethanol is contentious because on Global Hunger Index, the performance of India is not optimal. Diversion of food crops may invite serious implications not only on food security.
- ✓ Although the end product-Ethanol is a cleaner fuel but the process involve in its processing for instance-distilling fermentation have some negative consequences on environment.
- ✓ Water footprint, that is water required to produce a litre of ethanol, includes rainwater at the root zone used by ethanol-producing plants such as sugarcane, and surface, ground water, and fresh water required to wash away pollutants.
- ✓ Adoption of E20 fuel standards will require some up gradation in automobile engines. This move raise concern as the automobile industry already suffers due to low demand resulted out from economic contraction.
- ✓ Additionally, up gradation will enhance the cost of raw material and Thus the demand could be less. So the employment opportunities created by E20 Fuels' Infrastructure could offshoot if economy and demand could not revive.

Way Ahead

- To ensure sustainability, there is dire need to bridge the gap in oil supply value chain. This technology needs to be picked up to make it as a game changer.
- Moreover, only surplus food crops should be used for fuel production, if at all. Producing ethanol from crop residue will then be a good alternative.
- Government should put forth concerted efforts to either increase sugarcane yield and decrease water usage through better irrigation practices, or increase the ethanol production capacity of bio-refineries.
- Trying to increase blending without these efforts can encroach upon land and water available for food production.

The Ramsar Convention on Wetlands

In News:

After few additions, India now has 42 wetlands; the highest is in South Asia.

About Ramsar Convention

- The Ramsar Convention on Wetlands defines wetlands as “areas of marsh, fen, peat, and or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, including areas of marine water the depth of which at low tide does not exceed six meters.
- The Ramsar Convention, signed in 1971 in the Iranian city of Ramsar, is one of the oldest accords for preserving wetlands.
- The Montreux Record is a register of wetland sites on the List of Wetlands of International Importance where changes in ecological character have occurred, are occurring, or are likely to occur as a result of technological developments, pollution or other human interference. It is maintained as part of the Ramsar List.

Current Connect

Newly Added Wetlands

- The latest site to be added in the list is a high-altitude wetland complex in Changthang region of Ladakh.
- The complex is a notable example of two connected lakes in Upper Indus Biogeographic region, **the freshwater Startsapuk Tso and the hypersaline Tso Kar**.
- The name Tso Kar refers to the white salt efflorescence on the margins of the lake caused by the evaporation of the saline waters.
- The local climate is arid, and glacial meltwater is the primary water source for the lakes.
- The Tso Kar Basin is an A1 category Important Bird Area (IBA) as per Bird Life International and a key staging site in the Central Asian Flyway.
- The site is also one of the most important breeding areas of the black-necked crane (*Grus nigricollis*) in India.
- This IBA is also the major breeding area for great crested grebe (*Podiceps cristatus*), bar-headed geese (*Anser indicus*), ruddy shelduck (*Tadornaferruginea*), brownheaded gull (*Larus brunnicephalus*), lesser sand-plover (*Charadrius mongolus*) and many other species.

Role of Wetland in sustaining the Ecosystem

- Wetlands are indispensable for the countless benefits or “ecosystem services” that they provide humanity, ranging from freshwater supply, food and building materials, and biodiversity, to flood control, groundwater recharge, and climate change mitigation.
- The combination of shallow water, high levels of nutrients and primary productivity is ideal for the development of organisms that form the base of the food web and feed many species of fish, amphibians, shellfish and insects.
- Many species of birds and mammals rely on wetlands for food, water and shelter, especially during migration and breeding.
- Wetlands' microbes, plants and wildlife are part of global cycles for water, nitrogen and sulfur. Wetlands store carbon within their plant communities and soil instead of releasing it to the atmosphere as carbon dioxide. Thus wetlands help to moderate global climate conditions.
- Wetland is important for water quality improvement, flood protection, shoreline erosion control, opportunities for recreation and aesthetic appreciation and natural products for our use at no cost. Protecting wetlands can protect our safety and welfare.
- ✓ Management based on accurate knowledge and increased awareness of wetland issues involving all stakeholders and all components of ecosystem help in long term sustenance involving restoration and conservation.
- ✓ This would enhance the function and value of the system in terms of natural and socioeconomic factors to satisfy critical resource needs of the human population.

Threats Cause by the Ammonia

About

A major ammonia gas leakage was happened at Indian farmer's fertilizer Cooperative (IFFCO) unit located at Prayagraj.

- Ammonia is stored for industrial use in liquid form under high pressure or in gaseous form at low temperature, as was the case in the IFFCO unit where the accident took place.
- The victims had come in contact with the concentrated form of ammonia gas that leaked heavily from the plant.
- A tri-hydroid of nitrogen (NH_3), ammonia is a building block for ammonium nitrate (NH_4NO_3) that is used in agriculture as a high-nitrogen fertiliser.

Ammonia Gas's effects on human body

- In moderate concentration, ammonia gas can cause irritation to eyes, skin, nose and throat.
- Ammonia interacts immediately upon contact with moisture present in the skin, eyes, oral cavity, and respiratory tract to form ammonium hydroxide, which is very caustic and

Current Connect

disrupts the cell membrane lipids, ultimately leading to cellular destruction. As cell proteins break down, water is extracted, resulting in an inflammatory response that causes further damage.

- Ammonia is highly soluble in water, is found in soil, air, and water; it is naturally present in the body and secreted by the kidneys to neutralise excess acid. However, it is highly diluted when in the environment and does not affect the human body to a noticeable level.
- This gas is toxic and affects the lungs with a possibility of causing chemical pneumonitis — inflammation of the lung caused by aspirating or inhaling irritants. Inhaling ammonia instead of oxygen can result into oxygen deficiency and death due to suffocation.

Uses of ammonia

- About 80% of the ammonia produced in industry is used in agriculture as fertilizer. Ammonia is also used as a refrigerant gas, to purify water supplies, and in the manufacture of plastics, explosives, fabrics, pesticides, dyes and other chemicals. It is found in many household and industrial-strength cleaning solutions. Cleaning solutions for industrial use contain higher concentrations of ammonia and can quickly cause irritation and burns.
- Ammonia is critical in the manufacturing of fertilizers, and is one of the largest-volume synthetic chemicals produced in the world. Most of the ammonia also used for the production of formaldehyde.

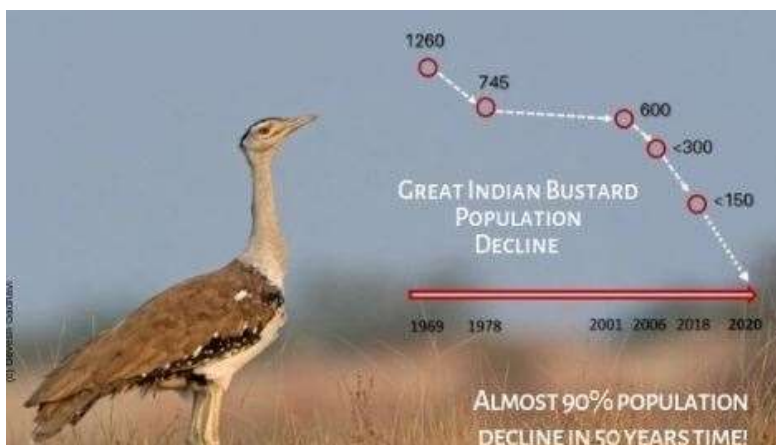
Great Indian Bustard Conservation

About

The Ministry of Environment Forest and Climate Change (MoEFCC) along with the Wildlife Conservation Society (WCS) India has come up with a unique initiative — a “firefly bird diverter” for overhead power lines in areas where Great Indian Bustard (GIB) populations are found in the wild.

Key Highlights

- Firefly bird diverters by the flaps installed on power lines. They work as reflectors for bird species like the GIB.
- Birds can spot them from a distance of about 50 meters and change their path of flight to avoid collision with power lines.
- The diverters are called fireflies because they look like fireflies from a distance, shining on power lines in the night.
- Smaller birds can change their direction [swiftly] but for larger bird species, it is difficult because their body weight and other factors.
- GIBs are one of the heaviest flying birds in India. Therefore, when they encounter these wires, they are unable to change the direction of their flight.
- Death in most cases is due to impact with the wires and not due to electrocution.
- GIB is one of the most critically threatened species in India, with less than 150 birds left in the wild.
- The Supreme Court of India, in a recent hearing, directed that power lines in GIB landscapes should be placed underground. Experts said that the innovative firefly diverter installation could serve as an alternative means to species conservation.
- Experts say only two districts in Rajasthan — Jaisalmer and Barmer — have a breeding GIB population in the wild. The bird can also be found in very small numbers in Gujarat, Madhya Pradesh, Karnataka, Maharashtra and Andhra Pradesh.



Nationally Determined Contributions and Climate Commitments

About

Recently, UNFCCC published a synthesis report of new and updated nationally determined contributions (NDCs) made by more than 70 parties under the Paris Agreement on climate change.

Key Points of the Report

- The NDC synthesis report is prepared in response to the entreaties from COP-21.
- The report while highlighting the NDC targets of countries has cited that current levels of climate action are not enough to put the world on a 1.5°C pathway by the end of this century.
- The United Kingdom and the European Union are the only regions among 18 of the world's biggest emitters that have significantly increased their GHG reduction targets. However, not adequate.
- Out of the 197 Parties to UNFCCC, only 75 have submitted new or updated NDC till December, 2020.
- These Parties account for 30 per cent of the global greenhouse emissions. Major GHG emitters have not presented updated NDCs so far.
- Other major emitters either submitted NDCs presenting a very low increase in their ambition level or have not presented NDCs yet.
- Report also highlighted that in comparison with earlier NDCs, the adaptation component receives greater focus, particularly adaptation planning and national adaptation plans.
- Despite the majority of countries which have increased their individual NDC's ambitions, their combined impact will help to achieve only a 1 per cent reduction by 2030 compared to 2010 levels.
- Global emissions, however, need to reduce by 45 per cent in order to meet the 1.5°C goal, according to Intergovernmental Panel on Climate Change.

India and Intended Nationally Determined Contribution

- ✓ India had earned international praise for exceeding its commitments to reduce India's emissions under the Paris Agreement in 2016.
- ✓ To achieve NDCs, India has begun to tread on the objectives of promoting a variety of renewable energies, introduction of newer, more efficient and cleaner technologies in thermal power generation, reduction in emissions from industries, transportation sector, buildings and appliances, waste etc.
- ✓ The implementation of the Green India Mission remains a priority. India's emission intensity has reduced by 21% over the period 2005-2014.
- ✓ By 2030, India's emission intensity is projected to be even lower—in the range of 35 to 50 percent.
- ✓ The share of installed capacity from renewable energy sources increased from 13% to 24% (36 GW in July 2015 to 88 GW in July 2020) while the share of thermal capacity declined from 70% to 68%. This indicates India's efforts towards reducing energy emissions.
- ✓ To curb vehicular emission, Under Phase-II of Faster Adoption and Manufacture of (Hybrid and) Electric Vehicles (FAME) Scheme, India allocated 10,000 crore (\$1.4 billion) for advancing electric mobility in public transportation fleets.
- ✓ Thirteen states have notified the Energy Conservation Building Code (ECBC) to reduce energy demands of the buildings.

Critical Analysis

- The politics of climate change finance are centered on the recognition that the Global North has disproportionately benefited from fossil fuel production and use, while the Global South experiences more severe hazard events, such as droughts and storms, with higher levels of vulnerability to them.
- Therefore, the Global North has both the moral responsibility to fund climate change mitigation and adaptation responses and the greater capacity to do so.

Current Connect

- Climate change finances are dangling between the cynicism of developed countries and the developing countries.
- A big chunk of finance has been devolved during the last decade to developing countries under Kyoto protocol.
- Developed countries have cited that their commitment for climate change has been gratified and now developing countries should contribute equally to the climate change.
- While developing countries has asserted that they have already pledged under NDCs and country like India is on well track to achieve its climate commitments.
- Now the developed countries are showing reluctance to finance developing countries, and developing countries got insufficient funds by the Global North to cope with climate change. The former is certainly irresponsible and the latter seems inconceivable.
- India's Economic survey expressed disappointment on insufficient fund allocation under Green Climate Fund of Paris agreement.
- Moreover, the Paris Agreement establishes that there should be a balance in funding between adaptation and mitigation.
- However, approximately twice the amount of finance goes towards projects that are mitigation-only compared to adaptation-only.
- This has consequences for the mode of climate financing because most mitigation funding comes in the form of debt financing that needs to be paid back, while most adaptation funding consists of grants. Moreover, the amount of global funding that does go towards mitigation and adaptation is grossly insufficient.

	Reductions (%)	Base year	Target year	Remarks
China	60-65	2005	2030	20 per cent of energy production from clean sources by 2030
USA	26-28	2005	2025	Will absorb 3 bt of CO2 through energy efficiency
EU	40	1990	2030	More action by 2050; targets described as 'ambitious' read as 'unrealistic'
Japan	18	1990	2030	Criticised as highly inadequate
India	33-35	2005	2030	40 percent of energy capacity from non fossil fuels by 2030

Conclusion

Climate change will not be solved by one country, To succeed rational, data driven, effective and legitimate policy should be adopted to cope with this rising issue. Moreover, in context of this report, an increase in ambition must be accompanied by a significant increase in support for climate action in developing nations. The longer the delay in acting, the larger the required action becomes. It is already almost too late to avoid destructive and irreversible changes in climate. For that reason vibrant policies are needed which establish stronger institutional mandates, Global climate financing and proper review and monitoring mechanism.

Issue of Mining in Aravalli

About

- In 2009, the SC imposed a ban on mining in the Aravalli hills in Faridabad, Gurugram and Mewat.
- A 2018 report by a Supreme Court-appointed Central Empowered Committee (CEC) said 25% of the Aravalli range has been lost due to illegal mining since 1967-68.
- In 1992, the Aravali ranges in Gurgaon and Alwar (Rajasthan) were notified as an 'ecologically sensitive area' by the National Capital Region Planning Board.

The Haryana government has enticed that **due to pandemic the state's economy has come to a halt**. Resumption of mining operations may help to fetch more income for State.

Importance of Aravalli Range

- ✓ **Climatic Factor:** For many hundreds of years, the Aravali hills have been instrumental in shaping the climate of the upper Indo-Gangetic plain. From rainfall, temperature and aquifer recharge to soil conservation, biodiversity and ecology, every factor has been dependent on this millennia-old hill range.
- ✓ **Combat Desertification:** The Aravalis checks the spread of the Indian Desert (Thar) towards eastern Rajasthan and Indo-Gangetic Plains, Haryana and western UP.

Current Connect

- ✓ **Recharge Groundwater:** This range play an important role in recharging groundwater especially in urban pockets of Delhi NCR region and Haryana. With high porosity levels it recharges northern aquifers.
- ✓ **Ecological Balance:** Aravalli's forest patches act as a green lungs for Delhi NCR region and Haryana. This range is a home to the tropical dry-deciduous forests and several wildlife species.

- ❖ Recently, CAG's report tabled in Haryana Assembly.
- ❖ The CAG has insisted that the delicate ecology under the forest cover in Aravalli and Shivalik range constantly suffered due to encroachments and unauthorised activities.
- ❖ The CAG has detected parcels of forest land being used for non-forest purposes.
- ❖ The report alleged that the Government of Haryana was ineffective in checking illegal mining, controlling offenders and expenditure incurred on surveillance.
- ❖ Ecological degradation in the Aravalli region is in alarming situation due to increasing population of human and cattle, injudicious use of natural resources, unscientific mining, uncontrolled grazing and felling of trees.

Issues with the Aravalli Range

- **Ambiguous Laws:**
 - The Haryana Government has been ambiguous about declaring the entire Aravalli in the state as 'notified forest'.
 - The uncertainty leads to many environmental violations. Additionally, the menace of illegal mining is rampant in Rajasthan and State government failed to curb that.
- **Illegal Mining and Deforestation:**
 - Mining of Stones in Rajasthan and Haryana continues despite a 2002 ban by SC. Destruction of the hills has opened up 12 Gap areas that have allowed the desert to progress towards north India.
 - Recently, the occurrence of stand storm was also attributed from this. Many villages are losing grazing lands due to irrational mining.
- **Lack of Research:**
 - There has been no comprehensive government study to understand the ground level challenges.

Economic Growth v/s Environment

- ✚ While economic growth is essential for improving the lives and livelihoods of citizens, governments should understand that unsustainable development may lead to short-term gains, but will spell disaster for citizens, the economy and the country in the long-term. Extensive mining may have significant impact on ecological balance of the region.
- ✚ Widespread mining have severe impact on forest habitats, agricultural surfaces and mismanaged urban growth can create **a fertile ground for man-made pandemic.**
- ✚ Therefore, States must choose their development path wisely. For instance- Haryana has the lowest forest cover in India (3.62%), and most of this is concentrated in the Aravalli hills in south Haryana.
- ✚ Allowing mining in the little forest cover remaining will lead to a deep environmental impact not only on State income but its citizens will suffer more in omnivorous ways.

Way Ahead

There is dire need to involve citizenry in preserving the old mountain range and check the menace of illegal mining. Citizens can play an effective role in monitoring such instances and State Government including local administration should take serious action to enforce the laws. Various campaign and schemes can be launched to restore the damages which have been done.

Need for Independent Environment Regulator

About

Recently, the Supreme Court (SC) has asserted the need for the establishment of an independent environmental regulator.

Current Connect

- In 2011, the SC in case of Lafarge Umiam Mining Private Limited v. Union of India had directed the Central government to set up an independent environment regulator to oversee the clearance process.
- As per the SC, the regulator will carry out independent, rational, objective and transparent appraisal and approval of projects for environmental clearances.
- It will also monitor the implementation of the conditions laid down in the clearances and impose penalties on polluters.
- While exercising such powers, the regulator will ensure the National Forest Policy, 1988 is duly implemented.

State of Present Environmental Laws

- The SC has experienced major problems with the way environment and forest clearances are granted by concerned authority and highlighted the unambiguity of law.
- SC cited that too many clearances for the same thing; and none of them seem to be working for the environment or for protecting the rights of communities. Additionally, they are adding to the burden of industry in terms of high transaction costs.
- Court has found conflict of interest in the way an Environmental Impact Assessment (EIA) report is prepared and forest area is identified, demarcated and finally diverted for non-forest uses.
- Court has to deal with poor EIA reports and bad decisions of the Forest Advisory Committee which recommends diversion of forestland for developmental projects. In the court's view, therefore, an independent national regulator is the solution to the problem.

Present Laws and related Issues

Present Law/Procedure	Key Issues regarding inefficiency of Laws
<ul style="list-style-type: none"> ○ EIA notification, 2006 provided for environmental clearance. Big projects are appraised by an Environment Appraisal Committee (EAC) and cleared by MoEF. ○ Small projects are handled by the State-level EAC (SEACs) and State-level Environment Impact Assessment Authorities (SEIAAs). 	<ul style="list-style-type: none"> ○ Most EIA reports are not worth the paper they are written on and the entire process of clearances is just a lot of paperwork. ○ The regulators – EAC, SEAC or SEIAA – are not accountable to anyone. ○ There are now many cases in which the clearances granted by regulators have been rejected by the courts. ○ There is no post-clearance monitoring is done. ○ The regional offices of the MoEF that are supposed to enforce the clearance conditions do not have the human power or the resources to do this.
<ul style="list-style-type: none"> ○ Under Section 2 of the Forest (Conservation) Act, 1980, Forest clearance is provided by Forest Advisory Committee which appraises the projects and recommends diversions. 	<ul style="list-style-type: none"> ○ Unlike environment clearance, there is no impact assessment report required for forest diversion. ○ There is no Law defined rational study regarding number of trees, girth of trees, types of trees, etc. ○ There is no assessment of the impact the forest diversion on the ecology, water resources or the people living in the area. ○ None of the reports are made available in the public domain. ○ Additionally, the CAMPA provisions are also inefficient as the funds are disproportionately devolved to the States against the pre-defined and pre-determined funds by law itself.
<ul style="list-style-type: none"> ○ Under the Coastal Regulation Zone Notification, 2011, 	<ul style="list-style-type: none"> ○ Under this, State Coastal Zone Management Authorities (SCZMAs) and the National Coastal Zone Management Authority (NCZMA) are supposed to map

Current Connect

<p>coastal clearance is given by Coastal Zone Management Authorities (CZMA).</p>	<p>the coastal zone of the states and develop integrated coastal zone management plans.</p> <ul style="list-style-type: none"> ○ But very few states have mapped their coastal zones and developed integrated coastal management plans. ○ Further, In the case of environment clearance, there is a conflict of interest in preparing the EIA report and demarcating the coastal areas. ○ Although preserving the livelihood of the coastal community is one of the main objectives of the CRZ notification, the law does very little in this regard.
<ul style="list-style-type: none"> ○ Wildlife clearance under the Wildlife Protection Act, 1972 is required for taking up non-forestry activities in wildlife habitats and within 10 km from boundaries of national parks and wildlife sanctuaries. 	<ul style="list-style-type: none"> ○ The state boards for wildlife (chaired by respective chief ministers) and the National Board for Wildlife (chaired by the prime minister) are involved in giving these clearances. ○ Expert opinion and adverse impacts can be weight over by the political intention.
<ul style="list-style-type: none"> ○ The Central Pollution Control Board (CPCB) and the State Pollution Control Boards (SPCBs) are the biggest pollution regulators of the country. 	<ul style="list-style-type: none"> ○ When a project comes up, it has to take Consent to Establish and Consent to Operate under the Water (Prevention and Control of Pollution) Act, 1974, and the Air (Prevention and Control of Pollution) Act 1981 from SPCBs. ○ Only some of the SPCBs demand EIA reports before giving the consent.

Can Independent regulator solve the problem?

- ✓ Standard-setting is an important area of concern in the environmental sphere in India (As highlighted in table).
- ✓ An independent regulator could be allowed to choose the consultant to prepare the EIA report and be empowered to ensure that quality parameters are strictly adhered to by the former.
- ✓ As of today, the MoEF still holds all the power on policy scale, implementation and monitoring.
- ✓ There is need to segregate powers for effective enforcement and monitoring. The major concerns regarding EIA norms, such as the compliance monitoring and ex-post regularization, could be tackled with proper standard-setting by an independent regulator.
- ✓ In this, context independent regulator can formalize and bring out effective formation of bodies backed by adequate rational legislative and executive powers.
- ✓ Moreover, regarding sectoral regulations, it is important to emphasize the independence of regulatory design of an environmental regulator.
- ✓ Lack of an independent body to oversee the entire environmental regulatory process could lead to a possible political interest in the decision making.
- ✓ Independence in standard-setting, monitoring, and enforcement are important characteristics of an effective regulatory body. Setting-up of a stand-alone independent body must precede fragmented revamping of environmental laws.
- ✓ The existence of a regulatory authority that could integrate the clearance processes embedded in other environmental laws is much needed.

Way Forward

- As the industry 4.0 is about to a reality and economic growth is taking place, there is dire need of second-generation reform for the environmental regulation, which aims to safeguard environment in more holistic way and community rights as well as reduce time and transaction costs for the industry.
- In order to make laws more effective and responsive, there is need to reduce multiplicity, remove archaic laws and streamline regulatory procedures.

Current Connect

- Therefore, in this reform process, certainly needs a thinking regarding a possibility of setting up a national regulator that can consolidate all clearances like environment, forests, wildlife and coastal, so that the project's impact is fully understood and decisions taken accordingly.
- This regulator should be given enough power and resources to do proper post-clearance monitoring and assessment and also impose fines and sanctions.
- The regulator must be transparent and accountable and promote deepening of public assessment, participation and scrutiny.

Vehicle Scrapping Policy

About

The Ministry of Road Transport and Highways (MoRTH) has introduced the Vehicle Scrapping Policy or Voluntary Vehicle-Fleet Modernization Program to create an ecosystem for phasing out unfit and polluting vehicles from road.

DATA:

- According to the estimates of MoRTH, In India, there nearly 51 lakh light motor vehicles (LMV) that are above 20 years of age, while another 34 lakh LMVs are above 15 years.
- Additionally, there are over 17 lakh medium and heavy motor vehicles, which are above 15 years, and running currently without valid fitness certificates.
- These vehicles are estimated to cause 10-12 times more pollution than the latest vehicles.

Key Takeaways

- India's first formal vehicle scrapping policy focuses on the replacement of old and unfit commercial and personal vehicles.
- The policy mandates that State governments should give a 15% road tax rebate for commercial vehicles and 25% for personal vehicles including the registration fees.
- Those opting for the scheme can also avail 5% discount to be offered by the manufacturer against the scrapping certificate and also a waiver can be availed in form registration fees. The owners of old vehicles will get strong incentives to scrap old and unfit vehicles.
- The policy calls for de-registration of commercial vehicles after 15 years if they do not get the fitness certificate. Similarly, private vehicles will be de-registered after 20 years upon failing to renew the registration certificate.
- The government owned vehicles may be de-registered and scrapped after 15 years from the date of original registration.
- A vehicle failing the fitness test or failing to renew the registration certificate may be declared as 'End of Life Vehicle'. The scrapping policy is not applicable to vintage cars.
- The policy has proposed increased prices for new fitness tests, issuance of fitness certificates, and re-registrations to dissuade the usage of old vehicles.
- The incentives to be offered to vehicle owners for scrapping their old vehicles and procure new vehicles like-
 - Scrap value for the old vehicle (approximately 4% to 6% of ex-showroom price of a new vehicle) will be provided by the registered scrapping centre. The scrapping centres shall also provide scrapping certificates to the vehicle owners.
 - State governments may be advised to provide road-tax rebates of up to 25% for personal vehicles and up to 15% for commercial vehicles.
 - Vehicle manufacturers may also provide a discount of 5% on submitting the scrapping certificate while purchasing a new vehicle. The registration fees may also be waived.
- The policy implementation is to be done in a phased manner starting with the implementation of new rules from October 2021, scrapping of government vehicles from April 2022, and mandatory fitness tests from April 2023.

Possible Outcomes of the Policy

Current Connect

- The policy will likely to increase India's automobile industry turnover to ₹10 lakh crore from the current ₹4.5 lakh crore and create as many as 35,000 jobs. This policy will result in increase of about ₹40,000 crore in Goods and Services Tax (GST).
- The objectives of the policy are to reduce the population of old and defective vehicles, achieve a reduction in vehicular air pollutants to fulfill India's climate commitments, improve road and vehicular safety, achieve better fuel efficiency, formalize the currently informal vehiclescrapping industry, and boost the availability of low-cost raw materials for automotive, steel and electronics industry.
- Policy will be ensured that the scrapping centers have adequate parking facilities, de-pollution equipment for air, water and sound pollution and adequate facilities for hazardous waste management and disposal. Therefore, it seeks to develop a holistic Scrapage infrastructure.

Key Concerns

- ✓ If this policy is going to be implemented, India will have over 2.18 crore vehicles nearing the end of their lives by 2025.
- ✓ The number of vehicles that need to be scrapped, the volume of non-biodegradable waste that will be generated, will be huge. Managing huge chunk of garbage in effective way is key challenge in the absence of robust scrapage infrastructure.
- ✓ The policy encourages the purchase of new vehicles only by providing incentives for the same when old vehicles are scrapped.
- ✓ However, the benefits for those not purchasing a new vehicle are low especially considering that COVID-19 has affected the economy and people's ability to purchase new vehicles in the next few years.
- ✓ Regarding the incentives there is uncertainty involved since the onus to provide tax rebates is on the state governments. State governments will already be incurring a heavy price to replace their fleet of vehicles that are older than 15 years.
- ✓ Therefore, expecting from State to provide further benefits may not be feasible. This may lead to the policy paralysis.
- ✓ The principal of 'Extended Producer Responsibility (EPR)' which holds manufacturers responsible for the safe disposal of the waste from their products and produce safe products for lifetime use is sidelined under the policy.
- ✓ There are growing concerns that around 50% of the goods carriers in India would be required to be dismantled if the government proceeds with the new policy.
- ✓ Therefore, scrapage policy will never be a practical option for thousands of vehicle owners.
- ✓ There are already existing good policies intended to reduce and control emissions but their implementation remains unachieved.
- ✓ If the environment really is the concern, pending and improper execution of existing environmental policies should come first.
- ✓ In the given context, the announcement of New Scrapage Policy which claims to be aimed at reducing pollution seems to be nothing more than a paper document.
- ✓ Most of the vehicle scrappers are unorganised and do not have proper equipment or processes to recycle vehicles.

Way forward

- The opportunity for maximizing these co-benefits lies in early implementation of the regulations and guidelines in the pipeline, legal enforceability, and time bound infrastructure creation.
- It is necessary that these policies and guidelines are amended as required and notified for implementation quickly.
- The informal sector plays an important role in the collection, dismantling, and recycling of outdated vehicles.
- The spare part recovery business generates livelihood and also serves the market for in-use vehicles.
- It is important to create a system of monitoring of these units based on MoRTH/CPCB guidelines.

Current Connect

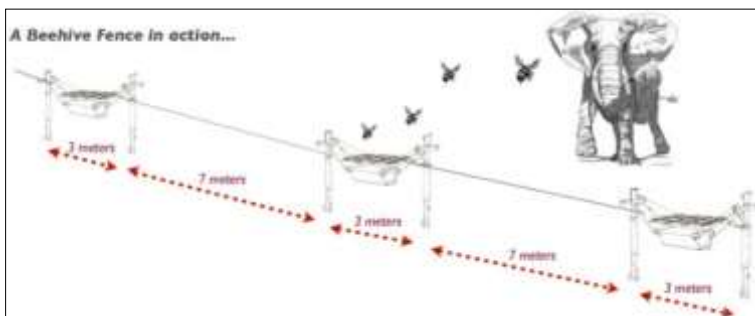
- There is need to adopt broad based criteria for establishing targets of the scrappage programme and adopt complementary measures to disincentivize old vehicles.
- State governments should adopt state level scrappage policy to add holistic feature in the policy for the implementation of robust scrappage infrastructure.
- Government should increase the test centers to increase regulatory ambit, along with it strict monitoring is required to make roads worthy.

Project RE-HAB for Elephant

About

Recently, an innovation project RE-HAB (Reducing Elephant Human Attacks using Bees) was launched on pilot basis to mitigate human-elephant conflict.

- Project RE-HAB is a sub-mission of the Khadi and Village Industries Commission (KVIC)'s National Honey Mission.
- KVIC has set up 15 to 20 interspersed bee boxes; these boxes are set up in the passage ways of human-elephant conflict zones to block the entrance of elephants to human habitations.
- The boxes are connected with a string so that when elephants attempt to pass through, a tug causes the bees to swarm the elephant herds and dissuade them from progressing further.
- Bee boxes are installed along the periphery of Nagarahole National Park and Tiger Reserve, known conflict zones.
- The biggest advantage of Project RE-HAB is that it dissuades elephants without causing any harm to them. It is extremely cost-effective method which not only avoids conflict but conserve the bees in their in-situ environment.



Human Elephant conflicts in India

Human-elephant conflict is a major conservation concern in India.

- **Scenario:** According to KVIC, between 2015 and 2020, nearly 2,500 people have lost their lives in elephant attacks across India out of which about 170 human fatalities have been reported in Karnataka alone.
- **Major reasons:** Encroachment into elephant corridors is the main reason for the heavy toll. The expansion of human settlements and the resulting biotic pressure, linear infrastructure such as roads, railway lines, canals and encroachments into corridor areas are a key reason for elephant entering human settlements.
- Around 48 per cent of instances related to Human-elephant conflict have been from reported from Odisha, West Bengal and Jharkhand. These three States, along with Assam, Chhattisgarh and Tamil Nadu, have accounted for 85 per cent of the total deaths.
- Farmers across the States have been complaining of wild elephants destroying their crops, leading to heavy losses. In order to protect farm electric fencing is done by farmers which kills most elephants. Elephants could be encroaching into agriculture fields and human habitations near forest borders due to insufficient food and water, thus posing a danger to lives.

Importance of Elephant Corridors

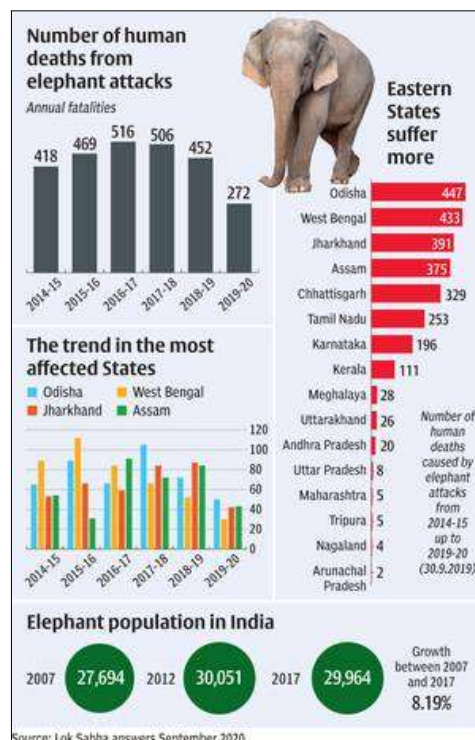
- ✓ Wildlife corridors are linear patches of natural vegetation that provide habitat for elephants. Corridors are so much important for elephant movement and to maintain a healthy population.

Current Connect

- ✓ As forest lands continue to be lost, these relatively narrow, linear patches of vegetation form vital natural habitat linkages between larger forest patches.
- ✓ In terms of land use, only 12.9 per cent of the corridors are currently under forest cover, compared to 24 per cent in 2005.

Way Forward

- To secure a sustainable future for wild elephants it is essential to ensure uninterrupted movement of elephant between key habitats. And to do this, designated corridors must be legally secured and protected.
- There is dire need to Priorities the securement of corridors that require purchase of land or setting aside of land by local communities.
- Governments should allocate adequate resources for corridor securement, and providing them technical assistance and 'soft hands' NGO interfaces with local communities wherever appropriate.
- Running a national-level public campaign and setting up a network of Green Corridor Champions (GCC) all across India could help to protect elephant and minimize the instances of human-elephant conflict across the nation.



Global Water Scarcity: UNICEF

About

Recently, UNICEF releases 'Water Security for all' report. It has highlighted global water deficiency across the world.

Key Points of the Report

- Today, 1.42 billion people including 450 million children live in areas of high or extremely high water vulnerability.
- Less than 3 per cent of the world's water resources are fresh water, and it is growing increasingly scarce.
- Eastern and southern Africa had the highest proportion of children living in such areas. More than half of children (58 per cent) here face difficulty accessing sufficient water every day.
- More than 155 million children in South Asia lived in areas with high or even extremely high water vulnerability.
- The report has identified 37 hot-spot countries where children faced especially dire circumstances in terms of absolute numbers, the proportions of children affected and where global resources support and urgent action must be mobilized.
- In India, around 25% of children are vulnerable to High and Extremely High Water scarcity.

Reasons for water insecurity

- Decades of misuse, poor management, and over-extraction of groundwater and contamination of freshwater supplies have exacerbated water stress.
- At the same time, demand for water is rising due to rapid population growth, urbanization and increasing water needs from a range of sectors, notably agriculture, industry and energy.
- Climate change is also compounding water scarcity through changing precipitation patterns and increased water demand.

Current Connect

Implications of water Scarcity

- ✓ Water scarcity and climate change are also drivers of conflict and migration, as communities and entire populations compete for shrinking water resources. Families may be forced to leave their homes in search of reliable water supplies and livelihood opportunities, often moving to urban areas and towns, putting even more pressure on already strained services.
- ✓ The resulting impact on children's health, development, and safety threatens the significant progress made in child survival and sustainable development over the past several decades. It is putting children's lives at risk today and threatens future generations.

Way forward

There is dire need to scaling up climate-resilient water services. Early warning groundwater system should be equipped to communicate on possible shortage of water quality. The monitoring network should be streamlined to generate data from manual measurements as well as automated systems where data are transmitted over the dedicated planning centers.

Energy Efficiency Enterprise (E3) Certifications

About

Ministry of Power and New & Renewable Energy launches Energy Efficiency Enterprise (E3) Certifications Programme for Brick manufacturing Sector.

India is the world's second largest producer of bricks and this demand is expected to multiply three to four times over the next 20 years.

- Brick Manufacturing Enterprise adopting and demonstrating energy-efficient manufacturing shall be endorsed through a BEE certification as Energy Efficient Enterprise (E3).
- Energy Efficient Enterprise (E3) Certification is an initiative to recognise burnt clay brick manufacturers who adopt energy-efficient manufacturing and encourage customers to source bricks from such E3 certified manufacturing units.
- E3 certificate will be awarded to Brick Manufacturing Enterprises that meet the minimum Specific Energy Consumption performance criteria specified in this Scheme like–
 - Improving energy efficiency in manufacturing, and
 - Producing Bricks having lower (bulk) densities e.g. porous, perforated and hollow bricks.
 - Low density Bricks provide better thermal insulation and hence assist in reducing operational energy in buildings.
- Implementation of E3 Certification will lead to multiple benefits in terms of energy savings in brick manufacturing process and improved quality of bricks resulting in cost savings to builders as well as energy savings to occupiers of buildings due to better thermal comfort and improved insulation properties.
- The E3 Certificate will be awarded to those enterprises whose specific energy consumption will be 25% lower than the national baseline.
- The enterprises can qualify for E3 through adoption of energy efficient brick manufacturing process and technology and Production of lower density bricks (hollow, perforated or porous bricks).
- The adoption of the E3 Certification is currently voluntary for the Brick industry.

India's Floating Solar Plant

- ❖ In Telangana, India's biggest floating solar power plant, by generation capacity (100MW), till date being developed by NTPC. This plant is set to be commissioned by June.
- ❖ It would be one of the renewable (solar) energy plants being developed by NTPC with an installed capacity of 447MW in the Southern Region and the entire capacity would be commissioned by March 2023.
- ❖ Floating solar plants is an opportunity to generate power with low cost. This practice required no land acquisition.

Current Connect

Expected Outcomes

- By availing E3 Certification, the brick units are likely to shift towards adoption of more efficient technologies for making energy efficient bricks.
- Such bricks will be useful in complying the requirements of Energy Conservation Buildings Code (ECBC).
- Energy saving of 7 Million Tonnes of oil equivalent (MTOE) per year and CO₂ savings of about 25 Million Tonnes by 2030 are estimated through adoption of E3 Certification by 7500 Bricks manufacturing units.
- E3 Certification Scheme seeks to accelerate brick sector modernization, using market incentives to create customer demand to fulfill the vision for Aatmanirbhar Bharat.
- Energy-efficient transformation in brick manufacturing is expected to create an enabling policy environment for promoting manufacturing and utilization of energy efficient Bricks, technologies and practices in India's construction sector.
- This will push towards phasing out of inefficient technology in Brick production and enhance awareness and access of energy efficient bricks and technology.

River Linking Project: Ken Betwa Link

About

A memorandum of agreement was signed between Jal Shakti Ministry and the chief ministers of Madhya Pradesh and Uttar Pradesh to implement the Ken-Betwa Link Project (KBLP).

Background

- In the 1970s, the idea of transferring surplus water from a river to water-deficit area was mooted by the then Union Irrigation Minister (earlier the Jal Shakti Ministry).
- National Perspective Plan (NPP) is intended to augment water resources development envisaging inter basin water transfer in the country.
- The NPP comprised two components–
 - Himalayan Rivers Development
 - Peninsular Rivers Development
- Based on the NPP, the National Water Development Agency (NWDA) identified 30 river links—16 under Peninsular component and 14 under Himalayan Component.
- Later, the river linking idea was revived under the then Atal Bihari Vajpayee Government. Ken Betwa Link Project is one of the 16 river linking projects under the Peninsular component.
- In the past, several river linking projects have been taken up. For instance—under the Periyar Project, transfer of water from Periyar basin to Vaigai basin was envisaged.

About Ken Betwa Link Project

- The Ken-Betwa Link Project is the first project under the NPP for interlinking of rivers.
- Under this project, water from the Ken river will be transferred to the Betwa river. Both these rivers are tributaries of river Yamuna.
- The Ken-Betwa Link Project has two phases. Under Phase-I, one of the components — Daudhan dam complex and its appurtenances like Low Level Tunnel, High Level Tunnel, Ken-Betwa link canal and Power houses — will be completed. While in the Phase-II, three components — Lower Orr dam, Bina complex project and Kotha barrage — will be constructed.
- According to the Union Jal Shakti Ministry, the project is expected to provide annual irrigation of 10.62 lakh hectares, drinking water supply to about 62 lakh people and also generate 103 MW of hydropower.
- According to the Comprehensive Detailed Project Report, the cost of Ken-Betwa Link Project is estimated at Rs 35,111.24 crore at 2017-18 prices.

Outcomes/Benefits

- ✓ The Ken-Betwa Link Project lies in Bundelkhand, a drought-prone region, which spreads across 13 districts of Uttar Pradesh and Madhya Pradesh.

Current Connect

- ✓ The project will be of immense benefit to the water-starved region of Bundelkhand, especially in the districts of Panna, Tikamgarh, Chhatarpur, Sagar, Damoh, Datia, Vidisha, Shivpuri and Raisen of Madhya Pradesh and Banda, Mahoba, Jhansi and Lalitpur of Uttar Pradesh.
- ✓ It will pave the way for more interlinking of river projects to ensure that scarcity of water does not become an inhibitor for development in the country.
- ✓ The project is supposed to irrigate 1.06 million hectares of land, provide drinking water to 6.2 million and generate 103 MW of hydel power.



Environmental Concerns

- Several committees, including the Supreme Court-appointed panel, have raised doubts about the project.
- This project will be very harmful to the Panna Tiger reserve, which is located in Madhya Pradesh and is home to more than 52 tigers and endangered vulture species like the white-rumped vulture.
- Further the forest advisory committee said that an estimated 4.6 million trees will be cut down for the project which will adversely affect the rain in the already dry Bundelkhand region.

Conclusion

- ✚ Though Interlinking of rivers have multifold benefits but such projects can cast more harm than good. Therefore, it is crucial to do a detailed hydrological, geological, meteorological, environmental and social impact analysis of the project before moving ahead.
- ✚ Until then, the Government should focus on alternative solutions to address the issue of water crisis in the region.
- ✚ Moreover, India gets abundant rainfall, but most of rainwater is wasted by going into drains. If we capture all these rainwater, India will not face water scarcity in the coming years.
- ✚ There is a need to India, to carry out tangible and intangible investment in water conservation mechanisms such as rainwater harvesting, watershed management etc.

Issue of Marine Pollution and Tarball

About Tarball

- Tarballs are dark-coloured, sticky balls of oil that form when crude oil floats on the ocean surface.
- Tarball is often formed when crude oil is released into marine environment; different physical, chemical, and biological processes interact to form solid to semi-solid tarballs.
- Some physical processes such as weathering and chemical and biological processes such as UV light degradation and biodegradation by microbes contributes to the formation of tarballs.



Current Connect

- Due to certain processes tarballs are contrast different from and microbes. Some of the balls are as big as a basketball while others are smaller globules.
- Tarballs can attract various heavy metals, including nickel, copper, and cobalt, to their surfaces. Due to different weathering processes, tarballs can accumulate high concentrations of heavy hydrocarbons, organic compounds that only contain carbon and hydrogen, such as polycyclic aromatic hydrocarbons (PAH).
- Discharge from municipal waste, oil-well blowouts, deliberate and accidental release of bilge and ballast water from ships are among the main factors driving the formation of these pollutants.
- These petroleum blobs also affect marine biodiversity in several ways, such as disturbing turtle habitats. This in turn, augments the impact on humans who consume marine fish.

Link with the Monsoon:

- It is being said that when the oil comes from the large cargo ships in the deep sea and gets pushed to the shore as tarballs during monsoon due to wind speed and direction.
- The entire oil spill in the Arabian Sea eventually gets deposited on the western coast in the form of tarballs in the monsoon season when wind speed and circulation pattern favour transportation of these tarball.

Impacts

- Tarballs's pollutants largely affect pollutants on coastal economies and the overall ecosystem.
- One of the major concerns regarding these particles is the potential for economic losses.
- Tarballs washed ashore on beaches will negatively affect local economies because tourists will be offended by the petroleum-like odor.
- Sticky tarballs can get caught in fishing nets, making them difficult to clean and a nuisance for local fisheries.
- Since, tarballs can attract heavy metals and PAH's, they could contribute to causes of cancer if ingested by marine animals.

Way Forward

- ✓ Despite having several legal provisions on the protection of the environment, the weaker implementation had to be plugged and effective enforcement on pro-active basis has to be followed.
- ✓ Lawmakers must take up environmental issues as a top-priority, apart from the comprehensive and collective efforts of the vigilant citizens, activists and environmentalists.
- ✓ Government regulations on licensing, oil filling at designated ports must be thoroughly followed and commissions must be set up for specifically dealing with coastal management.

State of the World's Trees report

About

The Botanic Gardens Conservation International (BGCI) launched the State of the World's Trees Report.

Key Highlights of the Report

- According to the State of the World's Trees report 17,500 tree species - some 30% of the total - are a risk of extinction, while 440 species have fewer than 50 individuals left in the wild.
- Almost a third of the world's tree species are at risk of extinction, while hundreds are on the brink of being wiped out.
- Overall the number of threatened tree species is double the number of threatened mammals, birds, amphibians and reptiles combined, the report said.
- Around 11% of the flora or plant life of every country was made up of threatened species.

Current Connect

- Among the most at-risk trees are species including magnolias and dipterocarps – which are commonly found in Southeast Asian rainforests. Oak trees, maple trees and ebonies also face threats.
- Many of varieties of trees in the world’s top six countries for tree-species diversity are at risk of extinction. The greatest single number is in Brazil, where 1,788 species are at risk. The other five countries are Indonesia, Malaysia, China, Colombia and Venezuela.
- There were also 27 countries that had no threatened species of trees.

Report & State of Tress in India

- ✓ Around 18% of India’s tree species stare at the possibility of extinction. India has 2,603 tree species, of which 650 are endemic or native to certain parts of the country; and 469 of them are threatened.
- ✓ India is known for its rich biological diversity due to the presence of large numbers of plant and animal species. It is one of the top-ranking, mega-diverse countries of the world.
- ✓ As per the ISFR 2019, the top five states in terms of increase in forest cover are Karnataka (1,025 sq. km.), Andhra Pradesh (990 sq. km.), Kerala (823 sq. km.), Jammu & Kashmir (371 sq. km.) and Himachal Pradesh (334 sq km).
- ✓ India’s 1.34 billion people exert a heavy pressure through encroachment, raising commercial plantations and other developmental activities. Due to anthropogenic activities like excessive harvesting and habitat destruction, many of the economically important tree species are under serious threat.
- ✓ The main threats to tree species are forest clearance for various projects; other forms of habitat loss including exploitation for timber, medicine, etc. and the spread of invasive pests and diseases.
- ✓ Out of the 387 Indian plants listed under the International Union for Conservation of Nature’s Red List, 77 have been enlisted as ‘critically endangered’, six are ‘extinct’ and two are ‘extinct’ in the wild.

5-country biosphere reserve

- ❖ UNESCO declares world’s first 5-country biosphere reserve in ‘Amazon of Europe’.
- ❖ The 1-million hectare ‘Mura-Drava-Danube’ is the now the largest riverine protected area in Europe.
- ❖ The biosphere reserve covers 700 kilometres of the Mura, Drava and Danube rivers and stretches across Austria, Slovenia, Croatia, Hungary and Serbia.
- ❖ The aim is to revitalise 25,000 km of rivers and protect 30 per cent of the European Union’s land area by 2030.

Way Forward

A systematic species recovery programme is the need of the hour. Firstly, there is need to extend the protected area coverage for endangered and vulnerable tree species that are currently not-well represented in protected areas. There is dire need to increase availability of Government and NGO’s effort in terms of funding. Moreover, Social tree planting schemes, and ensure the targeted planting of threatened and native species has to be carried out.

Weather Disaster Report: WMO

About

Recently, the World Meteorological Organization (WMO) stated that the number of disasters, such as floods and heat waves, driven by climate change have increased fivefold over the past 50 years, killing more than 2 millions people.

Key Points

- It surveys some 11,000 disasters occurring between 1979-2019, including major catastrophes such as Ethiopia’s 1983 drought, which was the single most fatal event with 3,00,000 deaths, and Hurricane Katrina in 2005 that was the most costly, with losses of \$163.61 billion.

Current Connect

- Economic losses are mounting as exposure increases. But, behind the stark statistics, lies a message of hope. Improved multi-hazard early warning systems have led to a significant reduction in mortality.
- Of the top 10 disasters, droughts proved to be the deadliest hazard during the period, causing 650,000 deaths, followed by storms that led to 577,232 deaths; floods, which took 58,700 lives; and extreme temperature events, during which 55,736 died.
- Meanwhile, economic losses have increased sevenfold from the 1970s to the 2010s, going from an average of \$49 million, to a whopping \$383 million per day globally.
- Storms, the most prevalent cause of damage, resulted in the largest economic losses around the globe.
- Three of the costliest 10 disasters, all hurricanes that occurred in 2017, accounted for 35 per cent of total economic disaster losses around the world from 1970 to 2019.
- In the United States, Hurricane Harvey caused \$96.9 billion in damage, Maria in the Caribbean 69.4 billion, and Irma \$58.2 billion in Cape Verde.
- More than 91% of the 2 million deaths occurred in developing countries, the report said, noting that only half of the WMO's 193 members have multi-hazard early warning systems.

The Atlas by region from 1970 to 2019

Continents	Recorded disasters	Lives loss	Economic losses	Most Prevalent Disasters
Africa	1,695	721,747	\$5 billion	Floods and Draught
Asia	3,454	975,622	\$2 trillion	45% Floods and 36% storms
South America	The top 10 recorded disasters in the region accounted for 60 per cent	34,854	\$39.2 Billion	Floods were responsible for 59 per cent of disasters, 77 per cent for lives lost and 58 per cent of economic loss for the region.
North America, Central America & the Caribbean	The region accounted for 18 per cent of weather-, climate- and water-related disasters	The region suffered 74,839 deaths	\$1.7 trillion economic losses.	Storms were responsible for 54 per cent and floods, 31 per cent of recorded disasters.,
South Pacific West	The region recorded 1,407 disasters	65,391 deaths,	\$163.7 billion in economic losses.	45 per cent of these disasters were associated with storms

Current Connect

				and 39 per cent with floods.
Europe	1,672 recorded disasters	159,438 lives	\$476.5 billion in economic damages.	Although 38 per cent were attributed to floods and 32 per cent to storms,

Climate Change footprints

- The number of weather, climate and water extremes are increasing and will become more frequent and severe in many parts of the world as a result of climate change.
- More water vapor in the atmosphere has exacerbated extreme rainfall and flooding, and the warming oceans have affected the frequency and extent of the most intense tropical storms.
- The Atlas clarifies that the attribution of drought events to anthropogenic, or human, factors, is not as clear as for heatwaves because of natural variability caused by large oceanic and atmospheric oscillations, such as El Niño climate pattern.
- However, the 2016-2017 East African drought was strongly influenced by warm sea-surface temperatures in the western Indian Ocean to which human influence contributed.
- Climate change has also increased extreme sea level events associated with some tropical cyclones, which have increased the intensity of other extreme events such as flooding and associated impacts.
- This has augmented the vulnerability of low-lying megacities, deltas, coasts and islands in many parts of the world.
- Moreover, an increasing number of studies are also finding human influence exacerbating extreme rainfall events, sometimes in conjunction with other major climate influences.

What need to be done?

- ✓ Only half of WMO's 193 member countries have multi-hazard early warning systems and severe gaps in weather and hydrological observing networks exist in Africa, some parts of Latin America and in Pacific and Caribbean island States.
- ✓ With the help of early warning systems more life can be saved, but it is also true that the number of people exposed to disaster risk is increasing due to population growth in hazard-exposed areas and the growing intensity and frequency of weather events.
- ✓ More international cooperation is needed to tackle the chronic problem of huge numbers of people being displaced each year by floods, storms and drought.
- ✓ We need greater investment in comprehensive disaster risk management to ensure that climate change adaptation is integrated in national and local disaster risk reduction strategies.
- ✓ It is further recommends countries to review hazard exposure and vulnerability considering a changing climate to reflect that tropical cyclones may have different tracks, intensity and speed than in the past.

El Niño and La Niña

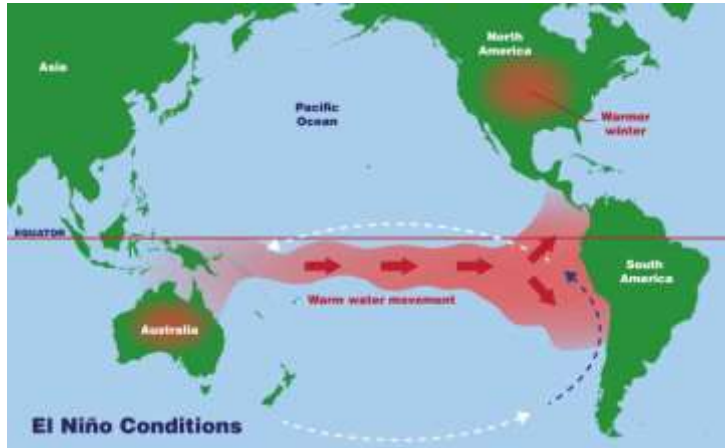
About

A super-computing led modelling suggested that climate change can cause extreme and more frequent El Niño and La Niña events.

- El Niño is the warming phase of water temperatures around the Pacific Equator.
- During normal weather patterns around the Equator, trade winds carry warm water from the tropical areas of the Pacific Ocean.
- Moving west, the winds distribute warm water from the Eastern Pacific into the cooler areas of the ocean.
- During El Niño, those winds weaken, and the east-west travel of warm water stops.

Current Connect

- The winds reverse and carry warm water back east, which makes the warm part of the Pacific Ocean even warmer.
- La Niña is the opposite of El Niño: an intensification of normal weather patterns. This causes ocean surface temperatures to cool down as winds strengthen and blow warm water towards the west.



About latest Findings

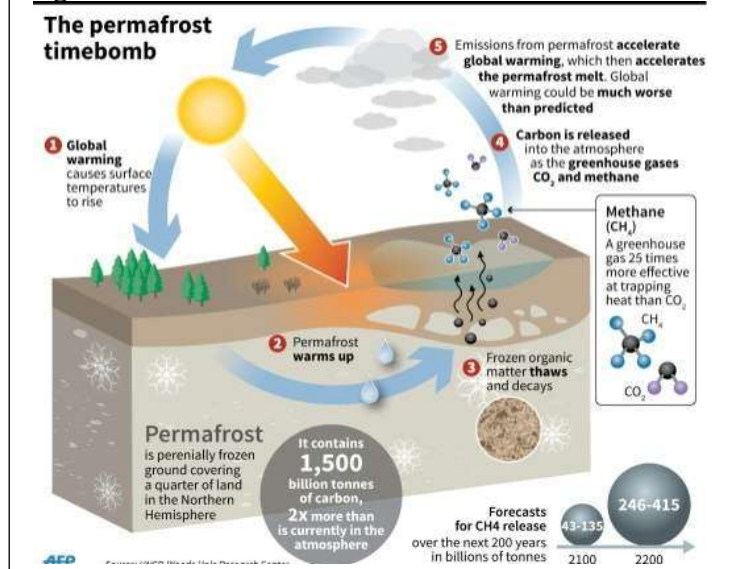
- Increasing atmospheric carbon dioxide can cause a weakening of future simulated El Niño-Southern Oscillation (ENSO) sea surface temperature variability. The intensity of the ENSO temperature cycle can weaken as CO₂ increases.
- Future El Niño events will lose heat to the atmosphere more quickly due to the evaporation of water vapour. Also, in the future there will be a reduced temperature difference between the eastern and western tropical Pacific, inhibiting the development of temperature extremes during the ENSO cycle.
- There can be a weakening of Tropical Instability Waves (TIWs) in the projected future which can cause a disruption of the La Niña event. TIWs are a dominant feature of monthly variability in the equatorial Pacific and Atlantic Ocean.

Impacts of El Niño And La Niña

- ✓ El Niño and La Niña affect not only ocean temperatures, but also how much it rains on land.
- ✓ Both circulation's have impact on other global cycles.
- ✓ Typically, El Niño and its warm waters are associated with drought, while La Niña is linked to increase flooding.
- ✓ El Niño and La Niña have the greatest impact on countries around the equator.
- ✓ This includes Central and South America, the Caribbean, Southeast Asia, and Eastern and Southern Africa.
- ✓ In other words, they hit some of the world's poorest regions the hardest.
- ✓ In areas like the Sahel or the Horn of Africa, communities are already working challenging land.
- ✓ An El Niño-induced drought worsened the food security situation.
- ✓ In India, El Niño is associated with drought or weak

Permafrost Time bomb

- ❖ **Permafrost is any ground that remains** completely frozen—32°F (0°C) or colder—for at least two years straight.
- ❖ These permanently frozen grounds are most common in regions with high mountains and in Earth's higher latitudes—near the North and South Poles.
- ❖ The immediate effects as permafrost melts due to increasing global temperatures will affect countries.
- ❖ The biggest Global issue is the potential for organic material, which is now entombed and frozen in the ground.



Current Connect

monsoon, while La Niña is associated with strong monsoon and above average rains and colder winters.

- ✓ ENSO affects crop production because it disrupts normal weather patterns.
- ✓ More specifically, El Niño creates water shortages and La Niña creates water abundance, including flooding. Water shortages reduce crop planting areas, delay planting seasons, and generally lower crop yields.
- ✓ El Niño could reduce the upwelling of cold water off the coast. When this happens, fish either die or migrate into areas where they'll find more to eat.
- ✓ With the fish gone, sea birds that depend on them may die or go elsewhere. Kelp forests are often destroyed by storms and ocean swells.

Analysis

- While El Niño and La Niña do impact global climate patterns; however, they neither affect all regions nor do are their impacts in a given region the same.
- In many locations, especially in the tropics, La Niña (or cold episodes) produces roughly the opposite climate variations from El Niño.
- For instance, parts of Australia and Indonesia are prone to drought during El Niño but are typically wetter than normal during La Niña.
- The impacts of each La Niña event are never exactly the same. They depend on the intensity of the event, the time of year when it develops and the interaction with other climate patterns.

Way Forward

It is important to consider the role of factors like—Indian Ocean Dipole with regarding to El Nino and La Nina to explore the local impacts on India and its coastline. Researchers, scientists and meteorologists should explore and relate this study in India context.

Land-use for renewable energy in India

About

Recently, Institute for Energy Economics and Financial Analysis (IEEFA) released ‘renewable energy and land use in India by mid-century’ report. IEEFA examines energy markets, trends and policies.

Key Points of the Report

- In India, around 50,000-75,000 square kilometres of land will be used in 2050 for solar energy generation and for an additional 15,000-20,000 sq km for wind energy projects.
- The report states that India will use significant stretches of land by 2050 to install renewable energy generation capacities.
- In India, electricity generation has to compete with alternative uses for land such as agriculture, urbanisation, human habitation and nature conservation.
- Properly managed renewable generation can co-exist with other land uses, and, unlike coal-based power, it does not fundamentally change land during use or following its ultimate decommissioning.
- The resulting land cover changes, including indirect effects, will likely cause a net release of carbon up to 50 grams of carbon dioxide per kilowatt-hour (gCO₂ / kwh).
- The amount of carbon release will depend on the region, scale of expansion, solar technology efficiency and land management practices at solar parks.

Effect on Ecosystems

Land use for renewable energy may put a pressure on ecosystems. Changing of land use may lead to the freeing of carbon which is captured in soil. Generally the terms zero impact areas, barren land, unused land or the official designation of wasteland imply that such areas have no value.

Way Forward

In order to save land there is need to promote the offshore wind, rooftop solar, and solar on (mostly artificial) water bodies where net environmental benefits can be assured. Protection of farmland is essential, renewable sector could secure benefits to farmers and reduce pressure on other types of land.

Air Pollution Standards

About

Recently, the World Health Organisation (WHO) has revised its global pollution standards.

About New Global Air Quality Guidelines (AQGs)

- The World Health Organization (WHO) in its first-ever update since 2005 has tightened global air pollution standards.
- The new guidelines reflect an overwhelming scientific consensus that countries need to more aggressively limit air pollution and protect everyone’s health.
- The annual PM 2.5 (respirable pollution particles) guideline from 10 micrograms per cubic metres to 5 micrograms per cubic metres and the 24-hour PM 2.5 limit from 25 micrograms per cubic metres to 15 micrograms per cubic metres.
- The earlier limit was 10 micrograms per cubic metre annually and 25 micrograms per cubic metre in a day.
- WHO tightened norms for five other pollutants based on recent evidence of health impacts associated with them.
- WHO also tightened the limits for gaseous air pollutants like nitrogen dioxide that are produced during the burning of fossil fuel.
- Other recommendations are– the ozone levels average should not exceed 100 micrograms per cubic metre, nitrogen oxide should not exceed 25 micrograms per cubic metre, sulphur dioxide should remain below 40 micrograms per cubic metre and carbon monoxide levels should not exceed more than 4 micrograms per cubic metre over the same time period.

AQG’s Impact on India

- The WHO’s new air quality benchmarks would make a call for policymakers in India.
- This revision in pollution standards put pressure on India to align its national Air quality standard in accordance with the WHO’s new standard. Moreover, Air quality in India has deteriorated significantly over the past two decades, and today, air pollution is the second largest risk factor contributing to the country’s disease burden.
- While these guidelines are not legally binding, But India may base their own standards on the WHO measures. The new recommendations for air quality standards may represent a turning point in the way we approach air pollution globally
- The move doesn’t immediately impact India as the National Ambient Air Quality Standards (NAAQS) don’t meet the WHO’s existing standards.

New Global Standard v/s India’s Air Quality Standard

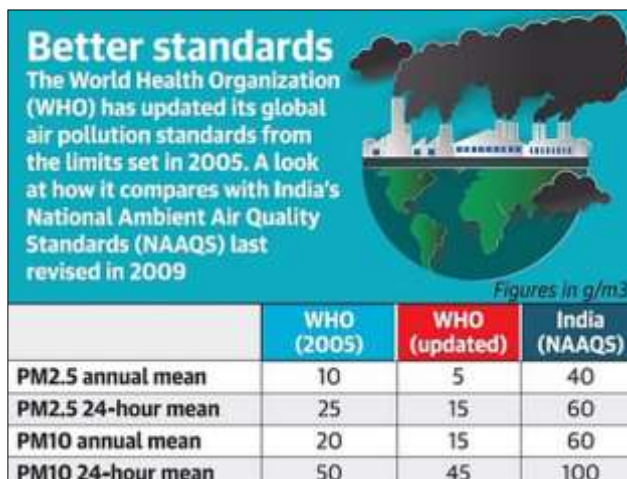
- ✓ India’s air quality standards were way short of WHO norms even before. The new thresholds will sharpen these differences.
- ✓ India’s annual average PM 2.5 standard, for instance, is now eight times below the WHO’s benchmark.
- ✓ Much of the gap is due to the geographical and meteorological factors that contribute to a high base pollution load in several parts of the country.

WHO’s AQG			
Pollutant	Averaging time	2005 AQGs	2021 AQG level
PM _{2.5} , µg/m ³	Annual	10	5
	24-hour ^a	25	15
PM ₁₀ , µg/m ³	Annual	20	15
	24-hour ^a	50	45
O ₃ , µg/m ³	Peak season ^b	–	60
	8-hour ^a	100	100
NO ₂ , µg/m ³	Annual	40	10
	24-hour ^a	–	25
SO ₂ , µg/m ³	24-hour ^a	20	40
CO, mg/m ³	24-hour ^a	–	4

India’s AQI					
AQI Value Of Index	Levels of Health Concern	PM _{2.5} Conc. (µg/m ³)	PM ₁₀ Conc. (µg/m ³)	Daily AQI Color	Air Pollution Level
0-50	Good	0-12	0-54	Green	Level 1
51-100	Moderate	12.1-35.4	55-154	Yellow	Level 2
101-150	Unhealthy for sensitive groups	35.5-55.4	155-254	Orange	Level 3
151-200	Unhealthy	55.5-150.4	255-354	Red	Level 4
201-300	Very unhealthy	150.5-250.4	355-424	Purple	Level 5
301 and Higher	Hazardous	250.5-Higher	425-Higher	Maroon	Level 6

Current Connect

- ✓ India's NAAQs — last revised in 2009 — specify an annual limit of 60 microgram per cubic metre for PM 10 and 100 for a 24-hour period.
- ✓ Similarly it's 40 for PM 2.5 annually and 60 on a 24-hour period.
- ✓ There are also standards for a host of chemical pollutants including sulphur dioxide, lead and nitrogen dioxide.
- ✓ Integrating the top 10 cities from WHO's most polluted cities' list, 122 non-attainment cities were identified for NCAP, which did not meet India's National Ambient Air Quality Standards (NAAQS) in 2011-15.
- ✓ The Central Pollution Control Board is reportedly working on framing revised guidelines. Even though complete compliance with them might be difficult, the CPCB cannot afford to ignore the WHO's new benchmarks.



Measures taken by Government

- ✚ The National Clean Air Programme (NCAP) in the country has aimed to reduce 20-30% of PM2.5 and PM10 concentrations recorded in 2017 by 2024.
- ✚ The Supreme Court in 2017 mandated the Central Pollution Control Board to come up with an emergency, comprehensive action plan, which was mapped out and submitted. The Graded Response Action Plan was introduced to the city of Delhi and the National Capital Region.
- ✚ The programme is referred to as a 'graded' plan, as it functions according to stages. There are specific actions to be taken for certain pollution concentration levels, which can bring about a gradual form of pollution control.
- ✚ The Central Government has notified a Comprehensive Action Plan (CAP) in 2018 identifying timelines and implementing agencies for actions identified for prevention, control and mitigation of air pollution in Delhi and NCR.
- ✚ SAMEER app has been launched wherein air quality information is available to public along with provision for registering complaints against air polluting activities. Air quality information collection and dissemination are done from a centralized location. It provides real time air quality status to all stakeholders.

Ministry	Initiative
Ministry of Power	A reduction in PM emissions by coal power plants, and in energy consumption by energy-intensive industries.
Ministry of Environment	Setting emission standards for the brick manufacturing industry and facilitating management of agricultural residues to reduce stubble burning.
Ministry of Road Transport and Highways Ministry of Petroleum and Natural Gas	Stricter vehicle emissions regulation and upgrading of vehicles to more fuel-efficient standards.
Ministry of Urban Development	Enhancing availability of public transport.

Impacts of Air Pollution

- Ambient air pollution poses grave, multi-faceted risks to India's prospects for achieving its development goals.
- It would lead to a rapid increase in public health expenditure, diminished labour productivity, and reduced agricultural yields.
- The economic cost of air pollution to the Indian economy is more than US\$150 billion a year.

Current Connect

- People living in high-pollution cities are more likely to have compromised respiratory and cardiac issues.
- Women including child are most vulnerable due to the Air pollution and increased level of PM2.5. For instance-PM2.5 pose the greatest health risk, as they are minuscule and can get deep into a person's lungs and bloodstream.
- Exposure to fine particles can affect lung function and worsen medical conditions such as asthma and heart disease.
- Long-term exposure to fine particulate matter has been linked with an increased rate of chronic bronchitis, reduced lung function, and increased mortality from lung cancer and heart disease.
- The economic loss attributable to air pollution as a percentage of state gross domestic product (GDP) was the highest in Uttar Pradesh (2.15 per cent), Bihar (1.95 per cent), Madhya Pradesh (1.70 per cent), Rajasthan (1.70 per cent), and Chhattisgarh (1.55 per cent). These states have a relatively low per-capita GDP.
- The terrestrial ecosystem is widely affected by ground air pollution. The ill-effects include respiratory and pulmonary disorders in animals and humans. The effects on the marine ecosystem include acidification of lakes and eutrophication in aquatic food.
- The ill-effects of air pollutant emissions could impact the biological diversity. For instance- Nitrogen deposition on plant is the result of air pollution.

Conclusion

The air pollution crisis will require innovative, collaborative solutions from public, private, and civil society stakeholders. Institutions, governments, philanthropies, and members of the academe have been fighting the battle for clean air for decades; it is time to tap into the power of a multi-stakeholder framework to hurdle this challenge.

As India begins to direct resources towards addressing the post-pandemic economic crisis, policymakers should display political and economic commitment towards addressing the multi-dimensional impact of air pollution.

Issue of Stubble Burning

Context

Thousands of stubble burning instances were noticed this year amidst COVID-19 pandemic. Delhi would have to deal with the 'duo challenges' — 'Air pollution' related with 'stubble burning' and linked outbreak of 'COVID-19' with pollutants.

About Stubble Burning

- Stubble burning is an act of removing paddy crop residue from the field to sow next crop.
- It is being cited as traditional, cost effective and quickest way to prepare field to sow next crop.
- Stubble burning is attributed to worsening the air quality of Delhi. Other anthropogenic emission like-vehicular emission and industrial emissions coupled with stubble burning emission further deteriorate the air quality of Delhi to an alarming level.
- Other than temporary impacts i.e. – bad Air Quality, the stubble burning is also attributed to the GHG emissions, which have prolonged 'irreversible effect' on climate change.

Reasons for Stubble Burning

- In India, there is intense pressure on cultivable lands (northern India) to achieve maximum output. The main reason for paddy (rice crop) stubble burning is the short time available between rice harvesting and sowing of wheat; a delay in sowing wheat adversely affects the wheat crop. The short timeframe available between rice and wheat crops is also a reason that farmer have to burn crop residual quickly for next sowing.
- Additionally, the market for crop residue is shrinking, due to lack of technological support and monetary incentives by Government. Thus, farmers find it cheaper and easier to burn the post-harvest stubble.

Current Connect

- Even mechanization is unable to cope with management of stubble. The machine doesn't cut close enough to the ground, leaving stubble behind that the farmer has no use for. There is pressure on the farmer to sow the next crop in time and for it to achieve a full yield.
- Traditionally, wheat and rice fields were burned after harvest to dispose of the left over straw and to control disease and pest problems that can carry over between crops.
- Lack of awareness and failure of policy implementation are additional structural reason for menace of Stubble burning. Policy measures had not been percolated towards marginal and small farmers.

- Punjab alone produces 19-20 million tonnes of paddy straw and about 20 million tonnes of wheat straw. About 85-90 per cent of this paddy straw is burnt in the field.
- Nearly 80 % of the entire crop residue burning takes place in the months of October-December.

Impacts of Stubble Burning

1. Climate change

- Stubble burning releases harmful GHGs emission and particulate matters (PM). GHGs are cited as a reason for global warming and climate change.
- For Instance— A crop residue burning released 149.24 million tonnes of carbon dioxide (CO₂), over 9 million tonnes of carbon monoxide (CO), 0.25 million tonnes of oxides of sulphur (SO_x), 1.28 million tonnes of particulate matter and 0.07 million tonnes of black carbon.

2. Impacts on air quality

- Burning of stubble poses a serious threat to the air quality of the exposed environment. The amount of PM_{2.5} and PM₁₀ is increased in the atmosphere. Climatic conditions further deteriorate the level of pollution.
- Stubble burning releases VOCs (Volatile Organic Compounds) and NO_x which combine to form ground-level ozone. Ozone is formed in the immediate atmosphere by the reaction of nitrogen oxide and volatile organic compounds in the presence of solar radiation.

3. Impacts on soil fertility

- Stubble burning negatively affects the soil productivity. Due to burning the composition of essential nutrients inside the soil get disturbed. It also raises the soil temperature to about 42 °C, thus displacing or killing the important microorganisms in the soil at a depth of about 2.5 cm.
- This generates an additional expense of regaining back the soil fertility through the application of fertilizer or compost.
- Stubble burning strips the soil of the essential nutrients, i.e. Nitrogen, Phosphorus, and Potassium (NPK) as well as other micro-nutrients.

4. Impacts on agricultural productivity

- The effects of burning crop stubble extend to the agricultural sector. Air pollution affects food production. The pollutants may affect agricultural productivity directly or indirectly.
- Direct effects entail injury to leaves, grains, or assimilation of heavy metals. For instance- Nitrogen oxide can damage the tissue of plants and cause discoloration. SO₂ may lead to the formation of acid rain.
- Prolonged exposure of plants to particulates pollution may lead to Chlorosis.
- Ground-level ozone affects plant's metabolism, penetrates, and destroys leaves causing serious effects on crops in the northern parts of India. Hence, stubble burning negatively impacts agricultural productivity.

Stubble Burning — Air Quality — and COVID

- ✓ Pollution produced by agricultural practice may facilitate Covid-19 transmission and increase susceptibility. The increase amount of PM_{2.5} and PM₁₀ may attribute to the respiratory disease.
- ✓ Stubble burning releases VOCs and NO_x which combine to form ground-level ozone. Pollution plus coronavirus has become lethal for people. It can cause severe health issues.

Current Connect

- ✓ Covid-19 atmospheric particulate matter (PM) could create a suitable environment for transporting the virus at greater distances.
- ✓ PM induces inflammation in lung cells and exposure to PM could increase the susceptibility and severity of the Covid-19 patient symptoms. Increase in cases of co-infection with Covid-19 is likely to be increase.

Measures taken by Government

- The Centre will bring in a law, via ordinance, to address air pollution as well as check stubble burning in Delhi as well as the surrounding National Capital Region. The Commission for Air Quality Management in the National Capital Region and Adjoining Areas Ordinance of 2020 was promulgated by the Centre.
- The Delhi NCR already has a Graded Response Action Plan, which is overseen by the Environment Pollution Authority.
- In another significant development, the Punjab government directed manufacturers to install a straw management system in combined harvester machines. The straw management system cuts and mulches the leftover crop into the same field.
- Punjab government has appointed 8,000 nodal officers in villages that grow paddy. Over 23,000 crop residue management machines are being given to farmers for on-site management of straw.
- The National Green Tribunal (NGT) had banned crop residue burning in the states of Rajasthan, Uttar Pradesh, Haryana and Punjab.
- Burning crop residue is a crime under Section 188 of the IPC and under the Air and Pollution Control Act of 1981. However, government's implementation lacks strength.
- In 2014, the Union government released the National Policy for Management of Crop Residue, under which each state needs to have an action plan to stop residue burning by involving people at different levels—from communities to panchayats to state governments.

Possible Alternatives

Due to lack of effective policies, we are wasting precious bio-mass which could be used either as cattle feed or as fuel. And on the other hand, we are creating environmental hazard of smog and turning the country into a gas chamber. Following are the possible alternatives of stubble burning.

1. Waste Decomposer

- Scientists at the National Centre for Organic Farming have developed a 'Waste Decomposer' solution concocted with effective microorganisms that propel in-situ composting of the crop residue.
- The solution can decompose over 10,000 metric tons of bio waste in 30 days. The same can also be used in foliar spray and via drip irrigation.
- The 'Pusa Decomposer' developed by the Indian Agriculture Research Institute (IARI) in New Delhi as a solution to the problem of crop burning. It is capable of dealing with all kinds of bio-mass and it is completely organic and chemical free.

2. Converting Crop Stubble into Animal Feed and Manure

- In South India, stubble is not burnt as there's economic value as animal feed. There is need to adopt a do-ecology approach with farmers to convert rice stubble into income rather than making them agents of eco-disaster.
- Crop residuals can be used to feed cattle and can be utilized for making organic manures.

3. Happy Seeder

- Instead of burning the stubble, a tractor-mounted machine called the Happy Seeder "cuts and lifts rice straw, sows wheat into the bare soil, and deposits the straw over the sown area as mulch.
- Thus, it will "eliminate air pollution by crop burning and reduce greenhouse gas emissions (GHG) from on-farm activities by more than 78% relative to all burning options.

4. 'Raw' material for Industries

The alternative management practices include the incorporation of the stubble into the soil, use of stubble as fuel in power plants, use as raw material for pulp and paper industries, or

Current Connect

as biomass for biofuel production. It can also be used to generate compost and biochar, or as blend for the production of cement and bricks.

Way Forward

- ✚ A holistic approach is required to address crop residue burning. This includes a multi-disciplinary and multi-agency setting involving technical agencies, market-based economic tools, supporting agricultural and environmental policies, and awareness and capacity building for farmers.
- ✚ There is a dire need to incentivise the farmers for not burning the stubble, by providing economic value for this crop residue or stubble, which may be converted into either cattle feed or fuel (in the form of briquettes).
- ✚ The government should pave way for setting up “Agri- waste Collection Centres” alongside the “Paddy Purchase Centres”, where the farmers may sell their agri-waste at a reasonable price and earn some additional income and are not tempted to burn it.
- ✚ Farmer Producer Organizations (FPOs) or Farmers’ Co-operatives may be supported for purchasing of this agri-waste/ crop residue from the farmers and later selling it to industries that convert it into cattle feed or fuel briquettes.
- ✚ The industries which are converting this agri-waste/crop residue into wealth in the form of cattle feed or fuel briquettes, may also be suitably incentivised and subsidised.
- ✚ Encourage and incentivise the farmers to go for early paddy, so as to give them enough time to harvest and thereafter prepare their fields for the next Rabi crop.
- ✚ In order to pace up R & D regarding stubble, Government should encourages companies, investors and startups in this realm. Innovation will surely drive the way for sustainable agriculture.

Flash Flood Guidance System

About

India has launched first of its kind Flash Flood Guidance services for India and other South Asian countries -- Bangladesh, Bhutan, Nepal, and Sri Lanka -- to issue impact-based forecasting at the watershed and also city level, of floods which are very sudden and of short duration.

Key Points

- The South Asia FFGS is implemented by the World Meteorological Organization while National Oceanic and Atmospheric Administration (NOAA) is a satellite data provider into the System.
- It is part of a global FFGS which currently provides early warnings to three billion people – 40% of the world’s population – across more than 60 countries
- The Flash Flood Guidance is a robust system designed by the India Meteorological Department (IMD) to provide the necessary products in real-time to support the development of warnings for flash floods about 6-12 hours in advance at the watershed level with a resolution of 4kmx4km for the Flash Flood prone South Asian countries -- India, Nepal, Bhutan, Bangladesh, and Sri Lanka.
- Operated by the India Meteorological Department (IMD), the South Asia FFGS is now providing the nation’s nearly 1.6 billion people with effective flash flood guidance and forecasts.
- IMD acts as the regional centre covering Bhutan, Bangladesh, India, Nepal and Sri Lanka, providing forecast products, data and training.
- Since September 2020, the IMD has started issuing regional flash flood advisories to the Member countries (Bangladesh, Bhutan, India, Nepal and Sri Lanka) alerting NMHSs and stakeholders on possible flash flood risks and associated heavy rainfall and/or snowmelt daily.

Flash Floods

- Flash Floods are highly localized events of short duration with a very high peak and usually have less than six hours between the occurrence of the rainfall and peak flood.

Current Connect

- Flash Floods can be caused by a number of things, but is most often due to extremely heavy rainfall from thunderstorms. Flash Floods can occur due to Dam or Levee Breaks, and/or Mudslides (Debris Flow)
- Flash Flooding occurs so quickly that people are caught off-guard. Their situation may become dangerous if they encounter high, fast-moving water while traveling. If people are at their homes or businesses, the water may rise quickly and trap them, or cause damage to the property without them having a chance to protect the property.
- There is a general lack of flash flood warning capabilities and capacities of the nations across the world.
- Flash floods and riverine floods cause major loss of life and property in South Asia during the monsoon season. Due to the frequency of extreme precipitation, urbanization, land-use changes, the need for early warning systems becomes more important.

What needs to be done?

Structural measures- The construction of dams and river dikes, flood-control reservoirs, storm water detention basin, flood ways, channelization including deepening, widening and improving conveyance capacity, bank protection etc.

Non-structural measures- Flood forecasting and warning, floodplain management, flood insurance.

Persistent Organic Pollutants

About

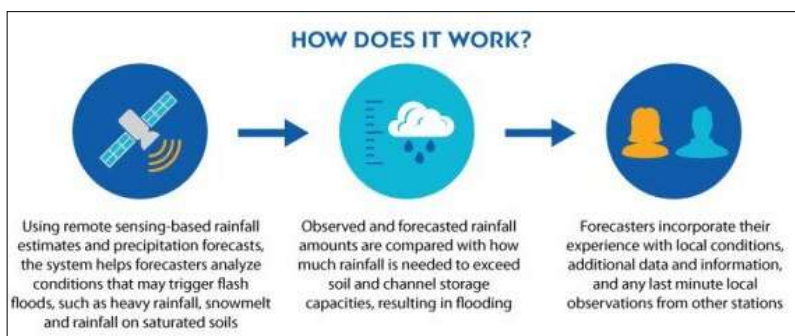
The Union Cabinet ratified the ban on seven chemicals that are hazardous to health and environment listed under the Stockholm Convention.

Pre-Connect

- The Stockholm Convention is a global treaty to protect human health and environment from POPs, which are identified chemical substances that persist in the environment, bio-accumulate in living organisms, adversely affect human health/ environment and have the property of long-range environmental transport (LRET).
- Exposure to POPs can lead to cancer, damage to central & peripheral nervous systems, diseases of immune system, reproductive disorders and interference with normal infant and child development.
- POPs are listed in various Annexes to the Stockholm Convention after thorough scientific research, deliberations and negotiations among member countries.
- Over 152 countries ratified the Convention and it entered into force, on 17 May 2004.

Highlights

- Considering its commitment towards providing safe environment and addressing human health risks, the Ministry of Environment, Forest and Climate Change (MoEFCC) had notified the 'Regulation of Persistent Organic Pollutants Rules, on March 5, 2018 under the provisions of Environment (Protection) Act, 1986.
- The regulation inter alia prohibited the manufacture, trade, use, import and export seven chemicals namely (i) Chlordecone, (ii) Hexabromobiphenyl, (iii) Hexabromodiphenyl ether and Heptabromodiphenylether (Commercial octa-BDE), (iv) Tetrabromodiphenyl ether and Pentabromodiphenyl ether (Commercial penta-BDE), (v) Pentachlorobenzene, (vi) Hexabromocyclododecane, and (vii) Hexachlorobutadiene, which were already listed as POPs under Stockholm Convention.
- The Cabinet's approval for ratification of POPs demonstrates India's commitment to meet its international obligations with regard to protection of environment and human health.



Current Connect

- It also indicates the resolve of the Government to take action on POPs by implementing control measures, develop and implement action plans for unintentionally produced chemicals, develop inventories of the chemicals' stockpiles and review as well as update its National Implementation Plan (NIP).
- The ratification process would enable India to access Global Environment Facility (GEF) financial resources in updating the NIP.
- The Cabinet further delegated its powers to ratify chemicals under the Stockholm Convention to Union Ministers of External Affairs (MEA) and Environment, Forest and Climate Change (MEFCC) in respect of POPs already regulated under the domestic regulations thereby streamlining the procedure.

Commission for NCR Air Quality

About

Recently, the President of India has signed a new ordinance to form a commission for air-quality management in the National Capital Region (NCR) and adjoining areas.

Background

- Delhi has had a very serious air pollution problem for some years, often at its worst in the winter months.
- In November 2018, levels reached 20 times the recommended World Health Organisation's safe limits for air pollution.
- It's been caused by growing volumes of traffic, construction and industrial activity, the burning of rubbish and crops, the use of fireworks during religious festivals and weather patterns which can trap polluted air in the lower atmosphere for long periods of time.
- The monitoring and management of air quality in the Delhi NCR region have been done inefficiently by multiple bodies till now.

Highlights

- New law through ordinance aims to set up a commission to tackle the problem of air pollution in Delhi-National Capital Region (NCR), amid Supreme Court hearings on the matter, with provisions of punishing violations of parameters laid down by it with a fine of up to ₹1 crore or a jail term of up to five years or both.
- The body, Commission for Air Quality Management in National Capital Region and Adjoining Areas, will have jurisdiction over Punjab, Haryana, Uttar Pradesh and Rajasthan — states which impact the Delhi-NCR air quality.
- The 18-member commission, whose members have yet to be selected, will coordinate inter-state and inter-ministerial actions to check air pollution. It will have the power to prohibit activities that are likely to cause or increase air pollution in the NCR and adjoining areas.
- It will also have the power to lay down parameters of air quality and emissions, discharge of pollutants, inspect premises violating the law on the basis of complaints and also to take suo motu cognisance of violations, and order closure of non-abiding industries or plants.
- Appeals in cases of non-compliance will lie only with the National Green Tribunal and not any civil court. Provisions of both stringent punishments and appeals are new and stronger measures, aimed at deterrence against violation of pollution norms.
- The body is proposed to replace multiple ad hoc committees and task forces set up under the Union environment ministry, Prime Minister's Office and Central Pollution Control Board (CPCB), besides the EPCA set up in 1998 by the Supreme Court. The Centre has dissolved the Environment Pollution (Prevention and Control) Authority for the NCR (EPCA) to make way for the functioning of the Commission.
- It will have three sub-committees — on monitoring and identification, safeguarding and enforcement, and research and development — to help address the problem of air pollution.
- The commission will be headed by a full-time chairperson who has been a secretary to the government of India or chief secretary of a state. It will have senior officials from the Union

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government and stakeholder states, besides experts from the Central Pollution Control Board (CPCB) and Indian Space Research Organisation. Experts and stakeholders from civil society are also likely to be co-opted in the body, which will look at strong public engagement to fight air pollution.

- The chairperson of the commission will be selected by a committee headed by the Union minister for environment, forest and climate change. It will also have on board the cabinet secretary and ministers for road transport and highways, commerce and industry, and science and tech.

Amendments to the Forest (Conservation) Act, 1980

About

The Union Ministry of Environment, Forest and Climate Change (MOEFCC) has proposed several amendments to the Forest (Conservation) Act, 1980, to facilitate infrastructure projects.

Background

- The Forest (Conservation) Act (FCA), 1980 is the foremost legislation that regulates deforestation in the country. It prohibits the felling of forests for any “non-forestry” use without prior clearance.
- Supreme Court in 1996 had extended the coverage of FCA to all areas that satisfied the dictionary definition of a forest; earlier, only lands specifically notified as forests were protected by the enforcement of the FCA.
- The FCA is legislation with five sections. The government seeks to amend section 1 and 2 of FCA—
 - Section 1: It defines the extent of coverage of the law
 - Section 2: It restricts activities in forest areas and
 - The rest deals with the creation of advisory committees, powers of rule-making and penalties.
- Several key amendments are—

Leases on forest land

- Section 2 of the FCA requires the central Government’s approval before assigning forest lands on lease to any private person / corporation / organisation not owned or controlled by the central government.
- This clause, however, has purportedly been deleted in the proposed amendment.
- This may mean that state governments can issue leases for the use of forest land without the Centre’s prior approval.

Exemptions to plantations

- Section 2 proposes to exempt plantation of native species of palm and oil-bearing trees from the definition of “non-forest purpose”.
- Since the FCA applies to conversion of forest land to “non-forest purpose”, this proposed amendment would effectively mean that anyone who wants to clear a natural forest to raise such plantations would not require any approval from the government.
- The government will only impose conditions for compensatory afforestation and payment of other levies and compensations.

Exemptions to wildlife tourism, training infrastructure

- The FCA classifies activities related to wildlife conservation as “non-forestry” purposes, which means activities such as building check posts, communication infrastructure, fencing, boundary, etc do not need a forest clearance.

States may grant forest clearance for strategic projects

- The proposed Section 2A may empower the central government to provide for state government approval for projects on forest land for “strategic” or security projects of “national importance”, according to the documents accessed.
- There is no clarity on the scope of these terms, or on the determination of national importance, or illustrative examples of such projects.

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Creation of 'No-Go areas'

- The proposed amendment inserts a new Section (2B), which will allow the central government to delineate forest areas where conversion to specific non-forest uses would not be permitted for a fixed period of time.
- The delineation would be based on the basis of pre-defined criteria. This could mean, for instance, that a certain dense forest would not be allowed to be converted to a coal mine for the next 30 years, but it could be allowed to be cleared for a thermal power plant.
- The proposed section 1A claims to seek completion of this process within a year of the commencement of the amendment.

Expected Outcomes

- ✓ This move will facilitate rapid infrastructure growth, which is imperative for economic growth, along with that it would also enable ease of doing business in diverse sector. Amendments will also ensure that projects of strategic importance can be carried out without any legal and procedural hurdle.
- ✓ The move is likely to reduce the burden of environmental litigation and facilitate the private sector in managing the forest patches with best available standards of conservation.
- ✓ Proposed Amendments will reduce the time delay during the consideration of advisory committee regarding the forest clearance, management and diversion for its use in non-forest purpose.
- ✓ Infrastructure growth is likely to generate livelihood opportunities for marginalized forest dwellers, development of transport line will help to integrate forest communities with mainstream society.

Key Concerns/Consequences

- This move would discourage people's collective participation in conservation and management of forest and forest land. Rights provided under the Forest Rights Act (FRA), 2006 will be undermined and opinion of indigenous people may not be considered, and this may create a political and governance challenge.
- Interference in forest's tribal communities would invite resistance from tribal communities. De-regulating several regulations may invite corrupt practices, illegal exploitation of forest resources and timber extraction.
- This move aimed to give exemptions to railways, roads, tree plantations, oil exploration and wildlife tourism. Such steps could have severe impact on forest diversity and could cause large scale deforestation which could become beyond management.
- Generally, Forest is always considered as collective right. Transferring its ownership right to private entities may invite resistance from active citizenry.

Way Forward

- ✚ Community-led approach is much needed. Community-led initiatives have successfully regenerated forests by adopting sustainable- use practices, regeneration through traditional knowledge of forests and species, guarding and penalizing poachers, among others.
- ✚ There is dire need to standardize the process of environmental impact assessment (EIA) in order to reduce faulty and arbitrary assessment reporting, meanwhile there is need to streamline the process of clearance by state government and other key authorities.

Issue of Marine Plastic

About

The Ministry of Housing and Urban Affairs signed an agreement on technical cooperation titled—'Cities Combating Plastic Entering the Marine Environment' at a virtual ceremony.

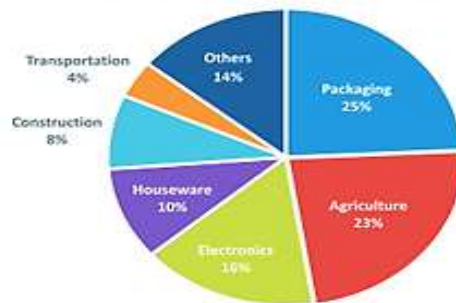
- This project is envisioned under the joint declaration of intent regarding cooperation in the field of 'Prevention of Marine Litter' signed between India and Germany in 2019.
- The project, aimed at enhancing practices to prevent plastic entering the marine environment, and will be undertaken at the national level, and selected states such as—

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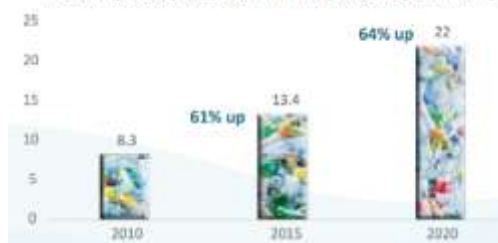
–Uttar Pradesh, Kerala and Andaman & Nicobar Islands and in the cities of Kanpur, Kochi and Port Blair for a period of three and a half years.

- This project is expected to foster improvements in segregation, enable cities to improve collection, segregation and marketing of plastic waste, to prevent plastic disposal to water bodies, and to improve handling of port and marine waste collection, transportation, treatment and disposal of waste in municipalities, thereby establishing an efficient system, that ensures no waste finds its way into rivers or oceans.
- This will be combined with data management and reporting systems, civil society involvement and increased cooperation with recyclers and the recycling industry through a digital platform.
- The project's outcomes are completely in line with the objectives of Swachh Bharat Mission-Urban focusing on sustainable solid waste management.

Per capita consumption of plastic

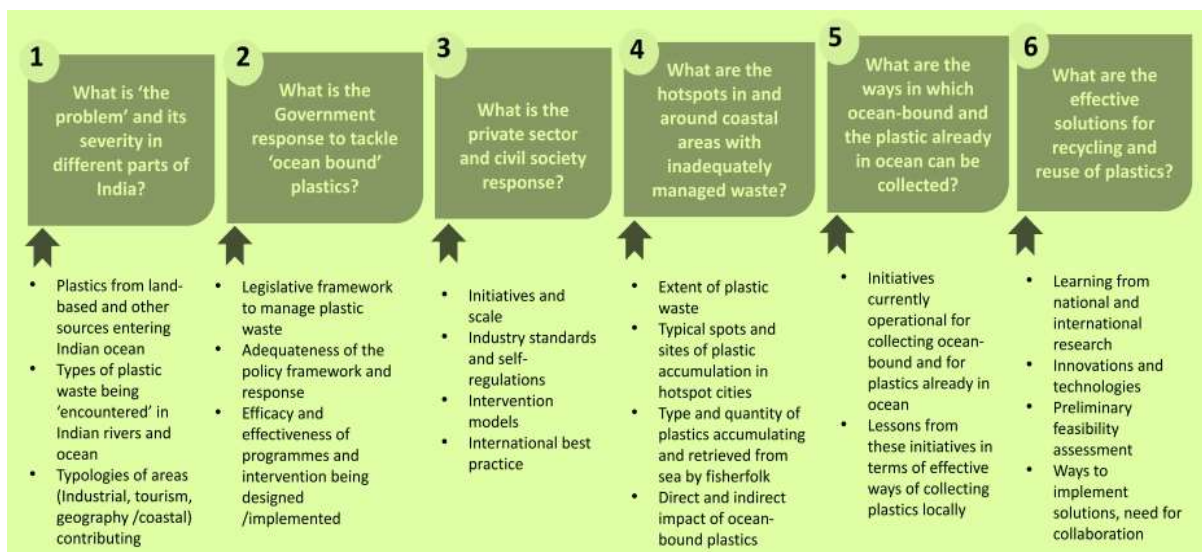


Trend in plastic production in India (m tonne per annum)



State of Plastic and Marine Pollution in India

- In India, plastic has quickly replaced usage of other materials including rubber, metal, stone, concrete, wood, etc. The growth of the petrochemical industry and the increased per capita consumption of plastic accelerated the plastic production in India.
- In recent times, the level of plastic waste that has accumulated in oceans and marine ecosystems through the increasing production and use of durable synthetic materials has alarmed the public and policy makers alike.
- It is estimated that 15-20% of all plastics are entering oceans via riverine ecosystems of which 90% are contributed by 10 of the world's most polluting rivers. **Two of these river systems are located in India, namely Ganga and Brahmaputra.**
- Ocean bound plastic waste has two main sources namely land based and sea based. Several reports suggested that about 80% of ocean bound plastic is land based and 20% is sea based.



Impacts of plastic on marine life

- ✓ Marine litter threatens ecosystems and adversely affects fishery and tourism industries around the globe.

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- ✓ In addition to negative economic impact, it affects public health with increased concerns about micro-plastic and risk of particles entering the food chain.
- ✓ Plastic waste kills up to a million seabirds a year. As with sea turtles, when seabirds ingest plastic, it takes up room in their stomachs causing starvation.
- ✓ Plastic pollution threatens food safety and quality, human health, coastal tourism, and contributes to climate change.

Way Forward

- To effectively address the issue of marine plastics, research and innovation should be supported and augmented.
- Knowledge of the full extent of plastic pollution and its impacts would provide policy-makers, manufacturers and consumers with scientific evidence needed to spearhead appropriate technological, behavioural and policy solutions.
- It would also accelerate the conceptualisation of new technology, materials or products to replace plastics.
- Adopting Zero waste approach- The zero-waste hierarchy is defined as the “progression of policies and strategies to support the Zero Waste system, from highest and best to lowest use of materials”.
- The 5 levels are: Reduce (Most preferred), Reuse, Recycle, Recover, and Landfill (Least preferred).
- Governments, research institutions and industries also need to work collaboratively redesigning products, and rethink their usage and disposal, in order to reduce microplastics waste for instance—from pellets, synthetic textiles and tyres.
- Recycling and reuse of plastic materials are the most effective actions available to reduce the burden of domestic waste. Along with that genuine legal effort should be adopted to combat the marine pollution.

Protection Rules for Exotic Animals not included in WPA

About

Recently, Delhi High Court issued an order guiding the Union Government to take a decision on framing rules to provide protection to exotic animals which are currently not under the ambit of the Wildlife (Protection) Act (WPA), 1972.

Background

- Wildlife (Protection) Act (WPA), 1972 is aimed to protect animal and plants species. It restricts the hunting of wild animal, prohibits the uprooting, damage, collection, possession or selling of any specified plant from any forest land and has various schedules to protect species.

Schedule-I	It cover species under 'endangered species' Absolute protection is provided to listed species.
Schedule II	Animals listed under this schedule are also conferred high protection. Their trade is prohibited.
Schedule III & IV	These schedule provided protection to species but the penalty for any violation is less.
Schedule V	It contains animals that can be hunted. When any species is declared vermin, it is considered to be placed in Schedule V.
Schedule VI	This schedule provides for regulation in cultivation of a specified plant and restricts its possession, sale and transportation. Both cultivation and trade of specified plants can only be carried out with prior permission of competent authority.

- A wild animal covered under above schedules can be hunted or killed with the prior permission of the Chief Wildlife Warden (CWLW) of the state under certain condition.

Importance of the Ruling

- Animals and many species are protected under WPA. Many of birds and animals are out from the ambit of WPA. Consequently, birds and animals are possessed by

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individuals, some of which may be invasive species and have adverse impact on the exiting eco-system. Such ruling may force government to create a database of such species, ensure adequate protection and lastly illegal trafficking can be checked.

- Along with reduced instances of trafficking, such move will help to check exposure to the Zoonotic disease. Additionally, illegal trade can also be checked.
- Proper strategy and programmes can be implemented to save ecosystem from the threat of invasive species. Habitat destruction can also be checked.

Menace of Exotic Animal Trafficking in India

- ✓ Since there is a complete ban on selling Indian species under the Wildlife Protection Act, smugglers have shifted to the exotic animal trade.
- ✓ There have been multiple instances in the last one year when exotic animals have been seized by different enforcement agencies across northeast India.
- ✓ Exotic animals including rare species like leopard tortoise, red-footed tortoise, yellow, orange and green iguana, bearded dragon and albino iguana around the Friendship Bridge over the Tayo river near the India-Myanmar border in Champai district of Mizoram has been seized by authorities.
- ✓ India is now slowly emerging as a major demand market for exotic animals

Government Advisory

- To regulate this growing undocumented market of exotic animals in the country, the Ministry of Environment, Forest and Climate Change last year issued an advisory for dealing with the declaration of stock of exotic live species (species listed under Appendix I, II and III of CITES), import of exotic live species, registration of progeny of previously held stock and transfer/transport of stock in India.
- According to a report published recently in India-Spend, 32,645 Indians declared their stock of exotic animals till February. Initially, a six-month window open till December 15, 2020, was given to Indians willing to voluntarily declare their stock of exotic pets, though later the window was extended till March 15, 2021.

Way Forward

- ✚ United efforts are required to ban and restrict illicit wildlife trade by Governments at international level; this would reduce the demand and hence reduce the trade itself.
- ✚ Bringing in a stricter domestic trade regulation can help to boost the population of endangered animals. Moreover, the funding needs to be increased for tackling the poachers.
- ✚ People's empowerment and engagement needs to be enhanced to widen the scope of 'people participation' in order to track, report and monitor the instances of illicit wildlife trade.

Science and Technology

Supercomputers in India

Context

- Supercomputing in India has a history going back to the 1980s. The Government of India created an indigenous development programme as they had difficulty purchasing foreign supercomputers. As of June 2020, when ranking by number of supercomputer systems in the TOP500 list, India is ranked 23rd in the world.

National Supercomputing Mission

- In 2015 the Ministry of Electronics and Information Technology announced a "National Supercomputing Mission" (NSM) to install 73 indigenous supercomputers throughout the country by 2022. This is a seven-year program worth \$730 million (Rs. 4,500 crore). Whilst previously computer was assembled in India, the NSM aims to produce the components within the country. The NSM is being implemented by C-DAC and the Indian Institute of Science.
- The aim is to create a cluster of geographically-distributed high-performance computing centres linked over a high-speed network, connecting various academic and research institutions across India. This has been dubbed the "National Knowledge Network" (NKN). The mission involves both capacity and capability machines and includes standing up three petascale supercomputers.

Recent Developments

- Two supercomputers from India — PARAM Siddhi-AI and Mihir, have been ranked 63rd and 146th, respectively, and remain the only two supercomputers from India in the latest list of TOP500 released recently.
- PARAM Siddhi-AI has a Rpeak capacity of 5.267 Petaflops and Rmax capacity of 4.6 Petaflops. It was led and built on NVIDIA DGX SuperPOD architecture. The system, jointly built by the Department of Science and Technology and Ministry of Electronics and IT under the National Supercomputing Mission, was conceptualised by the Centre for Development of Advanced Computing.
- This Artificial Intelligence-based system's wide applications cover advanced materials, education, space, agriculture, defence and national security, computational chemistry and astrophysics, drug design and preventive healthcare systems, as well as flood forecasting in major cities like Delhi, Mumbai, Chennai, Patna and Guwahati.
- 'Mihir' is a 2.8 Petaflop supercomputer which has been operational at the National Centre for Medium Range Weather Forecast (NCMRWF), Noida. It is one of the powerful systems owned by the Ministry of Earth Sciences and has helped improve India's forecasting skills.

Significance of supercomputers in India

- Many of the institutions across India like IITs in Kharagpur, Madras, Goa and Palakkad will soon house the National Centre for Human Resource Development. At these centres, skilling and training facilities will be provided to the user communities aimed at familiarising themselves with next-generation technology, high-performance computing and artificial intelligence.
- Apart from academia and research institutions, open access of supercomputing facilities will be extended even to industries and start-ups.
- Sectors like health, climate modelling, oil explorations, etc. will enjoy benefits of supercomputers, which will in turn contribute towards the socio-economic upliftment of the nation.
- Employment generation for skilled work force: Under NSM, the long-term plan is to build a strong base of 20,000 skilled persons over the next five years who will be equipped to handle the complexities of supercomputers.

India: Emerging Leader in Supercomputing

- India is fast emerging a leader in high power computing with the National Super Computing Mission (NSM) boosting it to meet the increasing computational demands of academia, researchers, MSMEs, and startups in areas like oil exploration, flood prediction as well as genomics and drug discovery.
- Computing infrastructure has already been installed in four premier institutions and installation work is in rapid progress in 9 more. Completion in of Phase II of NSM in September 2021 will take the country's computing power to 16 Petaflops (PF).
- MoUs have been signed with a total of 14 premier institutions of India for establishing Supercomputing Infrastructure with Assembly and Manufacturing in India. These include IITs, NITs, National Labs, and IISERs.
- The NSM is setting up a grid of supercomputing facilities in academic and research institutions across the country. Part of this is being imported from abroad and part built indigenously. The mission is implemented by the Centre for Development of Advanced Computing (C-DAC), Pune, and the Indian Institute of Science (IISc), Bengaluru.
- PARAM Shivay, the first supercomputer assembled indigenously, was installed in IIT (BHU), followed by PARAM Shakti, PARAM Brahma, PARAM Yukti, PARAMSanganak at IIT-Kharagpur IISER, Pune, JNCASR, Bengaluru and IIT Kanpur respectively.
- PARAM Siddhi - AI, the high-performance computing-artificial intelligence (HPC-AI) supercomputer, has achieved global ranking of 62 in top 500 most powerful supercomputer systems in the world, released on 16th November 2020.
- The mission has also created the next generation of supercomputer experts by training more than 4500 HPC aware manpower and faculties till date.

Conclusion

- Given the current pace at which things are moving forward, experts suggest that India may soon have motherboards and sub-systems manufactured in the country, making supercomputers indigenously designed and manufactured. The National Super Computing Mission (NSM) is rapidly boosting high power computing in the country through its various phases to meet the increasing computational demands of academia, researchers, MSMEs and startups in areas like oil exploration, flood prediction, genomics and drug discovery.

Quantum Key Distribution (QKD) Technology
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Context

- C-DOT's (Centre for Development of Telematics) Quantum Communication Lab has recently been inaugurated by the government and it has unveiled the indigenously developed Quantum Key Distribution (QKD) solution. QKD, also called Quantum Cryptography, is a mechanism to develop secure communication
- Quantum cryptography is a technology that uses quantum physics to secure the distribution of symmetric encryption keys. A more accurate name for it is quantum key distribution (QKD). It works by sending photons, which are "quantum particles" of light, across an optical link. QKD technology will be used to enable start-ups and small and medium enterprises in the domain of quantum information technologies.
- Quantum key distribution (QKD) uses individual photons for the exchange of cryptographic key data between two users, where each photon represents a single bit of data. The value of the bit, a 1 or a 0, is determined by states of the photon such as polarization or spin.
- At the sender's end, a laser generates a series of single photons, each in one of two polarizations: horizontal or vertical. The polarization of the photon is measured at the receiver's end. If an eavesdropper (third party) intercepts the photon to determine its polarization, the photon is destroyed in the process, and the eavesdropper would have to generate a new, duplicate photon to pass on to the receiver.
- QKD works by transmitting millions of polarized light particles (photons) over a fiber optic cable from one entity to another. Each photon has a random quantum state, and collectively all the photons create a bit stream of ones and zeros.

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What makes QKD unbreakable?

- The security of QKD stems from the ability to detect any intrusion on the QKD transmission. Because of the unique and fragile properties of photons, any third party (or eavesdropper) who tries to read or copy the photons in any way will change the photons' state.
- The change will be detected by the endpoints, alerting them that the key has been tampered with and must be discarded. A new key is then transmitted. Moreover, since the keys generated are truly random, they are protected from future hacking attempts.

Uses of QKD

- QKD is one of the technologies “to protect and future-proof data against developments to computer power, new attack strategies, weak random number generators, and the emergence of quantum computers.”
- QKD is primarily a mechanism to undertake secure communication which utilises a cryptographic protocol involving various components of quantum mechanics.
- The technology enables two communicating sides to come up with random secret keys shared by both of them and known exclusively to them, so only they can use it to encrypt and decrypt messages, thus achieving highly-secure communication.
- It is useful in designing cryptographic algorithms that adequately scramble the target data.
- It helps in developing strong encryption keys to lock and unlock the algorithm, and securely distributing the keys between communicating devices.

Facial Recognition Technology

Context

- The central government has approved the deployment of its Automated Facial Recognition System (AFRS) to identity information are already housed in a database maintained by the National Crime Records Bureau (NRCB).
- Facial recognition as a technology used to analyse human faces for the purposes of ‘verification’ and ‘identification’ of individuals. It is based on the application of Machine Learning (ML) which is the most common technique of A.I.
- The face technology has many variants like **Face detection technology** determines whether the image contains a face. **Face analysis technology** aims to identify attributes such as gender, age, or emotion from detected faces. **Face recognition technology** compares an individual’s facial features to available images for verification or identification purposes.

How a facial recognition application works?

- Facial recognition is a category of biometric software (Biometrics is the measurement and statistical analysis of people's unique physical and behavioral characteristics) that maps an individual's facial features mathematically and stores the data as a face print. The software uses deep learning algorithms to compare a live capture or digital image to the stored face print in order to verify an individual's identity.

Automated facial recognition systems in use in India

- The Request for Proposal (RFP) released by the NCRB last year stated the Automated Facial Recognition System will provide a vital and necessary role in improving criminal identification and verification by way of the system’s rapid recording, processing, analysis, retrieval, and sharing of biometric identity information between different law enforcement and India’s intelligence services.
- The NCRB, which manages crime data for police, would like to use automated facial recognition to identify criminals, missing people, and unidentified dead bodies, as well as for “crime prevention”.
- Ministry of Civil Aviation’s “DigiYatra” using facial recognition for airport entry.

Benefits of Facial Recognition Technology:

- **Facial recognition is used when issuing identity documents** and, most often, combined with other biometric technologies such as fingerprints (preventing ID fraud and identity theft).

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- **No need to physically contact a device for authentication-** compared to other contact-based biometric authentication techniques such as fingerprint scanners.
- **Face match is used at border checks** to compare the portrait on a digitized biometric passport with the holder's face. It can also be employed in police checks.
- **Drones combined with aerial cameras** offer an interesting combination for facial recognition applied to large areas during mass events.
- **Facial recognition CCTV systems** can improve performance in carrying public security missions like:
 - Finding missing children and disoriented adults, examples from Chennai and Nepal show how facial recognition has played a critical role in finding missing children, preventing human trafficking, and curbing crime.
 - Identify and track criminals.
 - Support and accelerate investigations.
- **In health:** track a patient's use of medication more accurately, detect genetic diseases, support pain management procedures.
- **In Marketing and retail:** By placing cameras in retail outlets, it is now possible to analyse shoppers' behaviour and improve the customer purchase process. E.g., since 2017, KFC, the American king of fried chicken, and Chinese retail and tech giant Alibaba have been testing a face recognition payment solution in Hangzhou, China.

Concerns about Facial Recognition Technology

- It poses a threat to the fundamental rights to privacy and freedom of speech and expression because it does not satisfy the threshold the Supreme Court had set in its landmark privacy judgment in the 'Justice K.S. Puttaswamy Vs Union of India' case.
- Issue of not conducting "privacy impact assessment" prior to deployment of the facial recognition system (FRS) by agencies.
- Issue of 'function creep'- A function creep happens when someone uses information for a purpose that is not the original specified purpose.
- Threat to intensify mass surveillance by government and security agencies.
- The accuracy of the facial recognition software is questionable. It was found that when the Delhi Police applied the facial recognition technology to find missing children, the success rate was less than 1 percent.
- The technology could not even differentiate between genders.
- The technology suffers from ethnic and racial biases globally.
- The current application of facial recognition for public services does raise reasonable questions and concerns about privacy and rights. However, given this technology's potential to solve problems, if applied properly in specific cases and contexts and with proper regulatory mechanisms, it can be leveraged in a beneficial manner and used in many sectors ranging from security to health.

LiDAR Technology

Context

- National High Speed Rail Corporation Limited has announced that it will adopt Light Detection and Ranging Survey (LiDAR) technique using Laser enabled equipment mounted on a Helicopter for conducting ground survey for the preparation of Detailed Project Report for the proposed Delhi-Varanasi HSR corridor.
- This technique uses a combination of Laser data, GPS data, flight parameters and actual photographs to give accurate survey data. Based on the findings of the survey, designing of the vertical & horizontal alignment, structures, location of the stations and depots, Land requirement for the corridor, identification of project affected plots/structures, Right of Way etc. are decided.
- Lidar, which stands for *Light Detection and Ranging*, is a remote sensing method that uses light in the form of a pulsed laser to measure ranges (variable distances) to the Earth.

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- These light pulses—combined with other data recorded by the airborne system — generate precise, three-dimensional information about the shape of the Earth and its surface characteristics.
- A Lidar instrument principally consists of a laser, a scanner, and a specialized GPS receiver.
- Airplanes and helicopters are the most commonly used platforms for acquiring Lidar data over broad areas.
- Two types of Lidar are topographic and bathymetric. Topographic Lidar typically uses a near-infrared laser to map the land, while bathymetric Lidar uses water-penetrating green light to also measure seafloor and riverbed elevations.
- Lidar systems allow scientists and mapping professionals to examine both natural and manmade environments with accuracy, precision, and flexibility.

5G Technology and India

- 5G is the fifth-generation cellular network technology. It is designed to improve network connections by addressing the legacy issues of speed, latency and utility, which the earlier generations and the current generation of mobile networks could not address.
- 5G is promised to deliver data speed at a rate 100 times faster than 4G networks. Importantly, it is designed to transmit data almost instantly with a network latency of less than 10ms.
- It will also have an enhanced throughput to handle more simultaneous connections at a time than current-generation networks.
- 5G is the latest upgrade in the long-term evolution (LTE) mobile broadband networks. 5G mainly works in 3 bands, namely low, mid and high frequency spectrum — all of which have their own uses as well as limitations.

Where does India stand in the 5G technology race?

- On par with the global players, India had, in 2018, planned to start 5G services as soon as possible, with an aim to capitalise on the better network speeds and strength that the technology promised.
- All the three private telecom players, Reliance JioInfocomm, Bharti Airtel and Vi, have been urging the DoT to lay out a clear road map of spectrum allocation and 5G frequency bands, so that they would be able to plan the roll out of their services accordingly. One big hurdle, however, is the lack of flow of cash and adequate capital with at least two of the three players, namely Bharti Airtel and Vodafone Idea.
- On the other hand, Reliance Jio plans to launch an indigenously built 5G network for the country as early as the second half of this year. The company is said to have a complete end-to-end 5G solution prepared by the company itself that is ready for deployment once the networks are in place. This solution can also be deployed by other telecom operators as a complete managed service.

Pros of 5G

- **High speeds**- 5G works faster on mobile phones and other devices when compared to 4G and 4G LTE. It allows users to download movies, videos, and music in seconds as opposed to minutes. The network has 20 Gbps speed enabling organizations to use the same for services such as automation, advanced web conferencing, etc. A recent survey says that consumers who used 5G saved nearly 23 hours per day in the downloading process.
- **Low latency** - 5G has low latency when compared to 4G that will support new applications such as AI, IoT, and virtual reality efficiently. Not only that, it enables mobile phone users to open a webpage and browse things without any hassles. Another thing is that it gives ways to access the internet anytime when looking for some important information.
- **Increased capacity** - 5G has the capacity to deliver up to 100 times more capacity than 4G. It allows companies to switch between cellular and Wi-Fi wireless strategies that will

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help a lot to experience better performance. Apart from that, it provides methods to access the internet with high efficiency.

- **More bandwidth-** One of the main advantages of 5G is that it increases more bandwidth that will help transfer the data as soon as possible. Furthermore, mobile phone users can ensure a faster connection with more bandwidth after choosing a 5G network.
- **Powering innovation**
5G technology is the perfect choice for connecting with a whole range of different devices including drones and sensors. It gives ways to power the adoption of IoT allowing industries to enhance their productivity and other things.
- **Less tower congestion**
4G cellular networks often get congested which will result in various problems while accessing important data. On the other hand, 5G networks allow users to avoid them due to better speed and more bandwidth.

Cons of 5G

- **Limited global coverage**
The main disadvantage of 5G is that it has limited global coverage and is available only in specific locations. Only cities can benefit a lot from 5G network and remote areas may not get the coverage it for some years. Moreover, the expenses for setting tower stations are high when compared to other networks.
- **Decreased broadcast distance**
Although 5G works fast at high speed, it won't travel as far when compared to 4G. Moreover, tall buildings and trees may block the frequency of the 5G network that will result in various problems. Therefore, it requires more towers for coverage that is time-consuming and expensive. Rain can also cause problems to 5G coverage that needs more protection.
- **Upload speeds**
5G technologies allow mobile phone users to ensure high download speeds. On the other hand, the upload speeds are not over 100 Mbps when compared to 4G. Furthermore, mobile phones need better battery technology while using a 5G connection. Many phone users say that they experience more heat on their devices while running 5G.
- **Weakened device batteries**
Phones that use a 5G connection will result in a huge battery drain that reduces the lifespan to a large extent. Hence, manufacturers need to invest in new battery technologies to protect the battery from damages and other problems.
- **Cybersecurity:** Cybersecurity is one of the drawbacks of 5G because it will result in hacking. The expansion in the bandwidth enables criminals to steal the database with ease. Moreover, it uses software that leads to vulnerable attacks. As 5G connects with more devices, the chances of attacks are very high. Hence, companies and businesses should protect their infrastructure with a security operations center that will result in additional expenses.
- **Lack of encryption early in the connection process**
5G lacks encryption and hackers can plan their attacks with more precision that will affect the companies to a large extent. More bandwidth will strain current security monitoring and the network requires security measures to prevent cyber threats. Consumer education is necessary for enhancing security efficiently. On the other hand, efforts are being taken to improve the security along with the initial rollout of 5G. Keeping all IoT devices updated with security patches will help overcome the problems with optimal results. Not only that, 5G users should follow some other measures to minimize unwanted problems.

Science, Technology and Innovation Policy

Context

- Recently, the Department of Science and Technology released the draft of 5th National Science, Technology, and Innovation Policy for public consultation.

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- The policy drafted through a 4-track process of consultations during last 6 months aims to bring about profound changes through short, medium and long-term mission mode projects by building a nurtured ecosystem that promotes research and innovation on the part of both individuals and organizations.
- It aims to foster, develop, and nurture a robust system for evidence and stakeholder-driven science, technology and innovation (STI) planning, information, evaluation, and policy research in India.
- The objective of the policy is to identify and address strengths and weaknesses of the Indian STI ecosystem to catalyse socio-economic development of the country and also make the Indian STI ecosystem globally competitive.

An overview:

- For India to march ahead on a sustainable development pathway to include economic development, social inclusion and environmental sustainability for achieving an "Atmanirbhar Bharat", a greater emphasis may be needed on promoting traditional knowledge systems, developing indigenous technologies and encouraging grassroots innovations.
- The COVID-19 pandemic provided a compelling opportunity for R&D institutions, academia and industry to work in unison for sharing of purpose, synergy, collaboration and cooperation.
- The STIP will be guided by its broad vision of achieving technological self-reliance and position India among the top three scientific superpowers in the decade to come, to attract, nurture, strengthen and retain critical human capital through a **'people centric' STI ecosystem**, to double the number of Full-Time Equivalent (FTE) researchers, Gross Domestic Expenditure on R&D (GERD) and private sector contribution to the GERD every 5 years and to build individual and institutional excellence in STI with the aspiration to achieve the highest level of global recognitions and awards in the coming decade.
- The new policy, STIP, revolves around the core principles of being decentralized, **evidence-informed, bottom-up, experts-driven, and inclusive**.
- Also, it aims to bring in the concept of 'dynamic policy' with a robust policy governance mechanism incorporating features such as implementation strategy, periodic review, policy evaluation, feedback, and adaptation, and most importantly, a timely exit strategy for various policy instruments.
- The formulation process, by design, envisioned as a very inclusive and participative model with intense interconnectedness among different tracks of activities.

Liberalisation of Geo-Spatial Data

Context

- The Ministry of Science and Technology recently released new guidelines for the Geo-spatial sector in India, which deregulates existing protocol and liberalises the sector to a more competitive field.
- Geospatial data is data about objects, events, or phenomena that have a location on the surface of the earth. The location may be static in the short term, like the location of a road, an earthquake event, malnutrition among children, or dynamic like a moving vehicle or pedestrian, the spread of an infectious disease.
- Geospatial data combines location information, attribute information (the characteristics of the object, event, or phenomena concerned), and often also temporal information or the time at which the location and attributes exist.
- Geo-spatial data usually involves information of public interest such as roads, localities, rail lines, water bodies, and public amenities.
- The past decade has seen an increase in the use of geo-spatial data in daily life with various apps such as food delivery apps like Swiggy or Zomato, e-commerce like Amazon or even weather apps.

Factors leading to deregulation of geo-spatial data

- This system of acquiring licenses or permission, and the red tape involved, can take months, delaying projects, especially those that are in mission mode – for both Indian companies as well as government agencies.

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- The deregulation eliminates the requirement of permissions as well as scrutiny, even for security concerns. Indian companies now can self-attest, conforming to government guidelines without actually having to be monitored by a government agency- these guidelines therefore place a great deal of trust in Indian entities.
- There is also a huge lack of data in the country which impedes planning for infrastructure, development and businesses which are data-based. The mapping of the entire country, that too with high accuracy, by the Indian government alone could take decades. The government therefore felt an urgent need to incentivise the geo-spatial sector for Indian companies and increased investment from private players in the sector.

Impact of the move

- By liberalising the system, the government will ensure more players in the field, competitiveness of Indian companies in the global market, and more accurate data available to both the government to formulate plans and administer, but also for individual Indians.
- Start-ups and businesses can now also use this data in setting up their concerns, especially in the sector of e-commerce or geo-spatial based apps – which in turn will increase employment in these sectors.
- Indian companies will be able to develop indigenous apps, for example an Indian version of google maps.
- There is also likely to be an increase in public-private partnerships with the opening of this sector with data collection companies working with the Indian government on various sectoral projects.
- The government also expects an increase in investment in the geo-spatial sector by companies, and also an increase in export of data to foreign companies and countries, which in turn will boost the economy.

Conclusion

- The next generation of technologies will use hyper-resolution maps. Availability of comprehensive, highly accurate, granular and constantly updated representation of Geospatial Data will significantly benefit diverse sectors of the economy and will significantly boost innovation in the country and greatly enhance the preparedness of the country for emergency response.
- The availability of data and modern mapping technologies to Indian companies is also crucial for achieving the vision of AatmaNirbhar Bharat and a five trillion-dollar economy. What is readily available globally does not need to be regulated in India.
- This is one more distinct example of removal of some of the colonial legacies that India was still grappling with and deregulation of Map-making is historic in the sense that Geo-Map is now going to be recognised as an instrument for development rather than only a tool for securing the country.

Genome Mapping in the Indian Ocean

Context

- The National Institute of Oceanography (NIO) with research vessel Sindhu Sadhana will spend the next three months traversing the course of over 10,000 nautical miles in the Indian Ocean on a research project to reveal the internal working of the body of the ocean at a cellular level.
- The first-of-its-kind research project in the country is aimed at understanding the biochemistry and the response of the ocean to climate change, nutrient stress and increasing pollution. The researchers will collect samples from various stretches of the ocean at an average depth of about 5 km. Just like gene mapping is carried out on blood samples collected from humans, the scientists will map these in the bacteria, microbes found in the ocean. The mapping of the Deoxyribonucleic acid (DNA) and Ribonucleic acid (RNA) will show the nutrients present in them, and also those lacking in different parts of the ocean.

Expected Outcomes of the Study

- It will help scientists understand the internal working of the ecosystem of the Indian Ocean.

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- The research will enable scientists to identify the factors controlling the changes in RNA, DNA in the oceans, and various stressors impacting them.
- The ocean has several micronutrients like nitrates, sulphates and silicates, minerals like iron ore and zinc, and trace metals like cadmium or copper. The genome mapping will show the presence of which these microbes have adapted to, in addition to their reaction to atmospheric carbon dioxide. This will help in identifying which part of the ocean has a greater concentration of which mineral or element.
- Scientists will then use these as tracers to tackle the causative factors for excess or lack of a certain mineral or element and suggest possible solutions for their mitigation.
- In addition, the large pool of RNA, DNA library of the oceans will be utilised for using the Indian Ocean to human benefit in the future.
- According to the NIO, rapid advances in sequencing technologies and bioinformatics have enabled exploration of the ocean genome. Exploring the ocean genome will enable an increase in the growing number of commercial biotechnology applications, extending from multiple anticancer treatments to cosmetics and industrial enzymes, to antiviral molecules etc.
- Exploration of the ocean at a genetic level will result in new insights into taxonomy and adaptive capacity that can help optimize conservation efforts.

What is the objective of studying the interactions of trace metals and marine plant and animal life?

- Trace metals like cadmium or copper are supplied to oceans via continental run-offs, atmospheric deposition, hydrothermal activities and continental shelf interaction. They are essential for ocean productivity.
- Scientists say that it is important to understand the interactions of trace metals with marine biota “for having a holistic understanding about nutrient cycling and productivity of the oceans”.
- Apart from their reactions on marine life, isotopic forms of trace metals can be utilised to track the movement of water masses responsible for ocean circulation and as tools to study the biological, geochemical and ecosystem processes and food web analyses.
- The NIO’s project is expected to generate new information about trace metals from underexplored regions of the Indian Ocean, the third largest water body in the world, covering about 20 per cent of the Earth’s water surface.

The Biotechnology sector in India

- The Biotechnology sector in India has emerged as an integral part of the Indian economy over the past few decades, and the Government of India is playing a transformative and catalytic role in building a USD 150 billion bio-economy by 2025. The Indian Biotechnology industry that was valued at \$70 billion in 2020.
- The sector is recognized as one of the key drivers for India to achieve its USD 5 trillion target. The sector is divided into five major segments: BioPharma, BioAgriculture, BioIndustrial, and the combined segment of BioServices comprising of BioIT, CROs, and Research Services.
- The percentage share of the biotechnology segments is:
 - Bio-Pharmaceuticals: 62%
 - CRO/BioIT/Research: 15%
 - Bio-agriculture: 16%
 - Bio-Industrial: 7%
- India is also one of the first countries to have a department dedicated to Biotechnology. Moreover, the Department has also set up BIRAC (Biotechnology Industry Research Assistance Council) which is a not-for-profit agency to strengthen and empower emerging Biotechnology enterprises to undertake strategic research and innovation, by handholding them from ideation to the commercialization of their products/ technologies.

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Government Initiatives

- **National Biopharma Mission, 'Innovate India' 2017-** a DBT programme worth US\$ 250 million, aims to bring together industry and academia in order to promote entrepreneurship and indigenous manufacturing in biopharma.
- **Clinical Trials** -The Union Ministry for Health and Family Welfare introduced new Drugs and Clinical Trials Rules, 2019, changing the regulatory landscape to approve new drugs and conduct clinical trials in the country. The Indian Council of Medical Research (ICMR) selected 12 institutes for the clinical trials of the country's first indigenous COVID-19 vaccine. In 2020, ICMR developed indigenous COVID-19 vaccine (BBV152 COVID) in partnership with Bharat Biotech International Limited.
- **Biotech Parks-** Biotechnology Parks and Incubators are established across the country by the Department of Biotechnology (DBT), under the Ministry of Science and Technology, to translate research into products and services by providing necessary infrastructure support. These biotechnology parks offer facilities to scientists, and small & medium sized enterprises (SMEs) for technology incubation, technology demonstration and pilot plant studies to accelerate the commercial development of biotechnology. The government, at present, supports nine biotechnology parks in various states with the bulk being in the southern region of the country.

Way Forward

- Indian biotechnology is built on entrepreneurship, innovation, developing domestic talent and demonstrating value-based care. Given the long history of diseases in India, the country has accumulated years of experience and scientific knowledge to prevent and treat them. India is working to boost the biotechnology sector under the flagship programmes such as 'Make in India' and 'Start-up India'. Increase in the number of biotech incubators will boost research and promote growth of start-ups; this is critical for the success of the Indian biotech industry.

UNESCO Report on India's investment in research

Context

- The UNESCO Science Report has observed that while India has made 'solid progress' towards the Sustainable Development Goal (SDG) targets concerning industry, infrastructure and innovation, the country's investment in research remains unsatisfactory.

Highlights of the Report

- The gross domestic expenditure on research (GERD) has been **stagnant at 0.7%** of the GDP for years, although, in absolute terms, research expenditure has increased.
- India has one of the lowest GERD/GDP ratios among the BRICS nations, according to the report which is published every five years.
- It noted that, India's research intensity has been declining since 2014.
- The density of scientists/engineers engaged in R&D in the country per 10,000 of the labour force stood at ten. It rose to just 11 in 2018, when it stood at 50 in China, 130 in Japan and 180 in South Korea.
- R&D in the government sector has been in steady decline since 2015, whereas the share of private business enterprises in it has shot up to 42%.
- It further noted that investment in R&D by foreign multinationals is on the rise, accounting for as much as 16% of private-sector investment in R&D in 2019.
- On the bright side is the encouraging increase in scientific publications by Indian researchers on cutting-edge technologies. Total publications have risen from 80,458 in 2011 to 1.61 lakh in 2019.
- The report noted that Indian researchers are publishing between 1.5 and 1.8 times the global average on smart-grid technologies, photovoltaics, biofuels and biomass and wind turbine technologies, complementing the government's push to expand green energy sources.
- But then again, patenting by domestic corporations, research institutes, universities and individuals remains low in India. The report noted that the majority of the

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software-related patents were being bagged by MNCs operating from Indian soil, while pharma patents were obtained mostly by domestic firms.

Steps Taken by the Government

- **Prime Minister Research Fellowship (PMRF) Scheme** for promotion of research in the frontier areas of science & technology. It seeks to incentivize a maximum of 3,000 most talented students from recognized Universities/Institutions who will be selected as per PMRF guidelines to enrol in the Ph.D. program in IITs/IISc/IISERs/CUs by providing attractive rates of fellowship. In addition, a research grant of Rs.2.00 lakh per year for a period of 5 years will be given to each fellow to meet the cost of presenting research papers.
- **The University Grants Commission (UGC)** is providing financial assistance to the Ph.D. scholars under the schemes of Junior Research Fellowship (JRF) and Senior Research Fellowship (SRF) in Science, Humanities and Social Sciences (NET) etc.
- Scheme for Trans-Disciplinary Research for India's Developing Economy (**STRIDE**) for Humanities and Human Sciences.
- Impacting Research Innovation and Technology (**IMPRINT**) for technical research.
- Impactful Policy Research in Social Science (**IMPRESS**) for social sciences research.
- Scheme for Promotion of Academic and Research Collaboration (**SPARC**) for joint research with Foreign Universities; and
- National Doctoral Fellowship (**NDF**) scheme to promote research culture and collaborative research between Institute and Industries leading to start-ups in AICTE institutions.

What needs to be done?

- The UNESCO Science Report underscores the need for 'policy bridges' for fostering a more effective interaction between foreign and local research firms.
- Given the large number of multinational corporations now engaged in R&D, it is imperative that the host economy benefit from this activity
- It also called for improved linkages between the start-up ecosystem and manufacturers to push technological development in sectors where India enjoys a global presence.

Open Network for Digital Commerce (ONDC) Project

Context

- DPIIT recently issued orders appointing an advisory committee for its Open Network for Digital Commerce (ONDC) project that is aimed at curbing "digital monopolies". This is a step in the direction of making e-commerce processes open source, thus creating a platform that can be utilised by all online retailers.

Highlights

- Several operational aspects including onboarding of sellers, vendor discovery, price discovery and product cataloguing could be made open source on the lines of Unified Payments Interface (UPI).
- An executive of an e-commerce company has said that if mandated, this could be problematic for larger e-commerce companies, which have proprietary processes and technology deployed for these segments of operations.

The meaning and significance of making something open-source

- Making a software or a process open-source means that the code or the steps of that process is made available freely for others to use, redistribute and modify it.
- For example, while the operating system of Apple's iPhones — iOS — is closed source, meaning it cannot be legally modified or reverse engineered, Google's Android operating system is open-source, and therefore it is possible by smartphone OEMs such as Samsung, Xiaomi, OnePlus, etc to modify it for their hardware.
- If the ONDC gets implemented and mandated, it would mean that all e-commerce companies will have to operate using the same processes.

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- This could give a huge booster shot to smaller online retailers and new entrants.

The purpose of project

- ONDC seeks to promote open networks, which are developed using the open-source methodology. They will encourage the usage of standardised open specifications and open network protocols, which are not dependent on any particular platform or customised one.
- ONDC is expected to digitise the entire value chain, standardise operations, promote inclusion of suppliers, derive efficiencies in logistics and enhance value for stakeholders and consumers. They will provide a level-playing field.
- Permissions for an open-source project are enforced through an open-source licence easing adoption and facilitating collaboration.
- A nine-member advisory council has been constituted to advise the government on measures needed to design and accelerate the adoption of ONDC.

Government Stance

- In the order forming the council, the DPIIT noted that the ONDC aims at promoting open networks developed on open-sourced methodology, using open specifications and open network protocols, independent on any specific platform.
- ONDC is expected to digitise the entire value chain, standardise operations, promote inclusion of suppliers, derive efficiency in logistics and enhance value for consumers.

Gene bank

Context

- Minister for Agriculture and Farmers Welfare, inaugurated the **world's second-largest refurbished** state-of-the-art **National Gene Bank** at the National Bureau of Plant Genetic Resources (NPGR), Pusa, New Delhi.
- **Gene Bank-** Genetic banks help in conservation of rare plants and animals. Researchers or farmers can withdraw samples from these —gene banks to help rebuild populations of rare plant varieties and animal breeds or to help increase genetic diversity within species. Gene banks also preserve cells or organisms that host unusual gene variants — genes with special traits. Those genes might later prove useful when some disease epidemic strikes, when the climate changes or when other factors threaten the survival of plants or animals. Farmers could use the banked deposits — stored cells or tissues — to restore genetic diversity or to introduce traits from other breeds or varieties.

Types of Gene Banks: Gene bank refers to a place or organization where germplasm can be conserved in living state. Gene banks are also known as germplasm banks. The germplasm is stored in the form of seeds, pollen or in vitro cultures, or in the case of a field gene bank, as plants growing in the field. Gene banks are mainly of two types, germplasm is stored in the form of seeds, pollen or in vitro cultures, or in the case of a field gene bank, as plants growing in the field. Gene banks are mainly of two types

1. **Seed Gene bank-** A place where germplasm is conserved in the form of seeds is called seed gene bank. Seeds are very convenient for storage because they occupy smaller space than whole plants.

However, seeds of all crops cannot be stored at low temperature in the seed banks. The germplasm of only orthodox species (whose seed can be dried to low moisture content without losing variability) can be conserved in seed banks. In the seed banks, there are three types of conservation, viz., (1) Short term, (2) Medium term, and (3) Long-term. Base collections are conserved for long term (50 years or more) at -18 or -20°C. Active collections are stored for medium term (10-15 years) at zero degrees Celsius. Working collection is stored for short term (3-5 years) at 5-10°C.

Advantages of gene banks

1. Large number of germplasm samples or entire variability can be conserved in a very small space.
2. In seed banks, handling of germplasm is easy.

- Germplasm is conserved under pathogen and insect free environment.

Disadvantages

- Seeds of recalcitrant species cannot be stored in seed banks.
 - Failure of power supply may lead to loss of viability and thereby loss of germplasm.
 - It requires periodical evaluation of seed viability. After some time, multiplication is essential to get new or fresh seeds for storage.
2. **Field Gene banks**-Field gene banks also called plant gene banks are areas of land in which germplasm collections of growing plants are assembled. This is also called ex-situ conservation of germplasm. Those plant species that have recalcitrant seeds or do not produce seeds readily are conserved in field gene banks. In field gene banks, germplasm is maintained in the form of plants as a permanent living collection. Field gene banks are often established to maintain working collections of living plants for experimental purposes. They are used as source of germplasm for species such as coconut, rubber, mango, cassava, yam and cocoa. Field gene banks have been established in many countries for different crops.

Advantages

- It provides opportunities for continuous evaluation for various economic characters.
- It can be directly utilized in the breeding programme.

Disadvantages

- Field gene banks can not cover the entire genetic diversity of a species. It can cover only a fraction of the full range of diversity of a species.
- The germplasm in field gene banks is exposed to pathogens and insects and sometimes is damaged by natural disasters such as bushfires, cyclones, floods, etc.
- Maintenance of germplasm in the field gene banks is costly.

Meristem Gene Banks

- Germplasm of asexually propagated species can be conserved in the form of meristem.
- This method is widely used for conservation and propagation of horticultural species.
- In vitro method can be used in two ways, first, for storage of tissue under slow growth conditions. Second, for long term conservation of germplasm by cryopreservation.
- In cryopreservation, the tissues are stored at very low temperatures i.e., at 196 OC in liquid nitrogen. At these temperatures, all biological processes virtually come to a stop.
- Based on status of Research Institutes, gene banks are again of two types, viz. 1) National gene banks, and 2) International or global gene banks.
- National gene banks are maintained by each country and global gene banks are located in International Crop Research Institutes/ Centres.
- In India, gene banks are maintained by concerned crop research institute of ICAR. National Bureau of Plant Genetic Resources, New Delhi is also maintaining germplasm of various field crops.

What is the National Gene Bank?

- The National Gene Bank was established in 1996 to preserve the seeds of Plant Genetic Resources (PGR) for future generations. It has the capacity to preserve about one million germplasm in the form of seeds. Presently it is protecting 4.52 lakh accessions, of which 2.7 lakh are Indian germplasm and the rest have been imported from other countries. National Bureau of Plant Genetic Resources is meeting the need of in-situ and ex-situ germplasm conservation through Delhi Headquarters and 10 regional stations in the country. It is a type of Ex-Situ conservation technique.

National Bureau of Plant Genetic Resources (NBPGR)

- Set up in January 1977, the National Bureau of Plant Introduction was renamed as National Bureau of Plant Genetic Resources (NBPGR). It is one of the Indian Council of Agricultural Research (ICAR) Institutes. The Bureau has played a pivotal role in the improvement of various crop plants and diversification and development of agriculture in India through germplasm introduction from various institutes, organizations

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located in foreign countries and germplasm collection from within the country and abroad and conservation thereof.

Global facilities working towards conserving crops

- The Svalbard Global Seed Vault in Norway houses the world's largest collection of seeds. India's seed vault is at Chang La (Ladakh) in the Himalayas. Built in 2010 jointly by the Defence Institute of High-Altitude Research and the National Bureau of Plant Genetic Resources, this seed bank is the second largest in the world. Established with the objective of conserving the indigenous livestock biodiversity, National Animal Gene Bank is nestled at the National Bureau of Animal Genetic Resources (NBAGR – Karnal, Haryana), has the objective of conserving the indigenous livestock biodiversity.

Medical Oxygen Vs Industrial oxygen

Context- Shortages of medical oxygen during pandemic and lockdown

- Medical oxygen- it means high-purity oxygen. It is used by hospitals and clinics in the treatment of various illness that causes oxygen saturation level in the body to drop.
- It generally comprises of minimum 90% oxygen with 5% nitrogen and 5% argon.
- Medical grade oxygen is highly concentrated and can be obtained in several ways: -
 - i. Liquefying air through a process called cryogenic distillation
 - ii. Oxygen concentrators
 - iii. Pressure swing absorption(PSA) plants

Steps taken by the government to ensure oxygen supply: -

- Setting up of empowered group-II(EG-II)
- Temporarily restricting industrial usage of oxygen
- Facilitating inter-state movement of vehicles on ease, carrying medical oxygen
- Oxygen express trains were run across the country
- Setting up of PSA plants through allocation from the PM-CARES fund
- The judiciary lashed out at both the Centre and the Delhi government while ordering adequate supply of oxygen to save lives of serious COVID-19 patients.

Industrial Oxygen

- It is typically a type of oxygen used in industrial settings, like manufacturing plants, for tasks that may include combustion, oxidation and even to help accelerate certain chemical reactions. Industrial oxygen is not intended to be inhaled like medical oxygen is, but rather serves a complementary role to create the actions that are carried out in these facilities. Steelmaking, for instance, is one of the largest users of industrial oxygen.
- Industrial oxygen can be generated by oil-lubricated, oil-less or oil-free compressors. This will depend on what kind of product is produced using the compressed air application.

Some common uses of industrial oxygen include:

- Welding, cutting, flame cleaning, etc.
- Metal manufacturing, such as in steel production.
- Assisting in the creation of certain fuels.
- A bleaching chemical to help create paper and paper-based products.

Key Differences

- Think of medical oxygen vs. industrial oxygen like this: Medical oxygen is necessary to maintain good enough blood oxygen levels or else there's a risk of serious health consequences or even death. The difference is that purity levels of industrial oxygen are not at par with medical oxygen. There can be impurities from the containers of industrial oxygen. Medical oxygen cylinders should also be free of contaminants. The industrial cylinders should be thoroughly cleaned before use. Industrial oxygen is not intended to be inhaled like medical oxygen

Conclusion

- India needs to optimise its supply chain to ensure the clock oxygen availability to not only the main cities but also to the remotest areas. This will require proper assessment and analysis of oxygen demand and procurement system. Also, State authorities and hospitals need to make rational use of oxygen and ensure that there is no wastage of oxygen. Also, there should have government support to establish new oxygen plants.

Energy status and India

Context

- Out of 115 countries, India has been ranked at **87th position in the Energy Transition Index- ETI** of World Economic Forum (WEF). It tracks nations on the basis of the current performance of their energy systems across different aspects.

India join coal transition programme

- India, Indonesia and the Philippines will join South Africa as the first recipients of a multibillion dollar pilot programme aimed at accelerating their transition from coal power to clean energy, the Climate Investment Funds (CIF) said on 4 November 2021. The CIF said the Accelerating Coal Transition (ACT) programme was the first to target developing countries, which lack adequate resources to finance the shift away from coal considered vital to limit global temperature rise to 1.5 degrees Celsius (2.7 degrees Fahrenheit) by 2030.

Solar Energy

- **Solar Green Grids Initiative**- India and the UK are set to enhance their International Solar Alliance (ISA) partnership with the launch of a new Green Grids Initiative connecting different parts of the world at the United Nations (UN) COP26 climate summit in Glasgow on 2 November 2021.
- The new Global Green Grids Initiative – **One Sun One World One Grid (GGI-OSOWOG)** is an evolution of ISA's OSOWOG multilateral drive to foster interconnected solar energy infrastructure at a global scale. This initiative will bring together an international coalition of national governments, financial organisations, and power system operators to accelerate the construction of new infrastructure.
- The **ISA** is an observer to the United Nations Framework Convention on Climate Change (UNFCCC) and has been an active participant at Conference of Parties (COPs).

What is the OSOWOG project?

- India had first proposed connecting solar energy supply across borders at the International Solar Alliance in 2018 to allow parts of the world with excess renewable power to send power to other countries. OSOWOG is also aimed at addressing the issue of high cost of energy storage.

What are the challenges to the OSOWOG project?

- The transmission of power across vast distances would require large capital investment to set up long transmission lines. India, Bhutan, Bangladesh, Myanmar and Nepal already share transmission capacity for energy transfer across borders which can be expanded further and utilised for the transfer of solar power between these countries.

ISRO suggest to set up solar power projects:

- Indian space agency can suggest the ideal location to put up a solar power farm with the data gathered from its geostationary earth observation satellites within and outside India. ISRO also said the technology can be transferred to those who are interested. The data transmitted by the satellites will be analysed by ISRO officials. An android application for the computation of solar energy potential has been developed by ISRO's Space Applications Centre (SAC), Ahmedabad at the behest of the Ministry of New and Renewable Energy. The tool can be used for installation of photovoltaic solar panels for tapping solar energy.
- This application will be useful in deciding the location of solar projects and will also strengthen 'One Sun, One World, One Grid'. It gives monthly and yearly solar potential processed using Indian Geostationary Satellite data (Kalpana-1, INSAT-3D and INSAT-

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3DR). It also offers monthly minimum and maximum temperature to calculate realistic solar potential. Obstruction of sunlight due to terrain is also calculated using the Digital Elevation Model (DEM). The application also suggests optimum tilt angle for solar PV installation.

Clean Energy

- **India energy Outlook 2021-** India will overtake the European Union as the world's third-largest energy consumer by 2030, the International Energy Agency (IEA) said on 9 February 2021. India at present is the fourth-largest global energy consumer behind China, the United States and the European Union.
- A five-fold increase in per capita car ownership will result in India leading the oil demand growth in the world. Also, it will become the fastest-growing market for natural gas, with demand more than tripling by 2040. To meet its energy needs, India will be more reliant on fossil fuel imports as its domestic oil and gas production stagnates.
- **India's solar energy output-** The share of solar energy in India's power generation could equal coal-fired output by 2040, the International Energy Agency (IEA) said, driven by falling renewable tariffs and government push to increase green energy use. Coal currently dominates India's electricity sector, accounting for over 70% of overall generation with only about 4% produced through solar. India was on track to exceed its commitments as a part of the 2015 Paris agreement.
- **Inter-state transmission system (ISTS) waiver** extended. In a major relief to the renewable energy project developers, the union ministry of power extended the exemption on transmission charges till 2025. The waiver also now includes battery storage, pump hydro projects along with solar and wind. The Inter-state transmission system (ISTS) waiver was first introduced in 2019 by the Centre in order to bring down the tariff of solar and wind projects and increase investors' interest.
- **India's renewable energy generation-** India's renewable energy generation capacity excluding large scale hydro projects has crossed 100 GW, power and renewable energy minister R K Singh said on 12 August 2021. The country stands fourth in the world in terms of installed renewable energy capacity, fifth in solar and fourth in wind in terms of installed capacity.

Draft rules on clean energy

- The Ministry of Power has circulated the "Draft Electricity (promoting renewable energy through Green Energy Open Access) Rules, 2021," on 16 August 2021 for seeking comments from stakeholders. The ministry has sought comments within 30 days. These rules are proposed for purchase and consumption of green energy including the energy from waste-to-energy plants. The draft rules will provide in detail for Renewable Purchase Obligation (RPO); Green energy open access; nodal agencies; Procedure for grant of green energy open access; banking; and cross subsidy surcharge. The draft rules state green hydrogen is the hydrogen produced using electricity from the renewable sources. The obligated entity including the industries can also meet their Renewable Purchase Obligation by purchasing green hydrogen.

Global energy crisis

- The world is living through the first major energy crisis of the clean-power transition. It won't be the last. What's different now is that the richest economies are also undergoing one of the most ambitious overhauls of their power systems since the dawn of the electric age -- with no easy way to store the energy generated from renewable sources.
- **Recipe for Volatility:** - Even as solar and wind power become increasingly plentiful and cheap, many parts of the world will for decades still depend on natural gas and other fossil fuels as backups.
- **Power Demand:** - All this is happening at a time when power consumption is projected to increase 60% by 2050. Continued economic and population growth will also drive consumption higher. And as the world moves even more into all things digital
- **Global Fallout:** - The planet's energy systems are interconnected, so the crisis and its spill over are being felt across the world.

Current Connect

- **Storage Solutions:** - One of the biggest obstacles ahead will be storing power generated by intermittent wind and water sources.
- Hydrogen can be split from water using machines called electrolyzers powered by renewable energy, whenever it's abundant. The process produces no greenhouse gases. The hydrogen can then be burned in a turbine or fed through a fuel cell to generate electricity -- all without carbon emissions. And unlike oil, gas and coal, such "green hydrogen" can be produced most anywhere there's water and strong sun or wind.

Geospatial Energy Map of India

- Federal policy think tank NITI Aayog on 18 October 2021 unveiled a geospatial energy map of the country capturing data on all sources of energy, making it a key tool for policymakers, investors, conservationists, financial institutions and disaster management authorities. The geographic information system-based map developed by NITI Aayog and the Indian Space Research Organization with the support of the energy ministries and departments represents a holistic picture of all energy resources. The web-based geospatial energy map includes visualization of spatial and non-spatial data on renewable and non-renewable power plants, oil and gas downstream sector, renewable energy potential, fossil fuel resources, and other energy assets in the country.

Benefit of Energy Map

- It is likely to be useful for planning of resource, including infrastructure planning for upcoming solar parks, coal blocks, crude oil and natural gas pipelines. It is also likely to aid investment guidance for financial institutions, ensuring safety of energy assets and for disaster management of possible energy disruption. This may also help in resource and environmental conservation measures and inter-state coordination on infrastructure planning including different corridors of energy and road transport highway.
- Energy markets have immense potential to bring in efficiency gains. Therefore, GIS-based mapping of energy assets will be advantageous to all concerned stakeholders and will help in accelerating the policy-making process.

India's difficult transition from fossil fuels to net-zero emissions

- Power generation is the main source of carbon emissions. Estimates based on data from the International Renewable Energy Agency (IRENA) indicate that non-renewable fossil fuels account for 70% of the current (2020) generation capacity of 452,3038 MW, followed by hydro/marine power at 11%, solar and wind power at 6% each, nuclear power at 5% and bio-energy at 2%. A recent Council for Energy, Environment and Water (CEEW) report has highlighted many formidable challenges to India's transformation from a fossil-fuel-dependent economy to one based on renewable energy.
- **First**, there is the technological, managerial and regulatory capacity to manage this revolutionary transformation. Then there is the major constraint of finance. The transformation will involve massive high-cost, high-risk, long-gestation investments. There is little fiscal space for large public investment in renewables, while private investment in renewables at scale is just starting. Another major constraint is access to land. The CEEW estimates that creating renewable power generation capacity for a net-zero economy could require between 4% to 6% of India's land mass. If the cost of power based on renewables turns out to be higher than fossil-fuel-based power, even consumers will resist the transformation.

National Hydrogen Mission

- Prime Minister on 15 August 2021 announced the National Hydrogen Mission with an aim to make India a hub for the production and export of green hydrogen. The Prime Minister took a pledge to make India energy independent before completing 100 years of independence. For the progress of India, it is necessary for India to be energy independent to make an Aatmanirbhar Bharat.
- The National Hydrogen Mission, in line with the Government's push to meet its climate targets. We have already announced a target of achieving 450 GW renewable energy

Current Connect

by 2030, and I am happy to say that out of this we have already achieved 100 GW ahead of time.

Blue hydrogen

- Blue hydrogen is often touted as a low-carbon fuel for generating electricity and storing energy, powering cars, trucks and trains and heating buildings.
- So what is hydrogen fuel - and what makes it blue? According to the International Energy Agency, 96% of hydrogen produced worldwide is made using fossil fuels - coal, oil and natural gas - in a process known as reforming. This involves combining fossil fuels with steam, and heating them to around 800°C. Eventually, you get carbon dioxide (CO₂) and hydrogen. These two gases are then separated. The CO₂ is often emitted to the atmosphere where it contributes to global heating, and the hydrogen is extracted and used in everything from car engines to boilers, releasing water vapour.

The hydrogen rainbow

- **Grey hydrogen** is the most common form. The colour simply denotes how it's made, and this kind is generated from natural gas (which mostly consists of methane and ethane).
- **Brown hydrogen** uses lignite coal (also known as brown coal, generated over millions of years by compressed peat deposits) or oil. Black hydrogen is produced using bituminous coal - a tar-like substance. The process of extracting hydrogen from all of these options emits CO₂ to differing degrees, and so they are not a suitable pathway for reaching net zero emissions with hydrogen.
- **Green hydrogen**, meanwhile, is produced by using zero-carbon electricity - such as that generated by wind turbines or solar panels - to split water into hydrogen and oxygen. The process is carbon-neutral, but green hydrogen is very expensive, and is expected to remain so until at least 2030.
- **Blue hydrogen** is produced using the same reforming process that is used to create grey, brown and black hydrogen, but the CO₂ that would ordinarily be released is captured and stored underground.
- Carbon capture and storage equipment is expensive, raising the price of the fuel, but it at least provides for low-carbon fuel production at a lower cost than green hydrogen.
- **Out of the blue-** The process of making blue hydrogen also requires a lot of energy. For every unit of heat in the natural gas at the start of the process, only 70-75% of that potential heat remains in the hydrogen product. In others words, if the hydrogen is used to heat a building, you would need to use 25% more natural gas to make blue hydrogen than if it was used directly for heat.
- **India's first e-vehicles-only area-** The Statue of Unity Area Development and Tourism Governance Authority (SOUADTGA) on 6 June 2021 said it will develop the "country's first electric vehicles-only area" in Gujarat's Kevadia.
- **Country's first hydrogen dispensing station-** The Indian Oil Corporation Limited (IOCL) will expand the Gujarat Refinery in Vadodara where it will invest Rs 24,000 crore in six different projects, including India's first hydrogen dispensing station, said Dharmendra Pradhan, Union Minister for Petroleum and Natural Gas, on 7 June 2021.
- Today India is the third biggest consumer of energy. Today, natural gas or clean fuel consumption accounts for six per cent of India's energy basket.

US-India Hydrogen Task Force

- The United States Department of Energy (DOE), India's Ministry of New and Renewable Energy (MNRE) and the US India Strategic Partnership Forum (USISPF) have jointly launched a US-India Hydrogen Task Force on 18 June 2021. This is under the US-India Strategic Clean Energy Partnership (SCEP). India and US had decided to revamp their strategic partnership to focus on clean energy sectors such as biofuels and hydrogen after the Joe Biden administration took charge. This new Task Force represents industry and government stake holders to assess technology status, study innovative policy options, and make recommendations. The formation of this task force was first announced in April 2021 by US Deputy Secretary of Energy, David M Turk.

India's first green hydrogen plant

- India's largest oil firm IOC will build the nation's first 'green hydrogen' plant at its Mathura refinery, as it aims to prepare for a future catering to the growing demand for both oil and cleaner forms of energy. This will be the nation's first green hydrogen unit. Previously, projects have been announced to produce 'grey hydrogen' using fossil fuels such as natural gas.

Hydrogen fuel cell vehicles

- The Ministry of Road Transport and Highways has notified the Standards for Safety Evaluation of vehicles being propelled by Hydrogen Fuel cells through an amendment to Central Motor Vehicles Rules 1989 ...dated 23rd September, 2020. This would facilitate the promotion of hydrogen fuel cell-based vehicles in the country, which are energy-efficient and environmentally friendly.
- At the heart of the fuel cell electric vehicles (FCEV) is a device that uses a source of fuel, such as hydrogen, and an oxidant to create electricity by an electrochemical process. Put simply, the fuel cell combines hydrogen and oxygen to generate electric current, water being the only by-product.
- While the fuel cells generate electricity through an electrochemical process, unlike a battery-electricity vehicle, it does not store energy and, instead, relies on a constant supply of fuel and oxygen — in the same way that an internal combustion engine relies on a constant supply of petrol or diesel, and oxygen.
- Globally, EVs are bracketed under three broad categories
- **Battery powered (BEVs)** have no internal combustion engine or fuel tank, and run on a fully electric drive train powered by rechargeable batteries.
- **Conventional hybrid electric vehicles or HEVs** combine a conventional internal combustion engine system with an electric propulsion system, resulting in a hybrid vehicle drive train that substantially reduces fuel use. The onboard battery in a conventional hybrid is charged when the IC engine is powering the drive train.
- **Plug-in hybrid vehicles or PHEVs** too have a hybrid drive train that uses both an internal combustion engine and electric power for motive power, backed by rechargeable batteries that can be plugged into a power source.
- **Fuel cell electric vehicle (FCEVs)** are widely considered to be the next frontier in EV technology. Since they are powered entirely by electricity, FCEVs are considered EVs — but unlike BEVs, their range and refuelling processes are comparable to conventional cars and trucks.

FAME India Scheme Phase II Extended

- The **Department of Heavy Industries** on 25 June 2021 announced the extension of the **government's flagship electric vehicles promotion scheme** by a period of two years **till March 2024**.
- The Department of Heavy Industries under the Ministry of Heavy Industries and Public Enterprises, is administering the Faster Adoption and Manufacturing of (Hybrid &) Electric Vehicles in India (**FAME India**) **Scheme** since April, 2015 (completed on 31st March, 2019) to promote adoption of electric and hybrid vehicles (HEVs) in India. At present, Phase-II of FAME India Scheme is being implemented for a period of 3 years with effect from April 1, 2019 with a total budgetary support of Rs 10,000 crore.
- Faster Adoption and Manufacturing of (Hybrid &) Electric Vehicles in India (FAME-India) Scheme is launched under National Mission on Electric Mobility in 2011/ National Electric Mobility Mission Plan 2020, unveiled in 2013.
- The **National Electric Mobility Mission Plan (NEMMP) 2020** is a National Mission document providing the vision and the roadmap for the faster adoption of electric vehicles and their manufacturing in the country.
- Fame India Scheme has four focus Areas:
 1. Technology development
 2. Demand Creation
 3. Pilot Projects
 4. Charging Infrastructure

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National Hydrogen Mission

- India's National Hydrogen Mission was announced budget speech on 1 February 2021. A comprehensive National Hydrogen Energy Mission was announced by the Prime Minister Narendra Modi at the Third Re-inVest Conference in November 2020. It is now proposed to launch a Hydrogen Energy Mission in 2021-22 for generating hydrogen from green power sources.

WHY HYDROGEN?

- India's electricity is heavily coal-dependent. Hydrogen will replace fossil fuels, address pollution and oil-price rise
- It's the most abundant element in the universe, is lighter, energy dense, and

- two-three times more efficient than burning petrol
- It will benefit transportation (contributes 1/3rd of India's greenhouse-gas emissions), iron and steel and chemicals sectors

THE BAD

SCALE:
Only 3 manufacturers — Honda, Toyota (Japan) and Hyundai (South Korea). Under 25,000 hydrogen FCEVs on road in 2020, compared to 8 million EVs

LACK OF INFRA: Less than 500 hydrogen stations globally

SAFETY: Explosion risk and highly combustible. Stored at very high (up to 700 bar) pressure, but tank is outside passenger bay

THE GOOD

- Near zero carbon footprint (electricity to extract hydrogen comes from fossil fuels)
- Provides range like a Tesla Model S, about 400 miles or 550 km per charge
- Stored in tanks (like CNG) and integrated into cars' bellies (unlike CNG)
- Lighter than heavy lithium-ion batteries. Better for long-haul trucks, commercial vehicles
- Refuels in 5 minutes

Space technology and applications

Remote Sensing Satellite System

- Operational remote sensing services were initiated with the launch and commissioning of IRS-1A, the first operational Indian Remote Sensing (IRS) Satellite, in the year 1988. Various instruments onboard IRS satellites provide data in varied spatial, spectral and temporal resolutions to cater to different user requirements in the country.

NISAR:

- This mission is jointly being developed by NASA & ISRO. The primary mission goals are global coverage of the earth's biomass, cryosphere for surface dynamics and coastal studies over a period of 3-5 years, systematic coverage of global environment, Interferometry with precision orbit & pointing control.

Communication Satellite System and Applications

- Satellite Communication Programme**-The **communication satellites** have been **contributing significantly** in the **socio-economic** and **strategic activities in the country**. At present, there are **17 satellites in operation**.

Navigation Satellite Systems and Applications

- Satellite Navigation (SATNAV) is one of the important programmes of the Department. There are two main components of this program.
- GAGAN- The GPS Aided Geo Augmented Navigation (GAGAN) system is developed by Indian Space Research Organization (ISRO), together with Airports Authority of India (AAI) to deploy and certify an operational SBAS-Satellite Based Augmentation System

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for the Indian Flight Information Region (FIR), with expansion capability to neighbouring FIRs. GAGAN provides a civil aeronautical navigation signal consistent with International Civil Aviation Organization (ICAO) Standards and Recommended Practices (SARPs) as established by the GNSS Panel.

Under National Natural Resources Management System (NNRMS), projects at national, regional and local levels are carried out by NRSA Hyderabad, SAC Ahmedabad, Regional Remote Sensing Service Centres (RRSSCs) located at Bangalore, Dehradun, Jodhpur, Kharagpur, Nagpur and NE-SAC, Shillong.

 <p>AGRICULTURE</p> <ul style="list-style-type: none"> • Crop acreage and Production Estimation • Crop Production Estimation • Crop Condition Assessment 	 <p>LAND USE / LAND COVER</p> <ul style="list-style-type: none"> • Wasteland Mapping • Urban Sprawl Studies • Growth Centre Analysis • Monitoring water logged areas, Salt-affected areas, Eroded Lands, Shifting Cultivation, etc
 <p>WATER RESOURCES</p> <ul style="list-style-type: none"> • Surface Water Mapping • Run-off Forecasting • Reservoir Sedimentation and Drainage Congestion Studies • Groundwater Potential Zone Mapping 	 <p>OCEAN APPLICATIONS</p> <ul style="list-style-type: none"> • Potential Fishing Zone (PFZ) Mapping • Monitoring of Navigational Channels • Coastal Zone Mapping • Coral Reef Mapping
 <p>ENVIRONMENT</p> <ul style="list-style-type: none"> • Atmospheric Constituents and Aerosols • Land-air-ocean Interaction • Past Climate Data Modelling 	 <p>FORESTS</p> <ul style="list-style-type: none"> • Forest Cover Mapping and Monitoring • Forest Management Plan • Biodiversity Conservation • Environmental Impact Studies • Grassland Productivity
 <p>SOIL</p> <ul style="list-style-type: none"> • Soil Mapping • Land Capability and Irrigability Assessment • Soil Moisture Estimation 	 <p>GEOSCIENCE</p> <ul style="list-style-type: none"> • Geological Mapping • Geomorphological Mapping • Mineral Targeting
 <p>DISASTER WARNING AND MANAGEMENT</p> <ul style="list-style-type: none"> • Flood Damage Assessment • Flood Risk Zone Mapping • Monitoring of Volcanic Eruption and Underground Coal Fire • Forest Fire and Risk Mapping 	

INSAT APPLICATIONS

<p>TELECOMMUNICATIONS</p>  <ul style="list-style-type: none"> • A total of 451 telecommunication terminals • 6,645 two-way speech circuits • 205 BSNL VSATs • 44 High speed VSAT Networks • Mobile Satellite Services 	<p>TV BROADCASTING</p>  <ul style="list-style-type: none"> • Covers over 90 % of the Indian population and 65% of the Indian landmass • 40 Doordarshan TV channels and 47 private TV channels 	<p>SEARCH & RESCUE</p>  <ul style="list-style-type: none"> • India is a member of international COSPAS-SARSAT • Indian Mission Control Centre (INMCC) located at ISTRAC, Bangalore • Two Local User Terminals (LUTs) at Bangalore and Lucknow
<p>RADIO NETWORKING</p>  <ul style="list-style-type: none"> • High fidelity programme channels for national as well as regional networking 	<p>SATELLITE NEWS GATHERING AND DISSEMINATION</p>  <ul style="list-style-type: none"> • On the spot real-time news coverage 	
<p>METEOROLOGICAL</p>  <ul style="list-style-type: none"> • INSAT Meteorological data for weather forecasting • 300 Meteorological Data Collection Platforms 	<p>CYCLONE WARNING SERVICES</p>  <ul style="list-style-type: none"> • Through 350 receivers in coastal regions 	

- **IRNSS/ Navigation with Indian Constellation (NavIC)** - IRNSS is an independent regional navigation satellite system being developed by India. It is designed to provide

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- accurate position information service to users in India as well as the region extending up to 1500 km from its boundary, which is its primary service area.
- An Extended Service Area lies between primary service area and area enclosed by the rectangle from Latitude 30 deg South to 50 deg North, Longitude 30 deg East to 130 deg East. IRNSS will provide **two types of services**, namely, **Standard Positioning Service (SPS)** which is provided to all the users and **Restricted Service (RS)**, which is an **encrypted service provided only to the authorised users**.
 - The IRNSS System is expected to provide a position accuracy of better than 20 m in the primary service area. IRNSS is a constellation of seven satellites in space. Out of these, three are located in the geostationary orbit over the Indian Ocean and the other four in geosynchronous orbits, with the desired inclination and equatorial crossings in two different planes.
 - **Some applications of IRNSS are:**
 - Terrestrial, Aerial and Marine Navigation
 - Disaster Management
 - Vehicle tracking and fleet management
 - Integration with mobile phones
 - Precise Timing
 - Mapping and Geodetic data capture
 - Terrestrial navigation aid for hikers and travellers
 - Visual and voice navigation for drivers

Indian Regional Navigation Satellite System (IRNSS)

- On 11 November 2020, India became the fourth country (US, Russia and China) in the world to have its independent regional navigation satellite system recognised by the International Maritime Organisation (IMO) as a part of the World Wide Radio Navigation System (WWRNS). The navigation system can now replace GPS in the Indian Ocean waters upto 1500 km from the Indian boundary. The IMO is the United Nations' specialised agency responsible for the safety and security of shipping and the prevention of marine and atmospheric pollution by ships. The Maritime Safety Committee (MSC) of the IMO recognised the IRNSS as a component of the World-wide Radio Navigation System (WWRNS) during its 102nd session held virtually from 4 November 2020 to 11 November 2020.

Space Tourism

What is space tourism?

- Space tourism is a segment of space travel that seeks to give lay people the opportunity to go to space for recreational, leisure or business purposes. The idea is to make space more accessible to those individuals who are not astronauts and want to go to space for non-scientific purposes
- As of now, companies including Virgin Galactic (VSS Unity), SpaceX (Starship), XCOR Aerospace, Jeff Bezos's Blue Origin and Armadillo Aerospace are working on providing space tourism services to people.

What is the Space?

- International law states that outer space shall be free for exploration and use by all, but there is no definitive law stating where national air space actually ends and outer space begins. This leaves the door open for a variety of interpretations. A common definition of space is known as the Kármán Line (In the 1900s, Hungarian physicist Theodore von Kármán), an imaginary boundary 100 kilometers (62 miles) above mean sea level.

What's suborbital?

- When an object travels at a horizontal speed of about 28,000 km/hr or more, it goes into orbit once it is above the atmosphere. Satellites need to reach that threshold speed in order to do orbit Earth. Such a satellite would accelerate toward the Earth due to gravity. However, it moves fast enough that the Earth curves out from under it as fast as it falls, giving it a circular path. Any object travelling slower than 28,000 km/hr must eventually return to Earth.

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Opportunities: -

- Space tourism is the jobs that the industry is going to provide
- Opportunities in the next few years as a pilot, programmers, manufacturing in the making space flights
- Renew interests in space and space exploration
- Innovation in the industry and space exploration. Etc.

Challenges: -

- For space tourism, requires a lot of costs that few can afford.
- Life will be at risk.
- The innovation of space technology and other laws, medical facilities also needed in space.
- Public awareness of the possibility must be increased and world-wide excitement about space generated up to make space tourism a reality.
- Concern of space pollution is also associated with it. Etc.

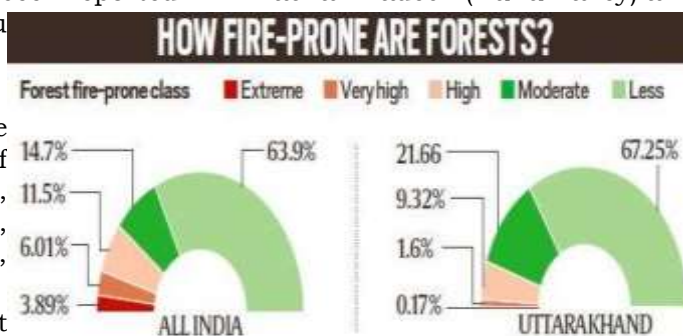
Issue of Forest Fires

About

Uttarakhand has seen more than 1,000 instances of forest fire during the last six months. Along with this, similar instances have been reported in Himachal Pradesh (Kullu Valley) and Nagaland-Manipur border (Dzukou Valley) in January.

Forest Fire in India

- Since the beginning of 2021, there have been several instances of forest fires in Himachal Pradesh, Nagaland-Manipur border, Odisha, Madhya Pradesh, and Gujarat, including in wildlife sanctuaries.
- April-May is the season when forest fires take place in various parts of the country. But forest fires have been more frequent than usual in Uttarakhand and have also taken place during winter.



Forest Fire in Uttarakhand

- In Uttarkhand, 24,303 sq km (over 45 per cent of the geographical area) is under forest cover.
- The Forest Survey of India has identified forests along the south, west and southwest regions of
- Uttarakhand — comprising Dehradun, Haridwar, Garhwal, Almora, Nainital, Udham Singh Nagar, Champawat districts — as being prone to varying intensities of forest fires.
- In Uttarakhand, the lack of soil moisture is being cited as a key factor responsible for forest fire. In last two consecutive monsoon seasons (2019 and 2020), rainfall has been deficient by 18% and 20% of the seasonal average, respectively.

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Indian Forest's Proximity to Fire

- The forests of the Northeast and central India regions are the most vulnerable areas to forest fires.
- Forests in Assam, Mizoram and Tripura have been identified as 'extremely prone' to forest fire.
- States with large forest areas under the 'very highly prone' category include Andhra Pradesh, Manipur, Meghalaya, Mizoram, Nagaland, Odisha, Maharashtra, Bihar and Uttar Pradesh.
- Western Maharashtra, Southern Chhattisgarh and areas of Telangana and Andhra

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Pradesh, along with central Odisha, are turning into extremely prone forest fire hotspots.

- Areas under the 'highly prone' and 'moderately prone' categories make up about 26.2% of the total forest cover.

Causes of fire

- Forest fires can be caused by a number of natural causes but major fires in India are triggered mainly by human activities.
- Climate change is fuelling the instances of forest fires globally, especially the massive fires of the Amazon forests in Brazil and in Australia in the last two years. Fires of longer duration, increasing intensity, higher frequency and highly inflammable nature are all being linked to climate change.
- In India, forest fires are more frequent during the month of March and April. During this period, the ground has large quantities of dry wood, logs, dead leaves, stumps, dry grass and weeds that can make forests easily go up in flames.
- Under natural circumstances, extreme heat and dryness, friction created by rubbing of branches with each other also have been known to initiate fire.

Challenges of forest fire

- The locality of the forest and access to it pose hurdles in initiating firefighting efforts. During peak season, shortage of staff and lack of adequate resources is another challenge in dispatching firefighting teams.
- Timely mobilization of fuel and equipment, depending on the type of fire, through the thick forests remain challenges.
- It is very difficult to transport heavy vehicles loaded with water into the thick forests, a majority of fire dousing is initiated manually, using blowers and similar devices. But there have been incidents when forest fires were brought under control using helicopter services.
- Wind speed and direction play a critical role in bringing a forest fire under control. The fire often spreads in the direction of the winds and towards higher elevations.

Impacts of Forest Fire

- Forest fires can have multiple adverse effects on the forest cover, soil, tree growth, vegetation, and the overall flora and fauna. Fires render several hectares of forest useless and leave behind ash, making it unfit for any vegetation growth.
- Heat generated during the fire destroys animal habitats. Soil quality decreases with the alteration in their compositions. Soil moisture and fertility, too, is affected. Thus forests can shrink in size. The trees that survive fire often remain stunted and growth is severely affected. Other impact are—

Soil and Nutrients	Vegetation
<ul style="list-style-type: none"> o Changes the rate of formation of soil organic matter. o Affects the availability of minerals o Affects population of Micro-organism o Increases soil erosion with loss of vegetation 	<ul style="list-style-type: none"> o Curtailment of Natural Succession and forest regeneration o Affects plant Bio-mass, structure and shape o Affects plant nutrient uptake
Water circulation	Species
<ul style="list-style-type: none"> o Changes rate of evaporation and transpiration o Changes rate of permeability and sub-surface flow o Changes the rate of sediment and water o Changes the stream and river structure 	<ul style="list-style-type: none"> o Alters the pattern of resources like-food and water o Alters pattern of distribution of species o Possibility of early mortality

Way Forward

- Preventive steps to reduce the risk of forest fire must be cemented in a holistic way. The Forest Fire Alert System to monitor forest fires in real time is a need of the hour. Real-time fire information from identified fire hotspots can be electronically transmitted to concerned authority and General public. SMS based alerts can also be initiated in order

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- to invite faster action.
- Mapping of Eco-fragile zone's resources such as water sources, roads and staging areas can help to contain fires in a limited landscape and with in-situ resources, So that damage can be minimized and managed efficiently.
- A broad and comprehensive policy is much needed to deal with the instances of forest fires. Convergence of academia, researchers, fire fighters and people's participation is prerequisite to manage the instances of forest fires.

Indian summer monsoon: New Study

About

A new study now details how dust coming from the deserts in the West, Central and East Asia plays an important role in the Indian Summer Monsoon. The study showcases that the Indian monsoon is intensified by atmospheric dust particles swept up by the winds from deserts in the Middle East.

The Dust particles and winds from the Middle East

- The dust particles when carried by strong winds into the atmosphere (from the Middle East) absorb solar radiation and become extremely hot.
- The heat from these particles raises the heat of its surrounding environment enough to change air pressure and circulation patterns of the wind. This phenomenon is termed an —elevated heat pump that is responsible for driving moisture from the sea to the Indian subcontinent. So, Asian dusts enhance Indian summer monsoon via the—elevated heat pump (EHP) effect.
- The atmospheric dust plays a major role in deciding the radiation balance over the earth. The dust scatters the light, acts as cloud condensation nuclei, and hence helps in the formation of different types of clouds.

Positive feedback

A positive feedback loop plays a role when the dust particles boost the power of Indian monsoons, and the monsoons increase the winds in the Middle East and subsequently produce more dust aerosols.

Role of the Iranian Plateau

- Meanwhile, another Asian source fueling the impact of aerosolized dust upon the Indian summer monsoons is the Iranian Plateau, located between the Middle East and the Tibetan Plateau. This region is at a higher elevation which makes it easier for solar radiation to reach its surface and increase its temperature.
- An increase in surface temperature causes lower tropospheric winds to flow towards heated regions away from the colder oceanic regions of the winter hemisphere. This leads to an accumulation of hot air above the Iranian Plateau which strengthens the monsoon circulation over the deserts of the Arabian Peninsula.
- Thus, the Iranian Plateau's role in increasing the monsoon circulation as well as monsoon precipitation aids in explaining the relationship between Middle East dust and Indian summer monsoon.

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Impacts of Dust on Indian summer monsoon (ISM)

- The Indian summer monsoon is characterized by strong winds in the summer. So once the winds change, the moisture transport from ocean to land will change, and consequently they will increase the precipitation.
- Dust particles can modulate the circulation and precipitation of the ISM through absorption of solar and terrestrial radiation when suspending in the atmosphere and when deposited in snow and ice at surface and by acting as nuclei of liquid and ice clouds. In turn, the ISM can affect dust emissions, transport, and deposition through atmospheric circulation and wet scavenging.
- The monsoon can get influenced by dust emission. If there is stronger monsoon, there will be heating in upper atmosphere.
- The convection associated with the monsoon can go up to a very high elevation, as much as 10 kilometres.

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- When this pattern of air over the monsoon is heated, something like a wave is produced. These waves have distinct parts facing either high pressure or low pressure and are responsible for transporting air back to the Middle East. This air goes downwards and strikes the surface to pick up more dust particles, in turn starting the process again.

Other influences on the Indian summer monsoon

Snow-darkening effect	The solar-dimming effect	Aerosolized dust
<ul style="list-style-type: none"> o When black carbon and dust particles suspended in the air (known as aerosols) land in snow-covered regions. o This in turn darkens the snow, reducing their reflectivity and leading to more absorption of sunlight. o The process increases the warming of the land and the troposphere above, which leads to enhanced low-level southwesterly winds that amplify the dust accumulation over the Himalayas-Indo-Gangetic Plain. 	<ul style="list-style-type: none"> o When aerosols block the solar radiation from reaching the land surface. o This causes the surface temperature to cool down which interferes with hydrological processes by reducing evaporation and in turn reducing rainfall. 	<ul style="list-style-type: none"> o It can serve as ice-cloud nuclei, also known as the seeds for rain droplets. o This phenomenon changes the amount or type of precipitation that falls from a cloud and can "alter the microphysical properties of ice clouds and consequently the Indian summer monsoon rainfall

Conclusion

Understanding these mechanisms will prove to be of increasing importance in the face of global climate change, especially for Asia, as projections forecast that the land will become drier which will amplify dust emissions.

Monsoon has significant impact on Indian agriculture and Indian economy, therefore modeling new mechanism will help to understand the phenomena better.

Additionally, With air pollution worsening in Indian cities, and as residents try to improve air quality, the ratio between natural dust to anthropogenic aerosols will also increase, prompting dust to play a central role in the future.

National Climate Vulnerability Assessment

About

The National climate vulnerability assessment report has been released by Department of Science and Technology. It has identified eight eastern states as highly vulnerable.

Key findings of the vulnerability assessment

- Based on an all-India assessment, this report identifies the most vulnerable states and districts in India with respect to current climate risk and the main drivers of vulnerability.
- Eastern states like Assam, West Bengal among 8 states highly vulnerable to climate change. Himachal Pradesh, Telangana, Sikkim and Punjab have been categorised as lower- middle vulnerable states. Uttarakhand, Haryana, Tamil Nadu, Kerala, Nagaland, Goa and Maharashtra have been categorised as states with low vulnerability.
- The assessment is based on a set of common indicators and common methodology.
- States also carried out district-level vulnerability assessments individually.
- State-level vulnerability indices developed in this report vary over a small range: 0.42-0.67. This means all states must deal with concerns related to vulnerability.
- The states with a relatively high vulnerability, Jharkhand, Mizoram, Orissa, Chhattisgarh, Assam, Bihar, Arunachal Pradesh, and West Bengal, are mostly in the eastern part of the country, requiring prioritization of adaptation interventions.
- District-level vulnerability indices are also within a small range: 0.34 - 0.75. Assam,

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Bihar, and Jharkhand have over 60% districts in the category of highly vulnerable districts.

- Vulnerability indices are relative measures. This means, all districts or states are vulnerable, but some are relatively more vulnerable than others, requiring prioritized adaptation interventions.

Importance of Assessment

- The vulnerability assessment can assist in ranking and identification of the most vulnerable districts and states and help states prioritize adaptation planning and investments.
- It is critical for developing adaptation projects for the Green Climate Fund, Adaptation Fund, and funds from multilateral and bilateral agencies.
- The vulnerability assessments carried out by the states could become a chapter in their revised State Action Plan on Climate Change, as per the outline provided by the Ministry of Environment, Forest and Climate Change.
- It will also facilitate Nationally Determined Contributions, which aims to adapt better to climate change by enhancing investments in development programmes in sectors vulnerable to climate change, particularly agriculture, water resources, health sector and regions such as Himalayan region, coastal regions, etc.
- It may also aid to plan disaster management.
- A vulnerability assessment contributes to reporting under the Paris Agreement, Article-9 through the assessment of climate change impacts and vulnerability; the formulation and implementation of a National Adaptation Plan, monitoring and evaluation of adaptation plans, policies and programmes; and the development and implementation of resilience of socio-economic and ecological systems.

Way forward

- A vulnerability assessment is a first step towards adaptation planning. Development of a common framework, methodology and guidelines for risk assessment can help to adapt as well as manage disaster.
- Generation of data for risk assessment is important. There is need of a strategy for data generation for climate change risk and vulnerability assessment and adaptation planning. There is need of capacity augmentation of all state climate change centres in developing a Risk Index for states.
- It requires adaptation planning, adequate funding and enough physical infrastructures as well.
- Assessing vulnerability to climate change is important as it helps to understand climate risks and provides information, on the location specific measures to be taken to adapt to climate change.

Global Energy Review 2021

About

The Global Energy Review 2021 has been released by International Energy Agency (IEA). It evaluated the effects of economic recoveries on global energy demand and CO2 emissions in 2021.

Key points

- Global energy demand to fall 6 per cent in 2020 and all fuels except renewables are set to experience their greatest contractions in demand for decades.
- The Covid-19 pandemic continues to impact global energy demand. But stimulus packages and vaccine rollouts provide a beacon of hope.
- Global economic output is expected to rebound by 6% in 2021, pushing the global GDP more than 2% higher than 2019 levels.
- Global energy demand is set to increase by 4.6% in 2021, more than offsetting the 4% contraction in 2020 and pushing demand 0.5% above 2019 levels.
- Almost 70% of the projected increase in global energy demand is in emerging markets and developing economies, where demand is set to rise to 3.4% above 2019 levels. Energy use in advanced economies is on course to be 3% below pre-Covid levels.

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- Global energy-related CO₂ emissions are heading for their second-largest annual increase ever. Demand for all fossil fuels is set to grow significantly in 2021.
- Coal demand alone is projected to increase by 60% more than all renewables combined, underpinning a rise in emissions of almost 5%, or 1500 Mt.
- Sluggish demand for transport oil is mitigating the rebound in emissions. Despite an expected annual increase of 6.2% in 2021, global oil demand is set to remain around 3% below 2019 levels.
- Oil use for road transport is not projected to reach pre-Covid levels until the end of 2021. Oil use for aviation is projected to remain 20% below 2019 levels even in December 2021, with annual demand more than 30% lower than in 2019.
- A full return to pre-crisis oil demand levels would have pushed up CO₂ emissions a further 1.5%, putting them well above 2019 levels.
- Global coal demand in 2021 is set to exceed 2019 levels and approach its 2014 peak. Coal demand is on course to rise 4.5% in 2021, with more than 80% of the growth concentrated in Asia. China alone is projected to account for over 50% of global growth.
- The power sector accounted for only 50% of the drop in coal-related emissions in 2020. But the rapid increase in coal-fired generation in Asia means the power sector is expected to account for 80% of the rebound in 2021.
- Among fossil fuels, natural gas is on course for the biggest rise relative to 2019 levels. Natural gas demand is set to grow by 3.2% in 2021.
- Electricity demand is heading for its fastest growth in more than 10 years. Electricity demand is due to increase by 4.5% in 2021, or over 1 000 TWh.
- This is almost five times greater than the decline in 2020, cementing electricity's share in final energy demand above 20%.
- Almost 80% of the projected increase in demand in 2021 is in emerging market and developing economies, with the People's Republic China (—Chinal) alone accounting for half of global growth. Demand in advanced economies remains below 2019 levels.
- Demand for renewables grew by 3% in 2020 and is set to increase across all key sectors – power, heating, industry and transport – in 2021. The power sector leads the way, with its demand for renewables on course to expand by more than 8%, to reach 8 300 TWh, the largest year-on-year growth on record in absolute terms.
- Renewables are set to provide more than half of the increase in global electricity supply in 2021. Solar PV and wind are expected to contribute two thirds of renewables' growth. The share of renewables in electricity generation is projected to increase to almost 30% in 2021.
- Wind is on track to record the largest increase in renewable generation, growing by 275 TWh, or around 17%, from 2020.
- Solar PV electricity generation is expected to rise by 145 TWh, or almost 18%, and to approach 1 000 TWh in 2021.

The State of the Global Climate 2020

About

World Meteorological Organization (WMO) released its annual State of the Global Climate for 2020. It has cited that the world has seen the very high temperature in 2020.

Key Points of the Report

The State of the Global Climate 2020 lists the major global warming milestones such as–

- The WMO report listed key indicators of irreversible changes in the global climate. Such as–
- o **Greenhouse Gases:**
 - o Notwithstanding the economic slowdown due to the COVID-19 pandemic, emission of major greenhouse gases increased in 2019 and 2020. More to it, the level of greenhouse gas emission will be higher in 2021.
 - o Concentrations of the major greenhouse gases continued to increase in 2019 and 2020. —Globally averaged mole fractions of carbon dioxide (CO₂) have already exceeded 410 parts per million (ppm), and if the CO₂ concentration follows the same

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pattern as in previous years, it could reach or exceed 414 ppm in 2021

o Oceans:

- o In 2019, the oceans had the highest heat content on record. In 2020, it has broken this record further. Over 80 per cent of the ocean area experienced at least one marine heatwave in 2020.
- o The percentage of the ocean that experienced —strong marine heat waves (45 per cent) was greater than that which experienced —moderate marine heat waves (28 per cent)

o Sea-level rise:

- o Since record-taking started in 1993 using the satellite altimeter, sea-level has been rising. However, there was a blip in summer of 2020 that recorded a drop in sea level.
- o The WMO report says it is due to the La Niña induced cooling. —Sea level has recently been rising at a higher rate partly due to the increased melting of the ice sheets in Greenland and Antarctica.

o The Arctic and the Antarctica:

- o In 2020, the Arctic sea-ice extent came down to second lowest on record. The 2020 Arctic sea-ice extent minimum after the summer melt was 3.74 million square kilometre, marking only the second time on record that it shrank to less than 4 million sq km.
- o The Antarctic sea-ice extent remained close to the long-term average. However, the Antarctic ice sheet has exhibited a strong mass loss trend since the late 1990s. This trend accelerated around 2005, and currently, Antarctica loses approximately 175 to 225 Gt per year, due to the increasing flow rates of major glaciers in West Antarctica and the Antarctic Peninsula

Way Forward

- Adaptation policies aimed at enhancing resilience to a changing climate, such as investing in disaster-proof infrastructure and early warning systems, risk sharing through financial markets, and the development of social safety nets should be adopted.
- It can limit the impact of weather-related shocks and help the economy recover faster.
- Adaptation strategies play a key role in countries that are particularly vulnerable to climate change, such as low-income countries located in hot regions and areas exposed to more frequent or severe natural disaster risks.

Push for Green hydrogen

About

Recently, the Government scales up the target of producing 450 GW of renewable energy by 2030. A push for green hydrogen will help India to meet with its aspiration.

Background

- The National Hydrogen Energy Mission was announced in the Union Budget 2021. It will draw up a road towards using Hydrogen as an energy source.
- According to an analysis by the Council on Energy, Environment and Water (CEEW), green hydrogen demand could be up to 1 million tonnes in India across application in sectors such as ammonia, steel, methanol, and transport and energy storage.
- India will soon join 15 other countries in the hydrogen club as it launched the National Hydrogen Energy Mission (NHEM).

About Green Hydrogen

- It is based on the generation of hydrogen (a universal, light and highly reactive fuel) through a chemical process known as electrolysis. This method uses an electrical current to separate the hydrogen from the oxygen in water. If this electricity is obtained from renewable sources it will be known as green hydrogen. Produced energy will be without emitting carbon dioxide into atmosphere.
- The IEA points out, this method of obtaining green hydrogen would save the 830 million tonnes of CO₂ that are emitted annually when this gas is produced using fossil fuels. Likewise, replacing all grey hydrogen in the world would require 3,000 TWh/year from

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new renewables — equivalent to current demand of Europe.

Challenges involved in scale up

- Decentralize green hydrogen production: Decentralized hydrogen production must be promoted through open access of renewable power to an electrolyser.
- Ensure access to renewable power: To minimize intermittency associated with renewable energy, for a given level of hydrogen production capacity, a green hydrogen facility will store hydrogen to ensure continuous hydrogen supply.
- Blending green hydrogen in industrial sector: Improving the reliability of hydrogen supply by augmenting green hydrogen with conventionally produced hydrogen will significantly improve the economics of the fuel. This will also help build a technical understanding of the processes involved in handling hydrogen on a large scale.

Way Forward

India must learn from the experience of the National Solar Mission and focus on domestic manufacturing of Green Hydrogen. Establishing an end-to-end electrolyser manufacturing facility would require measures extending beyond the existing performance-linked incentive programme. India needs to secure supplies of raw materials that are needed for the production of Green hydrogen.

Global Energy Transition

About

India has been ranked at the 87th position among 115 countries in the Energy Transition Index (ETI) 2021, released by World Economic Forum. It tracks nation's current performance of their energy system.

Key Highlights of the report

- The top 10 countries in the index are Western and Northern European countries, with Sweden in the first place, followed by Norway and Denmark.
- Despite coal having to play a significant role in energy mix for China (68) and India (87), which together account for a third of global energy demand, have both made significant progress over the past decade.
- The latest report is based on a revised ETI methodology that takes into account recent changes in the global energy landscape and the increasing urgency of climate change action.
- As per the report, 92 out of 115 countries tracked on the ETI increased their aggregate score over the past 10 years, which affirms the positive direction and steady momentum of the global energy transition.
- **This report identifies three imperatives to increase the resilience of the energy transition–**

Deliver a “just transition” for all	Accelerate electrification and go beyond	Double-down on public-private sector collaboration
<ul style="list-style-type: none"> □ Inequality is on the rise and broad stakeholder buy-in is a prerequisite for resilience. □ The energy transition itself will change resource flows and reset sectors of the energy system in ways that, if not planned for, could lead to unintended consequences and leave entire communities adrift. 	<ul style="list-style-type: none"> □ Electrification and the scaling up of renewables are critical pillars of the energy transition and need to be ramped up quickly. □ Coordination on the demand side and the contribution of other energy sources are necessary to achieve the full impact required. □ Increased R&D funding and cross-sector collaboration are needed 	<ul style="list-style-type: none"> □ The UN Intergovernmental Panel on Climate Change (IPCC) estimates that annual investments in clean energy and energy efficiency need to increase by a factor of six by 2050, compared with 2015 levels, to limit warming to 1.5°C. □ Despite the growing inflow of capital into the sector, significant funding gaps remain,

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<ul style="list-style-type: none"> □ Policy-makers should prioritize measures to support the economy, workforces and society at large as countries shift to a low-carbon energy system. □ This will require an inclusive approach to evaluating energy policy and investment decisions. 	<p>to fully decarbonize energy systems, from green hydrogen and negative emission technologies to digitally enabled demand optimization.</p>	<p>particularly in emerging markets and nascent technologies.</p> <ul style="list-style-type: none"> □ Collaboration between public and private sectors, including risk-sharing as low-carbon solutions mature, will attract the diversified, resilient sources of capital needed for multi-year and multi-decade investments into energy systems.
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Report and India

- o As per the report, India has targeted improvements through subsidy reforms and rapidly scaling energy access, with a strong political commitment and regulatory environment for the energy transition.
- o Countries with rising energy demand, such as India have registered the largest gains, but their scores on the ETI remain low in absolute terms.
- o India is leading renewable energy independent power producer.

India's and Energy Transition

- India has set ambitious targets towards the achievement of the dual goals of climate action and sustainable development through its nationally determined contributions and energy access commitments. As India starts a new decade of energy transition the key focus should be on sustainable growth.
- India's energy transition is characterized by its ambitious targets. By the year 2022, India seeks to provide all households in the country 24x7 power. By 2030, India also seeks to install 450 GW of new renewable energy (RE) in the country.
- India in its Nationally Determined Contributions (NDCs) committed to three targets, which are to be achieved by the year 2030. First, by 2030, 40% of India's cumulative electric power installed capacity will come from non-fossil fuel-based energy sources. Second, India will reduce the emission intensity of its gross domestic product (GDP) by 33–35% (vis-à-vis 2005 levels). Third, India will create an additional carbon sink of 2.5–3 billion tonnes of CO₂ equivalent (through additional forest and tree cover).

Conclusion

Building an effective and resilient energy transition requires all hands on deck. As countries seeks to recover from the impact of COVID-19, there is an opportunity to reset and rethink the way we power our economies, produce materials and even how we travel. And live. It is critical to root the energy transition in economic, political and social practices so that progress becomes irreversible.

Desertification and Land Degradation Atlas

About

ISRO recently released a Desertification and Land Degradation Atlas. Atlas report has highlighted vulnerable areas for mitigation to policy makers, managers, planners, and researchers.

Background

- According to the United Nations Convention to Combat Desertification (UNCCD), Land degradation is —the reduction or loss of the biological or economic productivity and complexity of rainfed cropland, irrigated cropland, or rangeland, pasture, forest and woodlands resulting from land uses, including processes arising from human activities and habitation patterns.
- Generally, land degradation occurs in dryland areas, more specifically arid, semi-arid and

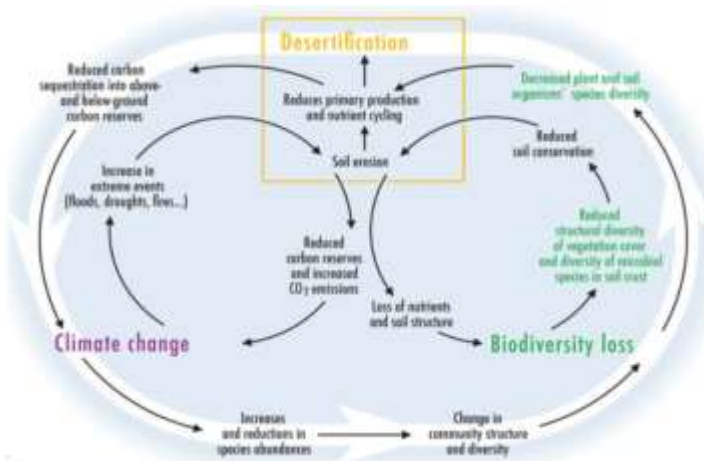
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dry sub-humid areas, it is referred to as desertification.

- Around 69 percent of India falls under drylands.
- India is a signatory to the UNCCD. Thematic Programme Network 1 (TPN-1), on Desertification Monitoring and Assessment, is one of the six thematic programme areas identified as part of Asian regional action programme under UNCCD.
- One of the important tasks under TPN-1 was to prepare desertification status map at national and regional levels.

Key Points of „Land Degradation and Desertification“ Atlas

- The Atlas provides state wise area of degraded lands for the time frame 2018-19.
- It also provides the change analysis for the duration of 15 years, from 2003-05 to 2018-19.
- The analysis reveals that out of selected/ mapped 49.66 million ha area, 22.80 million ha area (45.92%) is undergoing degradation during timeframe 2011-13.
- The area under degradation during time frame 2003-05 is 22.94 million ha (46.20%). A cumulative decrease of 0.14 million ha area (0.28%) in the area undergoing land degradation is observed.
- Mapping has been carried out for 49.66 million ha, which is ~ 15.10 % of country's total geographical area.
- The analysis revealed that 96.40 mha area of the country is undergoing process of land degradation i.e., 29.32% of the Total Geographic Area (TGA) of the country during 2011-13, while during 2003-05 the area undergoing process of land degradation is 94.53 mha (28.76% of the TGA).
- However, the analysis with respect to TGA of the individual states show that Jharkhand, Rajasthan, Delhi, Gujarat and Goa are showing more than 50% area under desertification/land degradation, whereas states with less than 10% area under desertification/land degradation are Kerala, Assam, Mizoram, Haryana, Bihar, Uttar Pradesh, Punjab and Arunachal Pradesh.
- There is a cumulative increase process of desertification/land degradation in the country (constituting 0.57% of the TGA of the country) during the time frame 2003-05 and 2011-13.
- The change analysis indicates that around 1.95 mha land has been reclaimed and 0.44 mha land has been converted from high severity to low severity degradation class, indicating improvement.
- On the other hand, around 3.63 mha productive land has degraded and 0.74 mha land has converted from low severity to high severity degradation class.
- Area under desertification (arid, semi-arid and dry sub-humid regions of the country) during 2011-13 is 82.64 mha; whereas, during 2003-05 it is 81.48 mha.



Thus there is a cumulative increase of 1.16 mha area under desertification. The most significant processes of desertification in arid region is observed to be wind erosion and in semi-arid and dry sub-humid regions vegetation degradation and water erosion dominates.

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Causes of Land Degradation

- Land degradation is driven by climate or human activities.
- Increasing population (both human and cattle), over exploitation of natural resources, un-sustainable land use practices, frequent natural hazards, extreme weather conditions and climate changes are accelerating the processes of land degradation.
- The physical status of the land is also a critical factor towards its vulnerability to land degradation, For Instance— a land without vegetation cover and loose soil is more susceptible to erosion by water or wind.
- The main anthropogenic factors contributing to land degradation include deforestation and land clearing for economic use and to cope with increasing urbanisation.
- Increasing population is putting infinite pressure on our finite land resources. Inappropriate land use and agricultural practices viz., over-cultivation, overgrazing, deforestation, poor irrigation practices, indiscriminate mining, increasing urbanization are some of the major causes leading to loss of fertile agricultural and forest covered land.

Way Forward

- Better regulation of lands and stepping up watershed management initiatives are need of hour to combat the rising trend of degradation.
- Reclaiming degraded lands will require a strict land-use policy and better watershed management initiatives.
- Space technology can be effectively utilised not only for rapid inventory and monitoring but also for action plan preparation to combat land degradation.
- Preventive actions should be encouraged like– Integrating land and water management to protect soils from erosion, salinization, and other forms of degradation, Protecting the vegetative cover, which can be a major instrument for soil conservation against wind and water erosion.
- Among practical measures undertaken to prevent and restore degraded land are prevention of soil erosion; improved early warning system and water resource management; sustainable pasture, forest and livestock management; aero-seeding over shifting sand dunes; narrow strip planting, windbreaks and shelterbelts of live plants; agroforestry ecosystems; afforestation and reforestation; introduction of new species and varieties with a capacity to tolerate salinity and/or aridity; and environmentally sound human settlements.

Security

Permanent Commission for Women in Indian Army

- The government issued a formal Government Sanction Letter (GSL) for grant of Permanent Commission (PC) to women officers in Indian Army, paving the way for empowering women officers to shoulder larger roles in the organisation.
 - The order follows a Supreme Court verdict in February that directed the government that women Army officers be granted PC and command postings in all services other than combat.
- A Permanent Commission means a career in the army until one retires. If one gets selected through Permanent Commission, one has the option to serve the country up to the full age of retirement.
- Earlier, woman officers could serve for 10-14 years in the Short Service Commission (SSC). Women officers were allowed entry into branches such as Army Service Corps, Ordnance, Education Corps, Engineers, Signals, Intelligence, Electrical, and Mechanical Engineering.
- The order specifies the grant of PC to Short Service Commissioned (SSC) women officers in all the 10 streams of the Army in which they presently serve — the Army Air Defence (AAD), Signals, Engineers, Army Aviation, Electronics and Mechanical Engineers (EME), Army Service Corps (ASC), Army Ordnance Corps (AOC), and Intelligence Corps in addition to the existing streams of Judge and Advocate General (JAG) and the Army Educational Corps (AEC).
- There is, however, no option to allow women in combat roles like infantry, armoured, mechanised infantry, aviation and artillery.
- This includes the central government's move to make the Battle Physical Efficiency Test (BPET) mandatory for all women officers, including those commissioned before 2009 and above 35 years of age, who were earlier exempt from it.
 - The BPET is a series of tests meant to test the physical fitness of an officer or a jawan to perform military tasks.
- There are total of 1,653 women officers which is a miniscule 4 % of the total strength of commissioned officers in the Army.

How do other armies treat women?

- ❖ UK — It lifted a ban on women serving in close combat roles in 2016. The next year, Royal Air Force's ground-fighting force opened to women for the first time, making it the first branch of the forces to open all roles to female service personnel. In 2018, women became eligible to apply for every role in the British forces.
- ❖ France — Women can serve in every position in the military, including submarines and combat infantry. Women make up around 15 per cent of all service personnel in the combined branches of the French military.
- ❖ Australia — All combat and non-combat roles are open to women. In 2016, women were allowed to serve in the front-line combat roles
- ❖ US — In 2015, US opened all combat jobs to women, and authorised the military to begin integrating female combat soldiers.
- ❖ Russia — Women can serve in most areas of the military except riot control. They have been allowed in submarines, including nuclear submarines, since 2014. Women are also allowed to lead the combat infantry.

Commonwealth Human Rights Initiative (CHRI) Report

- Recently, a report was released by the Commonwealth Human Rights Initiative (CHRI) and an international anti-slavery organisation Walk Free on the occasion of World Day Against Trafficking in Persons.

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- CHRI promotes adherence to the Universal Declaration of Human Rights, the Commonwealth Harare Principles and other internationally recognized human rights instruments, including domestic legislation supporting human rights in Commonwealth countries.
- In advocating for approaches and measures to prevent human rights abuses, CHRI addresses the Commonwealth Secretariat, the United Nations Human Rights Council members, civil society and the media on criminal justice concerns.
- CHRI's work is split into two core themes: Access to Information and Access to Justice, which includes Prison Reform, Police Reform, and advocacy on media rights and the South Asia Media Defenders Network (SAMDEN).
- Commonwealth countries have made little progress towards their commitment to eradicate modern slavery by 2030, despite an estimated one in every 150 people in the Commonwealth living in conditions of modern slavery.
- The report found that one-third of the Commonwealth countries had criminalised forced marriage, while 23 had not criminalised commercial sexual exploitation of children.
- Out of 54 countries, only four engage with business to investigate supply chains, and all countries report gaps in victim assistance program.
- None of the Asian countries in the group had implemented laws against forced labour in supply chain.
- The report said India accounted for one-third of all child brides in the world.
- India, like all other Commonwealth countries in Asia, had not ratified the International Labour Organisation's 2011 Domestic Workers Convention or the 2014 Forced Labour Protocol.
- Despite being the largest country in the region, India has the weakest response on national coordination, with no national coordinating body or National Action Plan in place.

The Commonwealth Human Rights Initiative (CHRI) is an independent, non-profit, international non-governmental organisation working in the area of human rights.

In 1987, several Commonwealth professional associations founded CHRI, since there was little focus on human rights within the association of 53 nations although the Commonwealth provided member countries the basis of shared common legal system.

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Modern Slavery

- ❖ Modern slavery is the severe exploitation of other people for personal or commercial gain. Modern slavery is all around us, but often just out of sight. People can become entrapped making our clothes, serving our food, picking our crops, working in factories, or working in houses as cooks, cleaners or nannies.
- ❖ From the outside, it can look like a normal job. But people are being controlled – they can face violence or threats, be forced into inescapable debt, or have had their passport taken away and are being threatened with deportation.
- ❖ 40 million people are estimated to be trapped in modern slavery worldwide. 1 in 4 of them are children. Almost three quarters (71%) are women and girls.
- ❖ Modern slavery takes many forms. The most common are:
 - Human trafficking
 - Forced labour
 - Bonded labour
 - Descent-based slavery
 - Slavery of children
 - Forced and early marriage

The Naga Peace Process

News Excerpt

- For the first time since the signing of the Naga Framework Agreement of 2015, NSCN (I-M) said the Naga flag and constitution were non-negotiable.
- The Nagas are not a single tribe, but an ethnic community that comprises several tribes who live in the state of Nagaland and its neighbourhood.
- One key demand of Naga groups has been a Greater Nagalim that would cover not only the state of Nagaland but parts of neighbouring states, and even of Myanmar.
- The British had annexed Assam in 1826, in which they subsequently created the Naga Hills district and went on to extend its boundaries.
- The assertion of Naga nationalism, which began during British rule, has continued after Independence, and even after Nagaland became a state.

The demand of Nagalim: History

The earliest sign of Naga resistance dates back to 1918, with the formation of the Naga Club.

In 1929, the Club famously told the Simon Commission –to leave us alone to determine for ourselves as in ancient times!.

In 1946, A ZPhizo formed the Naga National Council (NNC), which declared Naga independence on August 14, 1947.

In 1951, it claimed to have conducted a referendum in which an overwhelming majority supported an independent Naga state.

By the early 1950s, the NNC had taken up arms and gone underground.

The NNC split in 1975, the breakaway group being the NSCN, which split further in later years, most prominently into the NSCN(I-M) and NSCN (Khaplang)

Peace talks in recent years

- 1975: A peace accord was signed in Shillong in which the NNC leadership agreed to give up arms.
- 1997: NSCN (I-M) signed a ceasefire agreement. Key agreement was that there would be no counter-insurgency offensive against NSCN (I-M), who in turn would not attack Indian forces.
- 2015: The Centre signed a framework agreement with the NSCN(I-M). This set the stage for the ongoing peace talks.
- The government and the NSCN (I-M) have failed to agree on issues relating to a separate Naga flag and a constitution.

Analytica

- Since 2015, the engagement with other Naga groups has increased, even if the NSCN (I-M) is perceived as the major rebel organisation.
- The differences between the Naga National Political Groups (NNPGs) and the NSCN (I-M) are not insignificant.
- The NSCN (I-M) still insists on a –Greater Nagalim! beyond the boundaries of Nagaland State besides seeking a flag and constitution.
- Most of the NNPGs based in Nagaland on the other hand have sought to settle the issue without disturbing the State boundaries while keeping the –Greater Nagalim! question in abeyance.
- Any moves to alter boundaries will intensify ethnic conflicts and insurgencies beyond Nagaland, especially in Manipur.
- The Central government needs to take their concerns on board and reiterate its commitment to finalising the Naga accord while seeking to re-engage with the NSCN (I-M) without giving in to its arbitrary demands.

Way forward

- The Centre could do well to step back from its rigid position of forcing an agreement that a major political stakeholder is not willing to ink. The government will have to tread cautiously in tackling the situation lest a variant of the pre-1997 militancy

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returns to the State. That would be a retrograde development, especially given the last 22 years of hard-fought peace.

Militarising Andamans

- India moved to expedite plans for basing additional military forces, including facilities for additional warships, aircraft, missile batteries and infantry soldiers at the strategically-located Andaman Islands.
- The Ladakh stand-off with China has catalysed India's efforts to strengthen its military presence at the Andaman and Nicobar Islands (ANI).
- The idea of militarising the Andaman Islands isn't new. Since the 1980s, there have been suggestion of building strategic muscle at the ANI.
- When India first began developing the ANI in the mid-1980s, Malaysia and Indonesia had been wary. Jakarta and Kuala Lumpur feared that India would use its military facilities in the ANI to dominate its region, and project power east of Malacca.
- Today, amid growing threats from China, New Delhi seems open to the idea of militarizing the islands.
- While China's presence in the Indian Ocean is growing, Beijing hasn't so far militarised key Belt and Road Initiative outposts in the Bay of Bengal i.e. Hambantota, Chittagong and Kyaukpyu.
- If New Delhi pushes for greater military presence in the ANI, Beijing could well seek military access in friendly Bay countries.

Way Forward

- To counter China's expanding footprint in India's sphere of maritime interest, India must permit Japan, Australia and France and US to build strategic capabilities at the ANI.
- Strengthening collaboration with Indo-Pacific partners at the ANI is very much an option for Indian decision-makers to consider.
- India must also take into account the downsides of offering foreign navies access to its island facilities.
- The final decision should be based on a dispassionate weighing of costs and benefits.

Basic Exchange and Cooperation Agreement (BECA)

- India and U.S. have signed BECA, the last of four foundational agreements for strategic ties. BECA stands for Basic Exchange and Cooperation Agreement for Geo-Spatial Cooperation.
- The previous three agreements are:
 - The General Security of Military Information Agreement (GSOMIA) signed in 2002.
 - The Logistics Exchange Memorandum of Agreement (LEMOA) signed in 2016.
 - The Communications Compatibility and Security Agreement (COMCASA) in 2018.
- BECA will allow for expanded geospatial information sharing between the armed forces. It was not signed till now due to differences over the issue of reciprocity in the exchange of information.
- It will help India get real-time access to American geospatial intelligence that will enhance the accuracy of automated systems and weapons like missiles and armed drones.
- It will help India access topographical and aeronautical data, and advanced products that will aid in navigation and targeting.
- It will provide Indian military systems with a high-quality GPS to navigate missiles with real-time intelligence to precisely target the adversary.

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- Besides the sailing of ships, flying of aircraft, fighting of wars, and location of targets, geospatial intelligence is also critical to the response to natural disasters.
- The strengthening of the mechanisms of cooperation between the two militaries must be seen in the context of an increasingly aggressive China, which threatens a large number of countries in its neighbourhood and beyond, and which has been challenging several established norms and aspects of international relations.
- While LEMOA means one partner trusts the other enough to expose its valuable assets, COMCASA means one is confident that it can rely on encrypted systems to connect the
- Two militaries. And the latest pact, BECA, means the countries can share highly classified information in real time without fear of being compromised.

LEMOA and COMCASA

- ❖ LEMOA, signed in 2016, allows the militaries of the US and India to replenish from each other's bases, and access supplies, spare parts and services from each other's land facilities, air bases, and ports, which can then be reimbursed.
- ❖ While India had indeed provided ad hoc logistics support to the US in the past — such as allowing the refuelling of American aircraft in Bombay during the first Gulf War in 1991, and letting US warships visit Indian ports during the war on terror after 9/11— the signing of
- ❖ LEMOA has institutionalised this process and made it smoother.
- ❖ COMCASA, signed in 2018, allows the US to provide India with its encrypted communications equipment and systems so that Indian and US military commanders, and the aircraft and ships of the two countries, can communicate through secure networks during times of both peace and war.
- ❖ The signing of COMCASA paved the way for the transfer of communication security equipment from the US to India to facilitate —interoperability between their forces — and potentially with other militaries that use USorigin systems for secure data links.

FOUNDATIONAL AGREEMENTS		
<p>Logistics Exchange Memorandum of Agreement (LEMOA)</p> <ul style="list-style-type: none"> ➤ Provide logistic support, refuelling & berthing facilities for each other's warships & aircraft on barter/equal-value exchange basis ➤ Will not involve stationing of US troops on Indian soil. Nor will India extend support if US goes to war with "a friendly country" ➤ Good for US forces re-balancing to Asia Pacific. Indian forces rarely operate far away from their shores but access to Djibouti & Diego Garcia could be useful 	<p>Communication Interoperability & Security Memorandum Agreement (CISMOA)</p> <ul style="list-style-type: none"> ➤ Technology enabler to help transfer high-tech avionics, encrypted communication & electronic systems to India ➤ US says CISMOA will boost 'interoperability' as well as ensure secrecy of its C4ISR (command, control, communications, computer, intelligence, surveillance and reconnaissance) systems ➤ But fears that US will be able to track & snoop on Indian warships/aircraft equipped with such systems 	
	<p>Basic Exchange & Cooperation Agreement for Geo-Spatial Cooperation (BECA)</p> <ul style="list-style-type: none"> ➤ US says BECA will help India with advanced satellite & topographical data for long-range navigation & missile-targeting ➤ But India, which has its own satellite imaging capabilities, unwilling for American digital sensors to be positioned on its soil 	

ADMM-Plus

- Recently, India's Defense Minister virtually attended the 14th ASEAN Defence Ministers' Meeting Plus (ADMM-Plus). In the meeting he flagged threats to the rules-based order as one of the main challenges that need to be addressed, and called for avoiding actions that may further complicate the situation. Chinese defense minister was also present at the meeting.

Significance of ADMM-Plus

- Threats to the rules-based order, maritime security, cyber-related crimes and terrorism etc. remain the challenges that need to be addressed as a forum.

Current Connect

- Amid the current regional environment with visible strains, ASEAN led forums can play central role, including ADMM-Plus in promoting dialogue and engagement towards a pluralistic, cooperative security order in Asia.
- The challenges are becoming increasingly trans-boundary in character and thus, forging closer military-to-military interactions and cooperation amongst the ADMM-Plus countries has become a necessity.
- The conduct of field training exercises and table-top exercises amongst the ADMM-Plus countries can prove as important tools in order to understand each other, cooperate to enhance security and maintain peace in the region.
- Such forums can also boost collaborative and collective efforts that are needed in the current situation because of Covid-19 pandemic.

The ADMM-Plus is a platform for ASEAN and its eight Dialogue Partners Australia, China, India, Japan, New Zealand, Republic of Korea, Russia and the United States (collectively referred to as the “Plus Countries”), to strengthen security and defense cooperation for peace, stability, and development in the region.

The Inaugural ADMM-Plus was convened in Ha Noi, Viet Nam in October 2010.

BRICS Counter Terrorism Strategy

- For the first time, the bloc of five emerging economies have approved a counter-terrorism strategy aimed at strengthening linkages on combatting terrorism and sharing of timely information. The document was released after the leaders of Russia, India, Brazil, China and South Africa held their 12th annual summit.
- The BRICS countries have elaborated this Counter-Terrorism Strategy with the aim of strengthening the security of the BRICS countries.
- The objective of BRICS counter-terrorism cooperation is to complement and strengthen the existing bilateral and multilateral ties among the BRICS countries, and to make a meaningful contribution to the global efforts of preventing and combating the threat of terrorism.
- The BRICS countries’ counter-terrorism cooperation is based on the following principles:
 - Full respect for the sovereignty of the participating countries and noninterference in their internal affairs;
 - Commitment to the principles of international law and recognition of the central and coordinating role of the United Nations on the issues of peace and security;
 - Recognition of the role of regional organizations in countering the threat of terrorism;
 - Need for all States to refrain from organizing, instigating, facilitating, participating in, financing, encouraging or tolerating terrorist activities and to take appropriate practical measures to ensure that their territories are not

BRICS is the group composed by the five major emerging countries - Brazil, Russia, India, China and South Africa -, which together represent about 42% of the population, 23% of GDP, 30% of the territory and 18% of the global trade.

The acronym BRIC was coined by Goldman Sachs in 2001 to indicate the emerging powers that would be, alongside the United States, the five largest economies of the world in the 21st century.

In 2006, BRIC countries started their dialogue, which since 2009 takes place at annual meetings of heads of state and government. In 2011, with South Africa joining the group, the BRICS reached its final composition, incorporating a country from the African continent.

At the Fortaleza Summit (2014), in Brazil, important institutions were created: The New Development Bank (NDB) and the Contingent Reserve Arrangement (CRA). The CRA is operational and is an important financial stability mechanism for countries affected by crises in their balance of payments.

Current Connect

used for terrorist bases or preparation or organization of terrorist acts intended to be committed against other States or their citizens;

- Due consideration of national interests and priorities;
- Openness, information sharing, and consensus-based decision-making;
- Recognition of the decisive role of States and their competent authorities in combating terrorism and extremism conducive to terrorism with due account for national experience and countries' specificities;
- Inadmissibility of using terrorist groups, or issues pertaining to countering international terrorism and extremism conducive to terrorism, for political ends;
- Adoption of a comprehensive approach to combating terrorism;
- Rejection of double standards on countering terrorism and extremism conducive to terrorism;
- Addressing of the conditions conducive to the spread of terrorism and attach full importance to countering the extremism conducive to terrorism.

Updated Crime Manual of CBI

- The Central Bureau of Investigation (CBI) has brought out a revised crime manual after 15 years by keeping sight of latest developments in law, investigation techniques and procedures.

About

- A separate chapter dedicated to investigations in foreign jurisdictions and coordinating and operating with Interpol.
 - It also covers how to expedite issuance of Interpol notices against accused who have absconded from India and sought refuge abroad.
- Changes in the standard operating procedures: specially to probe digital crimes in the cyber world and those across national boundaries.
 - so as to enhance speed and quality of investigation in consonance with global best practices
- Considering the strides in the information-communication technology, the updated procedures in collection and analysis of digital evidence and for the handling of complex cybercrime cases have also been incorporated in the manual.
- Under the revised guideline, the Head of a Branch is required to complete the necessary process in six months and the Head of the Zone has to sum it up by nine months in usual cases.

CBI's crime manual: It lays down the standard operating procedures for the agency to implement in matters pertaining to special investigations, economic offences and cyber-crimes. The crime manual dictates the working of the investigative agency and lays down procedures on how the agency is expected and supposed to act in its investigations.

Analytica

- The new manual provides information about the laws, procedures and their interpretations in a format to assist the investigating officers in their day-to-day work.
- It has also discussed the team approach of investigation to be adopted in larger and complex cases.
- The standard operating procedures pertaining to cybercrime cases have been comprehensively revised to enhance the speed and quality of investigation, in consonance with the global best practices.
- Since the last update, there has been amendments in the Prevention of Corruption (PC) Act, the Criminal Procedure Code (CrPC) and a number of judgments passed by the Supreme court underscored the need for update of the manual especially keeping in view the rising cyber crime so that the premier agency can coordinate effectively with other agencies.

AFSPA and Nagaland

- The Ministry of Home Affairs (MHA) has declared the entire State of Nagaland as a “disturbed area” for six more months, under the Armed Forces (Special Powers) Act (AFSPA).
- The notification declaring Manipur and Assam as “Disturbed Areas” has been issued by the State governments. For Nagaland, the notification is issued by the MHA.
 - A disturbed area is the one which is declared by notification under Section 3 of the AFSPA. It can be invoked in places where the use of armed forces in aid of civil power is necessary.
 - The Central Government, or the Governor of the State or administrator of the Union Territory can declare the whole or part of the State or Union Territory as a disturbed area. A suitable notification would have to be made in the Official Gazette.
 - As per Section 3, it can be invoked in places where “the use of armed forces in aid of the civil power is necessary”.
- The Armed Forces (Special Powers) Act (AFSPA) has been in force in the Northeast since 1958 and Nagaland had acquired statehood in 1963.
- Hence, Nagaland has been under the Armed Forces (Special Powers) Act for almost six decades.
- The draconian act has not been withdrawn despite a framework agreement being signed in 2015 between Naga insurgent group NSCN-IM general secretary Thuingaleng Muivah and government interlocutor R.N. Ravi in the presence of central government.
- The Act came into force in the context of increasing violence in the North-eastern States decades ago, which the State governments found difficult to control.
- In simple terms, AFSPA gives armed forces the power to maintain public order in “disturbed areas”.
- They have the authority to prohibit a gathering of five or more persons in an area, can use force or even open fire after giving due warning if they feel a person is in contravention of the law.
- If reasonable suspicion exists, the army can also arrest a person without a warrant; enter or search premises without a warrant; and ban the possession of firearms.
- Any person arrested or taken into custody may be handed over to the officer in charge of the nearest police station along with a report detailing the circumstances that led to the arrest.
- Presently, AFSPA, 1958, is operational in the entire States of Assam, Nagaland, Manipur (except Imphal Municipal area), three districts namely Tirap, Changlang and Longding of Arunachal Pradesh and the areas falling within the jurisdiction of the eight police stations in the districts of Arunachal Pradesh, bordering the State of Assam.

Biological Warfare

- These are microorganisms like virus, bacteria, fungi, or other toxins that are produced and released deliberately to cause disease and death in humans, animals or plants.
- It is a subset of a larger class of weapons referred to as weapons of mass destruction, which also includes chemical, nuclear and radiological weapons. The use of biological agents is a serious problem, and the risk of using these agents in a bioterrorist attack is increasing.
- The Biological Weapons Convention (BWC): It is the first multilateral disarmament treaty banning the development, production and stockpiling of an entire category of weapons of mass destruction entered into force in 1975.
- The BWC bans:

Current Connect

- The development, stockpiling, acquisition, retention, and production of: Biological agents and toxins “of types and in quantities that have no justification for prophylactic, protective or other peaceful purposes;”
- Weapons, equipment, and delivery vehicles “designed to use such agents or toxins for hostile purposes or in armed conflict.”
- The transfer of or assistance with acquiring the agents, toxins, weapons, equipment, and delivery vehicles described above.

Biological Warfare Agents

- Biological warfare agents differ greatly in the type of organism or toxin used in a weapons system, lethality, length of incubation, infectiousness, stability, and ability to be treated with current vaccines and medicines. There are five different categories of biological agents that could be weaponized and used in warfare or terrorism. These include:
 - Bacteria—single-cell organisms that cause diseases such as anthrax, brucellosis, tularemia, and plague.
 - Rickettsiae—microorganisms that resemble bacteria but differ in that they are intracellular parasites that reproduce inside cells. Typhus and Q fever are examples of diseases caused by rickettsia organisms.
 - Viruses—intracellular parasites, about 1/100 the size of bacteria, that can be weaponized to cause diseases such as Venezuelan equine encephalitis.
 - Fungi—pathogens that can be weaponized for use against crops to cause such diseases as rice blast, cereal rust, wheat smut, and potato blight.
 - Toxins—poisons that can be weaponized after extraction from snakes, insects, spiders, marine organisms, plants, bacteria, fungi, and animals. An example of a toxin is ricin, which is derived from the seed of the castor bean.

Way Forward

- The direct use of infectious agents and poisons against enemy personnel is an ancient practice in warfare. Lethal biological weapons may be capable of causing mass deaths, but they are incapable of mass destruction of infrastructure, buildings, or equipment.
- “weaker militaries will continue to seek an asymmetric advantage in an unrestricted warfare milieu” while “social media will continue to be the vector of choice for the battle of narratives”.

Tour of Duty recruitment model

- Army’s proposed ‘Tour of Duty’ recruitment model may be expanded to Navy and IAF too. India’s defence establishment is actively considering expanding the scope of the ‘Tour of Duty’ model of recruitment to the Air Force and Navy as well.
 - Three-year volunteer scheme is being designed to attract more youth to Army, fill upofficers’ vacancies, and reduce ballooning defence pensions.
 - This engagement based on the pattern adopted by the Israel Defence Forces (IDF), excluding the conscription clause, is considered to accrue benefits to Army as well as the individual.
 - This proposal keeps the engagement as voluntary unlike Israel’s practice of necessary three years of military service for every able-bodied person.
- ToD is expected to result in a significant reduction in the expenditure on pay and pensions and free up funds for the Army’s modernization.
- The overall purpose of the ToD concept is ‘internship/temporary experience’.
- This scheme is for those who did not want a full career in the Army but still wanted to put on the uniform.
- They would also have an edge after leaving the service and going to the corporate sector.
- In case of any unfortunate eventuality, all the benefits will get extended to the person or the next of kin as is due to a regular officer or jawan.

Analytica

Current Connect

- India's political leadership is keen on the scheme, given its future potential to generate large-scale employment, and is pushing to working out its modalities.
- There are plans to expand the scheme over the next few years to ensure that close to 40 per cent of the strength of the Army is recruited through it.
- The proposal is deemed to be equally beneficial for the youth, nation and corporates as they will get trained, disciplined, confident, diligent and committed young men and women after their ToD.
- Analysing the cost of training incurred on each personnel compared with the limited employment of the manpower for three years, the proposal calculates that it will indeed have a positive benefit.
- No concrete decision has yet been taken on the implementation of the scheme, and the idea is currently at the discussion stage.

Ease of Doing Business in Defence Manufacturing

- Recently, some measures have been taken up by Government to increase the ease of doing business in defense.
- The move has been part of larger government efforts to boost ease of doing business since 2018. The government last year trimmed the headline corporate tax rate to 22 per cent from 30 per cent, and to 15 per cent from 25 per cent for new manufacturing companies as measures to boost ease of doing business.
 - Most of the investment in research and development across sectors has done by the public sector units so far and the private businesses too must increase its investment in the area.
- The initial validity of industrial licenses under the I(D&R) Act, 1951 which was earlier 7 years, extendable up to 3 years for existing as well as future licenses, has been revised to 15 years, further extendable up to 18 years for existing as well as future licenses.
- Further, under Arms Act 1959/Arms Rules 2016, license granted shall be valid for the life time of the licensee company provided the licensee shall be required to setup facility and fulfill other conditions within a period of seven years from the date of grant of a license.
- Guidelines have been issued to streamline the processing of applications for grant of extension of validity of Industrial License.
- Partial commencement of production is treated as commencement of production of all the items included in the license.
- The advanced version of National Industrial Classification (NIC-2008) has been adopted, which is a superior/sophisticated industrial classification.
- The 'Security Manual for Licensed Defence Industry' has been issued. With the issue of the Security Manual, the requirement of affidavit from the applicants has been done away with.
- Restriction of annual capacity in the Industrial Licence for Defence Sector has been removed under Industries (Development & Regulation) Act, 1951.
- Licensee has been allowed to sell the defense items to the government entities under the control of Ministry of Home Affairs (MHA), Public Sector Undertakings (PSUs), State Governments and other Defence Licensee companies without approval of Department of Defence Production.
- Licensee has been allowed to manufacture enhanced capacity up to fifteen percent of the existing capacity with prior intimation to the licensing authority under Arms Act, 1959.
- A new online portal has been developed for facilitating filing of online applications for Industrial Licence under Industries (Development & Regulation)-IDR Act, 1951/Arms Act, 1959.
- Defence products list requiring compulsory license from DPIIT under Industries (Development & Regulation) Act, 1951 and Arms Act, 1959 has been pruned, the licensing in defense sector has been further liberalized.

Current Connect

- To facilitate further ease of doing business in Industrial Licensing, No Industrial Licence/Arms Licence is required for manufacture of any parts or accessories in Defence Sector, unless they are specifically listed in any of the Annexures of Press Note 1(2019 Series). This shall not apply to issue of Arms Licence for small arms by MHA.

Analytica

- Pushing for self-reliance in the defense sector, the government has taken steps to move forward in the sector with —transparency, predictability and ease of doing businessl.
- The government is focusing on developing a strong domestic capability in defense to give greater impetus for economic growth, skilled job creation in manufacturing and to support growth of domestic manufacturers and MSMEs.
- The government has reinstated services as an avenue for discharge of offset obligations and provided a level playing field to Indian vendors in Capital acquisitions to boost ' Make in India'.
- The government is actively promoting not only domestic manufacturing but also an export- oriented defense industry.

Military Farm Service

- Recently, Military farms have been closed after 132 years of glorious service to the Nation.
- The farms were set up with the sole requirement of supplying hygienic cow milk to troops in garrisons across British India. The first military farm was raised on February 1, 1889 at Allahabad.
- Military Farms are pioneers in introduction of Artificial Insemination (AI) in cattle in the early 20th century (1925).
- Aim: To ensure nutritious milk supply to the troops deployed in India.

Project Frieswal:

- It is a collaborative project of national importance being undertaken by Military Farms with Indian Council of Agriculture Research (ICAR), Min of Agriculture. It is the world's biggest cross breeding programme that envisages to evolve a milch breed of cattle for tropical world.
- Its aim was to produce and rear Holstein Friesian cross breed with Sahiwal breed for high milk productivity.
- Technical Activities under Frieswal Project: Semen freezing, planned breeding, progeny testing and gene mapping were some of the other areas in which the research for the project was undertaken.

The genesis of the decision to close military farms

- It was in June 2013 that the Quarter Master General's branch of the Army Headquarters, under which Military Farms fell, issued a direction that the farms will be closed in a phased manner.
- In June 2014, another order was issued by the Deputy Director-General Military Farms that the responsibility of supply of milk and milk products was being shifted from Military Farms to Army Service Corps (ASC).
- In 2016, Lt. Gen. DB Shekatkar (retd) committee which was appointed to recommend measures to enhance combat capability and rebalance defence expenditure of the armed forces.
 - In 2016, a committee under Lt Gen DB Shekatkar (retd) submitted a report on reorganisation of several branches of the Army in which it was recommended that the Military Farms be closed down.

Joint logistics facility

- The Chief of Defence Staff General BipinRawat has operationalised the third joint logistics node (JLN) in Mumbai.

Current Connect

- The JLN in Guwahati and Tri-Services, Andaman and Nicobar Command, Port Blair were operationalised on January 01, 2021.
- It is a very important first step in the direction of logistics integration of our three Services.
- It will provide integrated logistics cover to the armed forces for their small arms ammunition, rations, fuel, general stores, civil hired transport, aviation clothing, spares and also engineering support in an effort to synergise their operational efforts.
- An integrated theatre command envisages a unified command of the three Services, under a single commander, for geographical theatres that are of security concern.
- The integrated theatre commander will not be answerable to individual Services, and will be free to train, equip and exercise his command to make it a cohesive fighting force capable of achieving designated goals.
- The Shekatkar committee has recommended the creation of 3 integrated theatre commands — northern for the China border, western for the Pakistan border and southern for the maritime role.
- The Andaman and Nicobar Command (ANC) is the first and only tri-service theater command of the Indian Armed Forces, based at Port Blair in the Andaman and Nicobar Islands, a Union Territory of India.
 - It was formed in 2001, following the Group of Ministers’ report on national security, after the Kargil War.
- The other tri-service command, the Strategic Forces Command (SFC), looks after the delivery and operational control of the country’s nuclear assets.
 - It was created in 2003, but because it has no specific geographic responsibility and a designated role, it is not an integrated theatre command but an integrated functional command.

Advanced Chaff Technology

- The Defence Research and Development Organisation (DRDO) has developed an Advanced Chaff Technology to safeguard the naval ships against enemy missile attack.
- Chaff is an electronic countermeasure technology used by militaries worldwide to protect naval ships or other sensitive targets from radar and radio frequency (RF) guiding mechanisms of the enemy missile.
- The chaff rockets deployed in the air reflect as multiple targets for the missile guidance systems and deflecting adversary missiles, thus protecting own assets.
- Defence Laboratory Jodhpur (DLJ), a DRDO laboratory, has indigenously developed three variants of this critical technology namely:
 1. Short Range Chaff Rocket (SRCR),
 2. Medium Range Chaff Rocket (MRCR) and
 3. Long Range Chaff Rocket (LRCR)

Chaff v/s flares:

- Chaff — which comprises “millions of tiny aluminum or zinc-coated fibers” — is stored onboard an aircraft in tubes and ejected behind the plane to confuse radar-guided missiles.
- Meanwhile, flares distract heat-seeking, infrared-guided missiles “by ejecting magnesium pellets from tubes to ignite in the wake behind an aircraft.

Iron Dome Air Defence System: Israeli

- It is manufactured by Rafael Advanced Defence Systems Limited and has been in service with Israeli Air Force since 2011. The radar system was developed by Elta.
- Iron Dome is a multi-mission system capable of intercepting rockets, artillery, mortars and Precision Guided Munitions like very short range air defence (V-SHORAD) systems as well as aircraft, helicopters and Unmanned Aerial Vehicles (UAV) over short ranges of up to 70 km.

Current Connect

- It is an all-weather system and can engage multiple targets simultaneously and be deployed over land and sea.
- One of the system's important advantages is its ability to identify the anticipated point of impact of the threatening rocket, to calculate whether it will fall in a built-up area or not, and to decide on this basis whether or not to engage it.
- The I-DOME is the mobile variant with all components on a single truck and C-DOME is the naval version for deployment on ships.
- The system's inability to cope with very short range threats as estimates put the Iron Dome's minimum interception range at 5-7 kilometres.

Research Design & Standards Organization

- Indian Railways' Research Design & Standards Organization (RDSO) has recently become the nation's first institution to be declared as Standard Developing Organization (SDO) under the mission called "One Nation One Standard" on Bureau of Indian Standards.
- The recognition is valid for 3 years and will require renewal after completion of the validity period.
 - Research Designs & Standards Organization (RDSO), Lucknow, which is the sole R&D Wing of Ministry of Railways, is one of India's leading Standard formulating Body undertaking standardization work for railway sector.
- The idea of One Nation One Standard Mission was first conceived in 2019, it was envisioned on the line of one nation, one ration card scheme in order to ensure quality products in the country.

Benefits of this Recognition

- Larger participation of industry/vendors/technology developers/MSME's in Indian Railways supply chain
- The competitiveness amongst the industry will increase
- There will be a reduction in cost and quantum improvement in the quality of product and services
- There will be smooth induction of latest evolving & emerging technologies on Indian Railways
- Dependence on imports will reduce and "Make-in-India" will get a boost
- Improved ease-of-doing-business
- RDSO will be recognized on international standards-making bodies and there will be integration with global supply chain/global trade

Major reforms undertaken in defense sector

- Recently, the Defense Minister released an E-booklet titled '20 Reforms in 2020', highlighting the major reforms undertaken by Ministry of Defense (MoD) in 2020.

Chief of Defence Staff & Department of Military Affairs

- The post of CDS was created to increase efficiency & coordination among the Armed Forces and reduce duplication, while DMA was established to ensure improved civil-military integration.
- General Bipin Rawat was appointed as the first CDS who also fulfills the responsibilities of Secretary, DMA.

AatmaNirbharta in Defence

- To promote 'Make in India' in defense sector, a list of 101 defense items was notified in August 2020, while Defense Acquisition Procedure 2020 was unveiled in September 2020.
- Corporatisation of Ordnance Factory Board (OFB) was approved in May 2020 for greater efficiency and productivity.
- There was 10 per cent budget increase in 2020-21 over the previous year.

Current Connect

Increased Defence Exports

- The increased partnership with the private sector has led to a substantial rise in defense exports.
- The value of total defense exports rose from Rs 1,941 crore in 2014-15 to Rs 9,116 crore in 2019-20. Also, for the first time, India figured in the list of defense equipment exporting nations, as the exports expanded to more than 84 countries.

Defense Acquisition

- First five Rafale fighter aircraft arrived in India in July 2020 and several more since then, adding firepower to the arsenal of the Indian Air Force.
- To promote innovation by young minds, five Young Scientists Laboratories of DRDO were launched in 2020.
- DRDO has joined hands with the private sector in design & development and identified 108 Systems & Subsystems for the industry to design, develop and manufacture.

Digital Transformation

- Directorate General Quality Assurance (DGQA) started online Pre-Delivery inspection in May 2020 to address security threats, while Armed Forces Tribunal began digital hearing for the first time in August 2020.

Strengthening border infrastructure

- Reforms of processes and workflows within Border Roads Organisation (BRO) enabled it to achieve targets ahead of schedule, in some instances.
- World's longest Atal tunnel above 10,000 feet, at Rohtang on the Leh-Manali Highway was inaugurated in October 2020.

Stree Shakti in Armed Forces

- Ten streams of Indian Army were opened for giving Permanent Commission to Short Service Commission (SSC) Women officers, while women pilots of Indian Navy were operationalised for the first time.
- All Sainik Schools were thrown open for girl students from academic session 2020-21.

Reforms in National Cadet Corps (NCC)

- Expanding the reach of NCC to remote locations was a major announcement.
- It was decided to give preference to NCC cadets in employment in Central Armed Police Forces from May 2020.

Aid to civil administration during COVID-19

- Ministry of Defense and the Armed Forces have mobilised resources to aid the civil administration in fight against COVID-19.
- DRDO has set up several hospitals to treat COVID patients across the states, passed on technology expertise to manufacture ventilators, oxygen plants, medicines, test kits and PPE kits to private sector for mass production.

Help beyond boundaries

- The Armed Forces extended a helping hand to the countries in distress. Indian Navy mounted eight relief missions during 2020-21.
- Besides evacuating stranded Indians from Iran, Sri Lanka and Maldives under Vande Bharat Mission, Indian Naval ships provided Covid-19 medical relief to five countries.
- INS Airavat provided 270 MT food aid to Sudan, Djibouti and Eritrea struck by natural calamities.
- The Indian Coast Guard led the rescue operation to save Sri Lanka coast of its biggest oil spill.

Jammu Drone Attacks

- Recently, Drones were used for the first time to drop explosive devices, triggering blasts inside the Air Force Station's technical area in Jammu.
- Over the past two years, drones have been deployed regularly by Pakistan-based outfits to smuggle arms, ammunition and drugs into Indian Territory.

Current Connect

- Weaponised drones were first used by the Islamic State in northern Iraq in 2016 and then in Syria.
 - In 2018, Syrian rebels used homemade drones to attack Russian military bases in Syria
- Drones are becoming security threats particularly in conflict zones where non-state actors are active and have deep pockets that make such technology easily accessible.
 - In 2019, Houthi rebels claimed responsibility for bombing Saudi oil installations using drones.
- In a war situation, Azerbaijan effectively drones used to defeat Armenia in the recent conflict between the two countries.
- According to government figures, 167 drone sightings were recorded along the border with Pakistan in 2019, and in 2020, there were 77 such sightings
- A drone attack is a cost-effective method to cause precision attacks and being small in shape and size are not easily picked up by RADAR systems. These small drones have a limited range.
- In terms of military usage, drones can be used for a number of purposes such as reconnaissance, surveillance, establishing military links and delivering supplies to attacking targets.
 - In some countries, armed drones are even being reportedly developed to be used in missile defense.
- In India, the most commonly known drones are quad- and hexacopters used for civil and commercial purposes, and Heron drones used for military surveillance.
 - Different UAVs operate under various technologies ranging from remote control by a human operator to using GPS and radio frequencies, and autopilot assistance.
- The Defense Research and Development Organisation (DRDO) have developed a detect-and-destroy technology for drones, but it is not yet into mass production.
 - The DRDO system, developed in 2019, has capabilities for hard kill (destroying a drone with lasers) and soft kill (jamming a drone's signals).
- Rafael, the defense company behind Israel's famed Iron Dome missile system, has also developed something called the Drone Dome.

Analytica

- Drones fly low and therefore cannot be detected by any radar system. Besides the low altitude, what also makes it difficult to trace and intercept drones is their slow speed.
- The biggest advantage that comes with using a drone for combat purpose is that it can be controlled from a remote distance and does not endanger any member of the attacking side.
- Anti-drone jammers cannot be that effective in the border areas, but they can be deployed at security sensitive installations to prevent such attacks in future.
- Besides this, terror outfits are interested in having combat drones because they provide them the capability of air strikes.
- Globally, a majority of non-state actors do not have infrastructure to launch air strikes. With combat drones coming into play, this monopoly that till now rested with sovereign governments no longer remains exclusive.

Way Forward

- The conventional drones being larger in size were being engaged by interceptor aircraft / automatic weapons using direct line of sight engagements. With smaller drones, this is a challenge and needs AI-based detection and destruction algorithms.
- The government needs to look beyond promulgation of orders by having effective drone systems in these vulnerable areas and vulnerable points, to negate any future threats.

SPARSH System

- Recently, Ministry of Defence has implemented SPARSH (System for Pension Administration Raksha).
- It is an integrated system for automation of sanction and disbursement of defence pension. Processes pension claims and credits pension directly into the bank accounts of defence pensioners without relying on any external intermediary.
- A Pensioner Portal is available for pensioners to view their pension related information, access services and register complaints for redressal of pension grievances.
- It will be launched in a phased-wise manner for all the pensioners of the Army, the Indian Navy and the Indian Air Force.
- It envisages establishment of Service Centres to provide last mile connectivity to pensioners who may be unable to directly access the SPARSH portal.
- The two largest banks dealing with defence pensioners – State Bank of India (SBI) and Punjab National Bank (PNB) – have been co-opted as Service Centres.

Analytica

- Right of The Pensioner: Payment to the right pensioner at the right time through digital processing of over 30 lakh pensioners.
- It will address the current challenges in the pension sanctioning and disbursement process such as decentralised solutions existing in silos, manual intervention in processing, lack of centralised information for addressing pensioner queries, among others.
- Incentivizing the personnel: It might act as morale boosters and feeling of security \

Women officers in combat

- In a first, Indo-Tibetan Border Police (ITBP) inducted women officers in the combat role, joining it as Assistant Commandants (AC).
- The ITBP started recruiting women combat officers in its cadre from 2016 through an all-India examination conducted by the Union Public Service Commission (UPSC). Before this, it only had combat women in the constabulary ranks.
- The army, air force and navy began inducting women as short-service commission (SSC) officers in 1992. This was the first time women were allowed to join the military outside the medical stream.
- In 2015, India also opened new combat air force roles for women as fighter pilots.
- In 2020, The Supreme Court last year ruled that women could serve as army commanders further granting permanent commission and promotions equal to their male counterparts.
 - The apex court had directed that women officers in the Army be granted permanent commission, rejecting the Centre's stand of their physiological limitations as being based on "sex stereotypes" and "gender discrimination against women".
 - The SC has done away with all discrimination on the basis of years of service for grant of PC in 10 streams of combat support arms and services, bringing them on a par with male officers.
 - Women officers are now eligible to occupy all the command appointments, at par with male officers, which would open avenues for further promotions to higher ranks for them.
 - If women officers had served only in staff, they would not have gone beyond the rank of Colonel.
- In early 2021, the Indian Navy has deployed four women officers on warships after a hiatus of almost 25 years.
 - India's only aircraft carrier INS Vikramaditya and fleet tanker INS Shakti are the warships that have been assigned their first women crews since the late-1990s.

Current Connect

- Recently, the Indian Army on Saturday inducted the first batch of women into the Corps of Military Police, the first time women have joined the military in the non-officer cadre.
- The army will soon open the doors of its aviation wing, which operates helicopters, to women officers. Until now, women officers were only carrying out ground duties in army aviation. The first batch of women officers will commence training to become pilots in July 2021.

Issues:

- **Physical Ability:** While the majority of jobs in the armed forces are open equally to men and women, there are some to which women are just not physically suited. The standards of physical fitness have been set to suit men, and women attempting to reach them will over-stretch themselves. In addition, combat units engage in activities designed to suit men's capabilities. Women serving in integrated units will suffer higher injury rates as a result of this.
- **Military readiness:** Pregnancy can affect the deployability of a unit when the unit has a disproportionate number of women or is understaffed.
- There are challenges — domestic issues, fitness, pregnancy.

Pros:

- **Ability vs Gender:** As long as an applicant is qualified for a position, one's gender is arbitrary. In modern high technology battlefield technical expertise and decision-making skills are increasingly more valuable than simple brute strength.
- **Effectiveness:** The blanket restriction for women limits the ability of commanders in theater to pick the most capable person for the job.
- **Military Readiness:** Allowing a mixed gender force keeps the military strong. The all-volunteer forces are severely troubled by falling retention and recruitment rates. This can be addressed by allowing women in the combat role.
- **Tradition:** Training will be required to facilitate the integration of women into combat units. Cultures change over time and the masculine subculture can evolve too.

Defence industrial Corridor

- The government has setup two Defence Industrial Corridors in the Country, one in Uttar Pradesh and another in Tamil Nadu.
- The Uttar Pradesh Defence Industrial Corridor is being set up by the Uttar Pradesh Expressways Industrial Development Authority (UPEIDA). It consists of the following six nodal points with the potential to develop defence industries in the corridor: Agra, Aligarh, Chitrakoot, Jhansi, Kanpur, and Lucknow.
- The Tamil Nadu Defence Industrial Corridor — also called the Tamil Nadu Defence Production Quad as the nodal cities form a quadrilateral with one of them at the centre — includes Chennai, Hosur, Salem, Coimbatore and Tiruchirappalli as nodes.

Analytica

- India is among the top 5 military spenders and one of the emerging defence manufacturing hubs in the world. To support the growth of the Defence sector and enhance manufacturing capacity in the sector.
- Setting up of Defence Industrial Corridors would catalyse indigenous production of defence and aerospace related items, thereby reducing our reliance on imports and promoting export of these items to other countries.
- This will lead to achieve India's goal of self-reliance in defence, generation of
- direct/indirect employment opportunities and growth of private domestic manufacturers, Micro Small and Medium Enterprises (MSMEs) and Star-ups.

Airspace map of India

- An airspace map of India has been recently launched by the Ministry of Civil Aviation for drone operations.

Current Connect

- It will allow civilian drone operators to check the demarcated no-fly zones or where they need to undergo certain formalities before flying one.
- The drone airspace map comes as a follow-through of the liberalised Drone Rules, 2021 released by the Central Government on 25 August 2021, the PLI scheme for drones released on 15 September 2021 and the Geospatial Data Guidelines issued on 15 Feb 2021. All these policy reforms will catalyse super-normal growth in the upcoming drone sector.
- This map has been developed by MapMyIndia and IT services firm Happiest Minds and is put up on the Directorate General of Civil Aviation's (DGCA) digital sky platform.
- The interactive map shows red, yellow and green zones across the country.

Green zone	Yellow zone	Red zone
<ul style="list-style-type: none"> ▪ Green zone is the airspace up to 400 feet that has not been designated as a red or yellow zone, and up to 200 feet above the area located between 8-12 km from the perimeter of an operational airport. ▪ In green zones, no permission is required for operating drones with an all-up weight of up to 500 kg. 	<ul style="list-style-type: none"> ▪ Yellow zone is the airspace above 400 feet in a designated green zone, and above 200 feet in the area located between 8-12 km from the perimeter of an airport, and above ground in the area located between 5-8 km from the perimeter of an airport. ▪ Drone operations in yellow zone require permission from the concerned air traffic control authorities — which could be either the Airports Authority of India, the Indian Air Force, the Indian Navy, Hindustan Aeronautics Ltd, etc as the case may be. 	<ul style="list-style-type: none"> ▪ Red zone is the 'no-drone zone' within which drones can be operated only after a permission from the Central government.

- The Yellow zone has been reduced from 45 km earlier to 12 km from the airport's perimeter.
- The map is available on DGCA's digital sky platform (<https://digitalsky.dgca.gov.in/home>) and the government said that it may be updated and modified by authorised entities from time to time.
 - The drone airspace map is freely available on the digital sky platform to all without any login requirements.

Analytica

- Drones offer tremendous benefits to almost all sectors of the economy. These include – agriculture, mining, infrastructure, surveillance, emergency response, transportation, geo-spatial mapping, defence, and law enforcement to name a few.
- Drones can be significant creators of employment and economic growth due to their reach, versatility, and ease of use, especially in India's remote and inaccessible areas.

Maoist influence down

- According to data provided by the Ministry of Home Affairs (MHA), there has been a steady decline in Left Wing Extremism (LWE) related violence and geographical spread of LWE influence in the country.
- The geographical influence of Maoists has contracted to only 41 districts in the country, a sharp reduction from 96 such districts in 10 States in 2010.
- According to the ministry, there has been a gradual decline in the number of LWE incidents in the last decade.
 - The incidents have reduced from 2,258 in 2009 to 349 incidents till August 31 this year.
 - The number of deaths reduced from 908 to 110 during the same period.

Left Wing Extremism (LWE)

- Left wing extremism, also known by various other names such as naxalism and Maoism, is a form of armed insurgency against the State motivated by leftist ideologies.
- Naxalism has been operating in several parts of the country. It has been there from the late 60s and 70s and different parts of the country have been affected with different levels of naxal violence.
 - The States of Chhattisgarh, Jharkhand, Odisha, Bihar, West Bengal, Andhra Pradesh, Telangana, Maharashtra, Madhya Pradesh, Uttar Pradesh and Kerala are considered LWE affected, although in varying degrees.
- A significant change came about with the merger of the Peoples War Group and the MCC to form the CPI (Maoist) in 2004.
 - The objective of the CPI (Maoist) Party is the armed overthrow of the Indian State. They do not have any belief in parliamentary democracy.
 - The CPI (Maoist) Party, is the major Left Wing Extremist outfit responsible for a majority of incidents of violence and killing of civilians and security forces and has been included in the Schedule of Terrorist Organizations along with all its formations and front organizations under the Unlawful Activities (Prevention) Act, 1967.
- In 2005, then PM Manmohan Singh described the LWE challenge as the most serious security threat to India.
- The Union Home Ministry first created the LWE desk, a separate department to address the Maoist issue in 2006.
 - The LWE Division implements security related schemes aimed at capacity building in the LWE affected States.
 - The LWE Division coordinates the implementation of various development schemes of the Ministries/Departments of Govt. of India in LWE affected States.
- LWE has its genesis in poor governance, lack of development in the tribal belt and an oppressive/exploitative hierarchy of the state and society that has pushed the tribal population, the landless and the socio-economically backward sections to the margins of survival.
- The root cause of dissatisfaction is that development has not reached there in last six decades since Independence and now to deal with it, it is very essential to ensure accessibility to fast-paced development so that common and innocent people do not join them.

Government Strategy to Curb LWE

- **Operation Green Hunt** was the unofficial name for major operation undertaken by security forces in September 2009 under MHA's guidance to "flush out" insurgents from Naxal affected border areas of states in 'Red Corridor'
 - The operation met with success but as a response to the offensive, the Naxals too launched violent attacks on the security forces, the worst being ambush on CRPF troops in April 2010 which cost lives of 75 policemen/CRPF men, the maximum number ever killed by the Maoists in any single conflict.
- **The National Policy and Action Plan formed in 2015** to address left Wing Extremism', aimed at eliminating the menace in the "shortest possible timeframe by using any element of the country's national power".
 - The plan envisaged adopting a four pronged strategy in the areas of 'security, development, ensuring rights & entitlement of local communities and management of public perception' with the focus towards addressing the existing deficits in LWE affected areas.
 - On the security front the Government laid emphasis on capacity building of the concerned State Governments and improving the security environment through various schemes such as Security Related Expenditure (SRE) scheme, construction of fortified police stations, construction of critical roads etc.

Current Connect

- **Operation ‘Samadhan’:** An integrated strategy through which LWE can be countered with full force and competence’. This is a compilation of short term and long-term policies formulated at different levels. SAMADHAN Stand for:-
 - S- Smart Leadership
 - A- Aggressive Strategy
 - M- Motivation and Training
 - A -Actionable Intelligence
 - D- Dashboard Based KPIs (Key Performance Indicators) and KRAs (Key Result Areas)
 - H- Harnessing Technology
 - A-An Action plan for each Theatre
 - N- No Access to Financing

Current Strategy:

- The Government’s approach is to deal with Left Wing Extremism in a holistic manner, in the areas of security, development, ensuring rights and entitlements of local communities, improvement in governance and public perception management.

Important Initiatives for LWE affected States:

- In order to holistically address the LWE problem in an effective manner, Government has formulated National Policy and Action Plan adopting multi-pronged strategy in the areas of security, development, ensuring rights & entitlement of local communities etc.
- **Security Related Expenditure (SRE) Scheme:** The SRE Scheme aims at strengthening of the capacity of the LWE affected States to fight the LWE menace effectively.
- **LWE Mobile Tower Project:** To improve mobile connectivity in the LWE areas.
- **Road Connectivity Project for LWE affected areas (RRP-II):** for improving road connectivity in LWE affected States.
- **Special Central Assistance (SCA):** The main objective of the Scheme is to fill the critical gaps in Public infrastructure and Services, which are of emergent nature.

Way Forward:

- It is the belief of the Government of India that through a holistic approach focussing on development and security-related interventions, the LWE problem can be successfully tackled.
- Para-military reforms: the Kargil Review Committee (KRC) report noted that the new situation of proxy war and large scale terrorism that the country faces, the role and the tasks of the para-military forces have to be restructured particularly with reference to command and control and leadership functions.
- Modernization of Police Forces: State plays vital role in maintaining law and order. Central forces have the numbers and the training, but they have no local knowledge or intelligence... Only local police can drive out Maoists.

Tibetology

- Recently, the Army has begun a course in Tibetology in a tie-up with the Central Institute of Himalayan Cultural Studies in Arunachal Pradesh.
- The Army’s Training Command, ARTRAC, has identified seven institutes for Tibetology across the country, two of which are in the Northeast. The other one is the Namgyal Institute of Tibetology in Sikkim.
- During the 42 days of the preliminary course, Tibetan history, geopolitics and current political dynamics were covered in the form of lectures and case studies.
- Currently, two courses a year are planned with about 15-20 participants in each course.
- Lamas who were proficient in Tibetan issues were hired from the Monastery in Bomdila to take the course.

Current Connect

- It will enable troops to have a better understanding of Tibetan history, culture, language and topography.
- To orienting its officers and men posted along the Line of Actual Control (LAC) in Tibetan culture and also preparing them to better understand the information warfare.

Art and Culture

Mongolian Kanjur Manuscripts

- The Ministry of Culture has taken up the project of reprinting of 108 volumes of Mongolian Kanjur under the National Mission for Manuscripts (NMM).
 - The publication of Mongolian Kanjur by the Government of India for the Government of Mongolia will act as a symbol of cultural symphony between India and Mongolia.
 - Buddhism was carried to Mongolia by Indian cultural and religious ambassadors during the early Christian era.
- Mongolian Kanjur, the Buddhist canonical text in 108 volumes is considered to be the most important religious text in Mongolia.
- In the Mongolian language 'Kanjur' means "Concise Orders"- the words of Lord Buddha in particular.
- It is held in high esteem by the Mongolian Buddhists and they worship the Kanjur at temples and recite the lines of Kanjur in daily life as a sacred ritual. The Kanjur are kept almost in every monastery in Mongolia.
- The Mongolian Kanjur is a source of providing a cultural identity to Mongolia. Mongolian Kanjur has been translated from Tibetan.

National Mission for Manuscripts

- ❖ The National Mission for Manuscripts was launched in February 2003 by the Government of India, under the Ministry of Tourism and Culture.
- ❖ It has the mandate of documenting, conserving and disseminating the knowledge preserved in the manuscripts.
- ❖ One of the objectives of the mission is to publish rare and unpublished manuscripts so that the knowledge enshrined in them is spread to researchers, scholars and general public at large.
- ❖ Under this scheme, reprinting of 108 volumes of Mongolian Kanjur has been taken up by the Mission.

Madhubani Paintings

- Madhubani painting, also referred to as Mithila Art (as it flourishes in the Mithila region of Bihar), is characterized by line drawings filled in by bright colours and contrasts or patterns. This style of painting has been traditionally done by the women of the region, though today men are also involved to meet the demand.
- These paintings are popular because of their tribal motifs and use of bright earthy colours. These paintings are done with mineral pigments prepared by the artists.
- The work is done on freshly plastered or a mud wall. For commercial purposes, the work is now being done on paper, cloth, canvas etc.
- Cotton wrapped around a bamboo stick forms the brush. Black colour is obtained by mixing soot with cow dung; yellow from turmeric or pollen or lime and the milk of banyan leaves; blue from indigo and so on.
- The colours are applied flat with no shading and no empty space is left.
- Figures from nature & mythology are adapted to suit their style.
- The themes & designs widely painted are of Hindu deities such as Krishna, Rama, Siva, Durga, Lakshmi, Saraswati, Sun and Moon, Tulasi plant, court scenes, wedding scenes, social happenings etc.
- Floral, animal and bird motifs, geometrical designs are used to fill up all the gaps.

Lokmanya Bal Gangadhar Tilak

Current Connect

- An iconic leader and one of the strongest proponents of purnaswaraj or total self-rule, BalGangadharTilak died on this day in 1920, in Mumbai.
- A part of the Lal-Bal-Pal (LalaLajpatRai, BalGangadharTilak and Bipin Chandra Pal) group, he was often called the "father of the Indian unrest" by the British Raj.

Contributions of Tilak

- His ideas of swaraj and swadeshi were anchored in making every Indian conscious of the insults and injustice meted out by the British. He prepared a fertile ground for swaraj through Home rule movement.
- For the cultivation of an enlightened mind, he used the media in the form of two newspapers, Kesari and Maratha, and national education through Deccan Education Society, an institute he established.
- His formula for preparing the ground for political activism through culture, education and media was so powerful that later on Mahatma Gandhi, Baba SahebAmbedkar and others adopted this path.
- A master strategist, Tilak adroitly used the two things — constitutionalism and democracy — that the British rulers used to boast about, to his maximum advantage.
- His idea of Swaraj was not confined to political freedom. He was conscious of the need for cultural and economic independence too.
- The public celebration of the Ganesh festival and ShivajiJayanti by Tilak were aimed at cultural assimilation of all caste and community groups.
- Tilak wanted to promote manufacturing in India. To that end, Tilak started collecting funds for a corpus, known as Paisa Fund. Tilak and RatanjiJamshedji Tata came together to open the Bombay Swadeshi Co-operative Stores.

Tilak and India after Independence

- ❖ Tilak almost had a blueprint of a post-Independence India in mind.
- ❖ For him, swaraj was also liked to swabhasha and swa-bhusha, i.e. mother tongue and indigenous attire.
- ❖ Perhaps, he was the first national leader who envisioned the formation of linguistic states.
- ❖ He spoke of how we should form one separate state each for Marathi, Telugu and Kanarese provinces.

Way Forward

- When we talk about Atmanirbhar Bharat, the legacy of Tilak is carried forward. Reviving the spirit of economic nationalism for indigenously manufactured goods and striving for social integration through culture are the features of Tilak's strategy and they continue to be relevant even today as we observe his 100th death anniversary.

Indus Valley Civilization (Dairy Production)

- The year 2020 marks 100 years of discovery of Indus Valley Civilisation, and a new study has shown that dairy products were being produced by the Harappans as far back as 2500 BCE.
- This is the first time it's been proved scientifically that dairy production was in place in the Indus Valley Civilization in 2500 BCE, and the earliest known evidence of dairy production.
- The studies were carried out on 59 shards of pottery from KotadaBhadli, a small archeological site in present-day Indian state of Gujarat.
- The study used molecular analysis techniques to study the residues from ancient pottery.
- Pots are porous. So as, Harappans put any liquid form of food, it will be absorbed. Hence, the pot preserves the molecules of food such as fats and proteins. Using techniques like C16 and C18, we can trace the source of lipid.
- Through a process called stable isotope analysis, the researchers were also able to identify the type of ruminant used for dairy, and concluded that these were cattle, like cows and buffalo, rather than goats and sheep.

Current Connect

- Most of the cattle died at an older age, suggesting they could have been raised for milk, whereas the majority of goat, sheep died when they were young, indicating they could have been used for meat.
- The Harappans did not use dairy for their household. The large herd indicates that milk was produced in surplus so that it could be exchanged and there could have been some kind of trade between settlements. This could have given rise to an industrial level of dairy exploitation.

LachitBorphukan

- Originally named as LachitDeka, LachitBorphukan, the fierce and indefatigable Ahom Commander, was born during the early 17th century at Betioni in the Golaghat district of modern Assam.
- His father, MomaiTamuliBorbarua was the 'Governor' of the kingdom and also 'Commander-in-Chief' of Ahom army under King PratapSingha during his reign starting from 1603 to 1639.
- Lachit received military training from an early age and joined the Ahom King JayadhvajSingha (1648-1663) as a scarf-bearer. The post 'scarf-bearer' or 'SoladharaBarua' is considered as a part of the incumbent king's personal staff.
- In the subsequent time, owing to his military training, Lachit was appointed as 'GhoraBarua' or 'Superintendent of Royal Horses'. Later he was promoted to the post of Commander of the Simulgarh Fort situated at the south bank of Brahmaputra.
- When ChakradhwajSingha became the king of Ahom dynasty during 1663 to 1669, he appointed Lachit as the Superintendent of the Royal Guards.
- Finally, Lachit was appointed as 'Borphukan' by King ChakradhwajSingha. Then onwards, LachitDeka was known as LachitBorphukan.
- The position of Borphukan, which is one of the top five councillors in the Ahom kingdom, was instituted by King PrataapSingha (1603-1641). Borphukan is a position embedded with both executive and judicial powers with its headquarters at Kaliabor in Assam. Lachit shifted the headquarters to Itakhuli in Guwahati.

Battle of Saraighat

- In August 1667, ChakradhwajSingha appointed LachitBorphukan as the Commander-in-Chief of Ahom kingdom. Immediately, Lachit started operation against the invading Mughal army to reclaim Guwahati.
- By November 1667, Lachit, with his military prowess, evicted the last vestiges of Mughal presence from the frontier of Assam. Mughal Emperor Aurangzeb Alamgir was enraged after the humiliating defeat and in January 1668 sent a strong contingent of Mughal army under Raja Ram Singh Kachwaha of Amber to defeat LachitBorphukan and his army.
- Raja Ram Singh Kachwaha was supported by a massive 71,000 Mughal troops. On the other hand, LachitBorphukan was fighting the battle with a few thousand soldiers.
- The battle of Saraighat, which was occurred in 1671, was the culmination of many small fights in between the two rival armies. The Mughal troops started fighting under Raja Ram Singh since February 1669.
- Lachit led the fight from the front and inflicted crushing defeat to the Mughals at every front. Lachitoutmanoeuvred the army of Raja Ram Singh at every war, which led to the stalemate of the battle.
- Aurangzeb asked his general to initiate diplomacy and sign a friendly treaty for the time being. But Lachit's trusted lieutenant AtanBurhagohain, who later became the Commander-in-Chief opposed such a deal stating that the treaty would be an example of typical Mughal treachery.
- The final battle of Saraighat started in 1671. On the day of Saraighat battle, Lachit was terribly unwell. However, despite being ill, he displayed tremendous valour, extraordinary bravery and exemplary leadership. Such an action by an ailing yet forceful Lachit motivated his troops. They fought the battle with fierce zeal and intense

Current Connect

- courage. The Mughal army suffered comprehensive defeat in the hands of Lachit's army.
- In April 1672, a year after the decisive battle of Saraighat, Lachit died at his Kaliabor headquarters.
 - Owing to his unparalleled heroism, Lachit has been a hero and an inspiration for generations of Assamese. People of all hues in Assam invoke Lachit's name to fight back and win from the verge of defeat. LachitBorphukan is an example of bravery, courage and statesmanship.

Miyas of Assam and their Char-Chapori culture

- Recently, a proposed "Miya museum" reflecting the "culture and heritage of the people living in char-chaporis" has stirred up a controversy in Assam.
- The 'Miya' community comprises descendants of Muslim migrants from East Bengal (now Bangladesh) to Assam. They came to be referred to as 'Miyas', often in a derogatory manner.
- The community migrated in several waves — starting with the British annexation of Assam in 1826, and continuing into Partition and the 1971 Bangladesh Liberation War — and have resulted in changes in demographic composition of the region.
- A char is a floating island while chaporis are low-lying flood-prone riverbanks. They are used interchangeably or with a hyphen. They keep changing shapes — a char can become a chapori, or vice versa, depending on the push and pull of the Brahmaputra.
- The community's cultural motifs and heritage are related to agriculture and the river. The community has a variety of songs (bhatiali related to the river, magangeet or harvest songs, noikhelorgeet or boat songs etc), instruments and equipment to catch fish, as well as different kinds of boats.
- They have an ancient performative martial art called the Lathibari. While the norm is to traditionally wear colourful clothes, their version has a white vest and dhoti, an Assamese gamosa on heads and waists.

Socio Economic Status of the Miya Community

- The website of the Directorate of Char Areas Development puts the population of chars at 24.90 lakh as per a socio-economic survey in 2002-03.
- Prone to floods and erosion, these areas are marked by low development indices. According to Government data, 80% of the Char population lives below poverty line.
- A UNDP Assam Human Development report from 2014 describes the char areas as suffering from "communication deficits, lack of adequate schooling facilities beyond primary, girl child marriage, poverty and illiteracy".

Hampi and its significance

- The Archaeological Survey of India (ASI) has placed wooden barricades around the famous stone chariot at VijayaVittala Temple Complex in Hampi for protection. To avoid the monument from getting damaged, the ASI placed the barricades around the heritage structure that was built in the 16th century.
- Hampi is the town of ruins of Vijayanagara Empire. It is one of the UNESCO recognized world heritage sites in India. The place is one of India's most known archaeological destinations.
- The heritage site is located near the River Tungabhadra. Hampi was known by various names at different points of time: Hosapattana (New City), Vijayanagara (City of Victory), Vidyanagara (City of Learning) or Hampe, Pampa-kshetra and Pampa-pura—after the local goddess Pampa, who was worshipped even before the seventh century C.E.
- Hampi was the capital of the mighty Vijaynagar Empire in the 14th century.
- Vijaynagar was one of the largest Hindu empires in India. Two brothers, Harihar and Bukka, founded it in 1336. Krishnadevaraya (1509-1529) was the greatest ruler and controlled almost all of peninsular India south of Tungabhadra River.

Current Connect

- The chariot inside the temple complex is a shrine dedicated to Garuda, but the sculpture of Garuda is now missing. The Hampi chariot is among three famous stone chariots in India, the other two being in Konark, Odisha, and Mahabalipuram, Tamil Nadu. The delicately carved chariot at Hampi, art historians say, reflects the skill of temple architecture under the patronage of the Vijayanagara rulers who reigned from 14th to 17th century CE.
- The temples of Hampi, its monolithic sculptures and monuments, attract the traveler because of their excellent workmanship.
- Hampi is an ancient village that has remained important for its variety of religious and secular structures. In the epic Ramayana, it is identified as Kishkinda.
- Hampi remained in central importance in the medieval times as the second capital of the Vijayanagara Empire.
- Vijaynagar Empire flourished, as it controlled both cotton and spice trade routes of southern India, attracting traders from Persia and Portugal.
- Medieval historians refer to Hampi as an important center of trade.
- However, the glory of Vijaynagar was short-lived. With the death of Krishnadevaraya, the combined armies of the Muslim kingdoms-Bidar, Bijapur, Golconda, Ahmednagar and Berar-destroyed this mighty empire in 1565.
- Hampi-Vijayanagara was also at one point one of the richest cities in the world after Beijing when it was at its peak and India's richest at that time.

Battle of Talikota (1565), confrontation in the Deccan region of southern India between the forces of the Hindu raja of Vijayanagar and the allied Muslim sultans of Bijapur, Bidar, Ahmadnagar, and Golconda.

- ❖ The battle was fought on January 23, 1565, at a site southeast of Bijapur, in what is now northern Karnataka state.
- ❖ The capital city of Vijayanagar was captured, destroyed over a period of five months, and never reoccupied. The raja and Rama Raya's brother Tirumala retired to Penukonda, where the latter usurped the throne in 1570.
- ❖ The battle was decisive in breaking up the Vijayanagarempire, a domination by Telugu speakers over the Tamil- and Kannada-speaking south.
- ❖ It also began a final Muslim penetration of southern India that lasted until the end of the 18th century.

Subhash Chandra Bose

- Recently the Government of India has also instituted Subhash Chandra Bose AapdaPrabandhanPuraskaar to recognise the excellent work done by the individuals and institutions in the field of disaster management.

About

- He was born on 23 January, 1897, in Cuttack, Orissa Division, Bengal Province.
- Subhash Chandra Bose (Netaji) is one of the most revered freedom fighters of India.
- Since his young days, he was highly influenced by Vivekananda's teachings and considered him as his spiritual Guru.
- Bose studied at Presidency College, Calcutta where he was later expelled for attacking a professor making racist remarks towards Indians.
- Subhas Chandra Bose was Selected for the Indian Civil Services (ICS) but refused to take up service.
- Bose authored the book 'The Indian Struggle' which covers the Indian independence movement from 1920 to 1942.
- His death is one of the greatest mysteries in the history, Bose is said to have died from third-degree burns in a plane crash in Taiwan on August 18, 1945.

Contribution in National Movement

Current Connect

- Bose joined the Indian National Congress in 1921. He started a newspaper called 'Swaraj'.
- In 1923, Bose was elected the President of the All India Youth Congress and also the Secretary of Bengal State Congress. He also served as the Chief Executive Officer of the Calcutta Municipal Corporation, with Das as mayor of Calcutta.
- Bose was sent to prison in Mandalay in 1925 and was released in 1927 and became the INC's general secretary. He worked with Jawaharlal Nehru.
- Bose's ideologies were highly contradictory to that of Mahatma Gandhi, who was highly popular among masses. While Bose stood for self-governance, even if it meant the use of force against the British, Gandhi emphasized on non-violent means.
- On June 22, 1939, Bose organized the All India Forward Bloc, a faction within the Indian National Congress, aiming at consolidating the political left, but was arrested again, and released following a seven-day hunger strike.
- He also founded the Indian Legion out of about 4500 Indian soldiers who were in the British army and had been taken prisoners by the Germans from North Africa.
- In 1943, Bose travelled to Tokyo, Japan and took leadership of the Indian Independence Movement in East Asia and proceeded, with Japanese aid and influence, to form a trained army in Japanese-occupied Southeast Asia known as the Indian National Army.
- Bose's arrival in Japan revived the Indian National Army (Azad Hind Fauj) which had been formed earlier.
- Azad Hind or the Provisional Government of Free India was established as a government-in-exile with Bose as the head. Its headquarters was in Singapore. The INA was its military.
- Bose is credited with the very famous slogan, "Give me blood, and I shall give you freedom!" as well as "Jai Hind." He is also credited to be the first man to call Mahatma Gandhi "Father of the Nation", in his address from Singapore.
- The INA supported the Japanese army in its invasion of northeast India and also took control of the Andaman and Nicobar Islands. However, they were forced to retreat by the British forces following the Battles of Kohima and Imphal in 1944.

Veer Savarkar

- In 2002, Port Blair airport in Andaman and Nicobar island was renamed after Veer Savarkar International Airport.
- He was born on May 28, 1883, in a Marathi Brahmin family, Veer Savarkar is known for his vision of Hindu Rashtra (Hindu Nation) and Akhand Bharat (United India).
- Savarkar began his political activities as a high school student and continued to do so at Fergusson College in Pune. He was inspired by leaders like BalGangadharTilak, LalaLajpatRai and Bipin Chandra Pal.
- He was also influenced by the protest against the partition of Bengal and the Swadeshi movement. The Savarkar brothers were active in the MitraMela, a secret society formed with the aim of liberating, through the use of armed force, India from British rule.
- He and his brother founded a secret society called Abhinav Bharat Society.
- When in 1906, Savarkar left for London to get credentialed in law, he involved himself with organizations such as India House and the Free India Society.
- Savarkar was a friend and guide to MadanLalDhingra who assassinated Curzon Wylie at the Imperial Institute, a British army officer. After Dhingra was executed by the British, Savarkar encouraged further revolution.
- In his book 'The History of the War of Indian Independence', he analysed the circumstances of 1857 uprising. It was Veer Savarkar who named the 1857 rebellion as the first war of independence, was banned by British authorities.
- In 1911, Savarkar was sentenced to 50 years in the cellular jail of Andamans, also known as Kala Pani for revolting against the Morley-Minto reforms (Indian Councils

Current Connect

Act 1909). After several mercy petitions for not participating in politics, he was released in 1924.

- He served as president of the Hindu Mahasabha from 1937 to 1943.

VD Savarkar: As a Social Reformer

- He was a champion of atheism and rationality and a passionate promoter of Hindutva.
- He worked on the abolishment of untouchability and caste-based discrimination in Ratnagiri

Relevance in Present day

- Savarkar’s ideas of modernity, social and religious reforms, cultivation of scientific temper and embracing technological tools continue to be relevant for building a new India in the post COVID-19 era.
- The central government is proactively taking measures for the building of “Ek Bharat-Shrestha Bharat” — following the contemporary relevance of the ideas of such eminent personalities.
- During the 21st annual session of the Hindu Mahasabha held in Calcutta in 1939, Savarkar, in his presidential address, he highlighted the importance of Hindu-Muslim unity in building a common Hindustani constitutional state.

Monpa Handmade Paper of Tawang

- Recently, The PM mention in his radio program Mann kiBaat about the 1000- years old heritage Monpa handmade paper or —Mon Shugul.
- Monpa Handmade paper is made by the Monpa tribe from the bark of tree Shugu Sheng grown locally in Tawang and is identified by its distinctive translucent fibrous texture.
- The bark from the shrub has to be extricated, dried, boiled with a solution of ash, made into pulp and then cut into sheets of paper.
- For centuries, the paper has made its way to the many Buddhist monasteries not just locally, but in Tibet, Bhutan, China and Japan too, where it serves as a medium for religious scriptures, manuscripts, prayer flags, and sometimes as part of flag poles and prayer wheels.
 - Writing on this paper is also known to be tamper-proof.
- Khadi and Village Industries Commission, has made Monpa Handmade paper available online through its e-portal www.khadiindia.gov.in.

Analytica

- Monpa Handmade Paper is not only supporting environment protection but has also opened new avenues of income for the local artisans.
- The paper is weightless but its natural fibers add great tensile strength to this paper making it apt for various art works.
 - The paper serves as a good material for religious scriptures.
- The Monpa Handmade paper industry set up in Tawang aims at engaging the local youths with this art professionally and earn.

Maharaja Suheldev’s contribution

- Recently, PM lays the foundation stone of Maharaja Suheldev Memorial and development work of Chittaura Lake at Bahraich, Uttar Pradesh.
- Suheldev was the king of Shravasti in Uttar Pradesh’s (UP) Bahraich district during the 11th century.
- Suheldev was deeply moved by the loot and destruction of the magnificent Somnath temple by invader Mahmud Ghazni that he decided to unites Indians across religions, castes, and regions, under his leadership, and mounts a fierce resistance against the foreign invaders.
- His army defeated and killed Ghazi SalarMasud, the nephew of Mahmud Ghazni, at Bahraich.

Current Connect

- He is known in history for waging guerrilla warfare against Mahmud Ghazni's large army.
- Suheldev is alternatively known as Sakardev, Suhirdadhvaj, SuharDeo, Sahardev, etc.
- He is mentioned in the 17th century Persian-language historical romance Mirat-i-Masudi.
 - Mirat-i-Masudi was written by Abd-ur-Rahman Chishti during the reign of the Mughal emperor Jahangir.
 - Suhaldeve was the eldest son of King Mordhwaj of Shravasti.
 - According to Mirat-i-Masudi, Suhaldeve belonged to the "BharTharu" community.
- In local folklore, Suheldeve is said to be a Rajbhar.

Battle of Bahraich: It was a decisive battle between forces of Raja Suheldeve and Ghazi Saiyyad Salar Masud on 13–14 June 1033 CE. The battle was fought near Chittaura Lake near the present day Bahraich city, Uttar Pradesh. Ghaznavid army was completely destroyed which halted the Islamic conquest of India for about a century.

Kerala's famous temple art Tholpavakkoothu

- The first robotic leather puppet was installed at the Palakkad District Heritage Museum. For the first time, the famous shadow leather puppets will tell stories of the epic Ramayana with the help of robots.
- The most difficult part of Tholpavakkoothu is the limb movements of the puppets.
- The Central government honoured Ramachandra Pulavar, a doyen of Tholpavakkoothu, awarding him Padma Shree this year.

About

- Tholpavakkoothu or shadow puppetry is a temple art form which is prevalent in the Bhagavathy temples (mother Goddess) in Palakkad district and nearby regions in Kerala.
 - This art is confined largely to Pulavar families from Shoranur region of Palakkad district.
- Tholppava (Thol means leather, Pava means puppet) are moved with the help of strings, and their shadows are depicted on a screen with the help of a row of oil lamps in the background.
- Tholppavas are made of the skin of deer and the puppet forms are made by making small holes in the leather that is then attached vertically to a bamboo stick.
- The story of Tholpavakkoothu performance is from the Indian epic, Ramayana.
- In the olden days it was performed elaborately over a period of forty-one days. The narrative used for the performance is a mixture of prose and poetry called Adalattu.
- It is also known as Nizhalkkoothu and Olakkoothu.
- The chief puppeteer is known as 'Pulavan'.
- Accompanying instruments include Ezhupara, Chenda and Maddalam. The puppetry is staged on a special structure in temple premises called Koothumadam.

Anangpal II:

- Anangpal II, popularly known as Anangpal Tomar, belonged to the Tomar dynasty that ruled parts of present-day Delhi and Haryana between the 8th and 12th centuries.
- The capital of Tomars was Dhillikapuri (Delhi) during the reign of Anangpal II.
 - Initially at Anangpur (near Faridabad) during the reign of Anangpal I (who founded the Tomar dynasty in the 8th century).
- Anangpal Tomar II was succeeded by his grandson Prithviraj Chauhan.
- The Delhi Sultanate was established in 1192 after Prithviraj Chauhan's defeat in the Battle of Tarain (present-day Haryana) by the Ghurid forces.

Current Connect

- Anangpal II is credited to have established and populated Delhi during his reign in the 11th century.
- The region was in ruins when he ascended the throne in the 11th century; it was he who built Lal Kot fort (Qila Rai Pithora) and Anang Tal Baoli (in South Delhi).
- The Tomar rule over the region (present-day Delhi and Haryana) is attested by multiple inscriptions and coins.
 - The most reliable evidence about the early history of Delhi is inscribed on the iron pillar of Masjid Quwaatul Islam, adjacent to the Qutab Minar.
 - According to this inscription, Anangpal of the Tomar Rajputs founded Delhi between 1053 and 1109 AD.
- According to KA Nizami's Urdu book, Ehd-e-Wustaki Dilli, translated in English as Delhi in Historical Perspectives, looks at Delhi across six centuries (from 1300 to 1800). Tracing the antecedents of Delhi, Nizami refers to Persian annals that describe it as "Inderpat".
- According to KA Nizami's Urdu book, Delhi formally emerged as a city only in the 11th century when Tomar Rajputs took over the mountainous Aravalli region.

About Jyotirao Govindrao Phule

- Phule was born on April 11, 1827 in present-day Maharashtra and belonged to the Mali caste of gardeners and vegetable farmers.
- Jyotirao Govindrao Phule was a social reformer who worked against social evils like untouchability and caste system, and was a strong advocate of women empowerment and education of girl child.
- After reading Thomas Paine's famous book 'The Rights of Man', Jyotirao was greatly influenced by his ideas. He believed that enlightenment of the women and lower caste people was the only solution to combat the social evils.
- Phule along with his followers formed Satyashodhak Samaj in 1848 which meant 'Seekers of Truth' in order to attain equal social and economic benefits for the lower castes in Maharashtra.
- He dedicated his book Gulamgiri (slavery) to the African American movement to end slavery.
- He was bestowed with the title of Mahatma on May 11, 1888 by a Maharashtrian social activist Vithalrao Krishnaji Vandekar
- On 28 November, 1890, the great social reformer, Mahatma Jyotirao Phule, passed away.

His works:

- He and his wife Savitri Phule battled for the education of girl students and opened a school in 1848.
 - He was a believer in gender equality and he exemplified his beliefs by involving his wife in all his social reform activities.
- Jyotirao realised the pathetic conditions of widows and established an ashram for young widows and eventually became advocate of the idea of Widow Remarriage.
- Jyotirao attacked the orthodox Brahmins and other upper castes and termed them as "hypocrites"
- In 1868, Jyotirao decided to construct a common bathing tank outside his house to exhibit his embracing attitude towards all human beings and wished to dine with everyone, regardless of their caste.
- It is believed by many that it was Phule who first used the term 'Dalit' for the depiction of oppressed masses often placed outside the 'varna system'.
- He worked for abolishment of untouchability and caste system in Maharashtra
- He wrote 16 books that contributed to the social awakening of the downtrodden masses who were subject to the atrocities of the upper castes and the British administrators at that time.

Current Connect

- Major Publication: ShetkaryachaAsud(1881), Gulamgiri (1873) and also penned some stories like 'TritiyaRatna', 'BrahmanancheKasab', 'Ishara'.

World's oldest cave art

- Recently, Researchers have reported that Pleistocene-era rock paintings dating back to 45,000-20,000 years ago in cave sites in southern Sulawesi, on the Indonesian island of Sulawesi, are weathering at an alarming rate.
 - Sulawesi is the largest island in Wallacea, a biogeographically distinct zone of oceanic islands situated between continental Asia and Australia.
- Archaeologists have discovered the world's oldest known cave art which is a life-sized picture of a wild pig that was painted at least 45,500 years ago in Indonesia.
- The Sulawesi warty pig painting we found in the limestone cave of LeangTedongnge is now the earliest known representational work of art in the world, as far as we are aware.
- The previously oldest dated rock art 'scene' at least 43,900 years old, was a depiction of hybrid human-animal beings hunting Sulawesi warty pigs and dwarf bovinds.
- It was discovered by the same research team at a nearby limestone cave site.
- The cave art of Sulawesi is much older than the prehistoric cave art of Europe.
- The painting was made using red ochre pigment and depicts a pig with a short crest of upright hairs and a pair of horn-like facial warts in front of the eyes.
- They used a calcium carbonate deposit, also referred to as a "cave popcorn", that had formed on the rear foot of one of the pig figures.

National Maritime Heritage Complex

- A National Maritime Heritage Complex (NMHC) will be developed in Lothal region of Gujarat.
- NMHC would be developed as an international tourist destination, where the maritime heritage of India from ancient to modern times would be showcased.
- It would be developed in an area of about 400 acres with various unique structures such as National Maritime Heritage Museum, Light House Museum, Heritage Theme Park, Museum Themed Hotels & Maritime themed eco-resorts, Maritime Institute etc.
- The unique feature of NMHC is the recreation of ancient Lothal city, which is one of the prominent cities of the ancient Indus valley civilization dating to 2400 BC.
- Lothal was one of the southernmost cities, and the only port town, in the Indus Valley civilisation, located in Gujarāt.
 - Construction of the city began around 2400 BCE.
 - Artefacts suggest that trade may have been conducted with Mesopotamia, Egypt and Persia.
- Other features include the acropolis, the lower town, the bead factory, the warehouses, and the drainage system.
- It has been nominated as a UNESCO World Heritage Site by the Indian government, its application is pending on the United Nation's tentative list.

International Yoga Day

- Seventh International Yoga Day is being celebrated the Ministry of Culture at 75 cultural heritage locations across the country.
 - This year, the theme is 'Yoga For Wellness'.
- The Prime Minister of India, along with United Nations and WHO, launched a mYoga app which will help in achieving 'One World, One Health'.

About Yoga

- Yoga is essentially a spiritual discipline based on an extremely subtle science, which focuses on bringing harmony between mind and body.

Current Connect

- The word 'Yoga' is derived from the Sanskrit root 'Yuj', meaning 'to join' or 'to yoke' or 'to unite'.
- The aim of Yoga is Self-realization, to overcome all kinds of sufferings leading to 'the state of liberation' (Moksha) or 'freedom' (Kaivalya).
- Prime Minister of India termed yoga a "ray of hope" and a source of strength in the midst of the coronavirus pandemic.
 - Yoga shows us the way from stress to strength and from negativity to creativity.
- In 2014, Indian Prime Minister proposed marking a day as the International Day of Yoga in his address at the UN General Assembly, and the proposal was endorsed by 175 member states, post which the United Nations recognized June 21 as the day to celebrate Yoga.
- Yoga is an ancient Indian practice that helps in maintaining physical and mental well-being, and over the years, it has found popularity in other countries as well.

Ashadha Purnima

- Recently, the International Buddhist Confederation (IBC) under the aegis of Ministry of Culture, Govt of India, observed one of its annual flagship events Ashadha Purnima on 24th July, 2021.
 - The day is also observed as Guru Purnima by both Buddhists and Hindus as a day to mark reverence to their Gurus.
- It marks the day when Buddha gave his first sermon to his first five ascetic disciples, after attaining enlightenment, at the 'Deer Park', R̥sipatana in the current day Sarnath, near Varanasi, India.
 - It is the second most sacred day for Buddhists after the Buddha Purnima or Vesak.
 - It is also known as Esala Poya in Sri Lanka and Asanha Bucha in Thailand.
- This teaching of Dhamma Cakka- Pavattana Sutta (Pali) or Dharma chakra Pravartana Sutra (Sanskrit) is also known as the First Turning of Wheels of Dharma and comprised of the Four Noble Truths and Noble Eightfold Path.
 - Four noble truths as preached by Buddha are that the life is full of suffering (Duhkha), that there is a cause of this suffering (Duhkha-samudaya), it is possible to stop suffering (Duhkha-nirodha), and there is a way to extinguish suffering (Duhkha-nirodha-marga).
 - Eight fold Path (astangika-marga) as advocated by Buddha as a way to extinguish the sufferings are right views, right resolve/aspiration, right speech, right action/conduct, right livelihood, right effort right mindfulness and right concentration.

Buddhism's Relevance in Covid-19

- Lord Buddha is all the more relevant in today's times of corona pandemic. India has shown how we can face even the most difficult challenges by following the path of the Buddha.
- Today all the countries are moving in solidarity and becoming each other's strength by following the teachings of the Buddha.
 - The 'care with prayer' initiative of the International Buddhist Confederation is praiseworthy
- Lord Buddha gave us an eight-fold path to achieve this harmony.

Contribution of Buddhism to Indian Culture

- The doctrine of ahimsa, so strongly stressed, devoutly preached and sincerely practised by the Buddhist, was incorporated bodily in their teachings by the Brahmins of later days.
 - The finest contribution of Buddhism to Indian life was made in the realm of architecture and sculpture.

Current Connect

- The stupas at Sanchi, Bharhut and Amravati, the stone pillars of Asoka and the cave temples of Kanheri (Bombay), Karle (Pune) and Nasik are considered the best specimens of Buddhist art.
- It had also promoted the spread of Indian Culture to other parts of Asia.

The Narayankoti temple

- Recently, Uttarakhand's Narayankoti temple has been identified under the central government 'Adopt a Heritage' project.
- The Narayankoti Temple is a group of ancient temples located about two kilometers from Guptkashi on the Rudraprayag-Gaurikund highway.
 - The mention of this temple group is also found in Kedarkhand.
- It is devoted to Lakshmi Narayan who is associated with Pandavas.
- It is a major attraction for devotees visiting Rudraprayag as it's the only place in the country where temples of all the nine planets – Mars, Mercury, Jupiter, Venus, Saturn, Sun, Moon, Rahu and Ketu – are present.
- This is the only place in the country which has nine planetary temples in a group that are a "symbol of nine planets".
- It is believed that these temples were constructed in the 9th century.
- This is not the first time the government has tried to rope in the corporate sector to help maintain tourist sites and monuments, the government in 2011 formed a National Culture Fund.
- Another similar scheme under the UPA government was 'Campaign Clean India,' in which the government had identified 120 monuments/destinations.
 - Under this scheme, the India Tourism Development Corporation had adopted Qutab Minar as a pilot project in 2012, while ONGC adopted six monuments — Ellora Caves, Elephanta Caves, Golkonda Fort, Mamallapuram, Red Fort and Taj Mahal — as part of its CSR.

'Adopt a Heritage' project

- The 'Adopt a Heritage: Apni Dharohar, Apni Pehchaan' scheme is an initiative of the Ministry of Tourism, in collaboration with the Ministry of Culture and the Archaeological Survey of India.
 - It was launched in September 2017 on World Tourism Day.
- Under it, the government invites entities, including public sector companies, private sector firms as well as individuals, to develop selected monuments and heritage and tourist sites across India.
- The sites/monument are selected on the basis of tourist footfall and visibility and can be adopted by private and public sector companies and individuals — known as Monument Mitras — for an initial period of five years.
- The Monument Mitras are selected by the 'oversight and vision committee,' co-chaired by the Tourism Secretary and the Culture Secretary, on the basis of the bidder's 'vision' for development of all amenities at the heritage site.
 - There is no financial bid involved.
- The corporate sector is expected to use corporate social responsibility (CSR) funds for the upkeep of the site.

Cultural mapping

- Recently, the National Mission on Cultural Mapping (NMCM) has now been handed over to the Indira Gandhi National Centre for the Arts (IGNCA), which is gearing up for a trial run in 75 villages in October, 2021.
- The Indira Gandhi National Centre for the Arts (IGNCA) was established in 1987 as an autonomous institution under the Ministry of Culture, as a centre for research, academic pursuit and dissemination in the field of the arts.

Current Connect

- The IGNCA would aim to complete mapping in 5,000 villages by the end of financial year 2021-2022
- National Mission on Cultural Mapping (NMCM) has been set up by the Ministry of Culture in 2017 to build a comprehensive database of artists, art forms and other resources from organisations under the Ministry.
- It is a mission mode project -
 - To envision and address the necessity of preserving the threads of rich Indian Art and Cultural Heritage.
 - To Convert vast and widespread cultural canvass of India into an objective Cultural Mapping.
 - To Design a mechanism to fulfill the aspirations of the whole artist community of the nation.
 - To Preserve the rich cultural heritage of this country for future generations.
 - To create a strong "cultural vibrancy" throughout the nation.
- The work of creating a database for folk arts and mapping of heritage of villages would be carried out over five years.
- The Mission encompasses data mapping, demography building, formalising the processes and bringing all cultural activities under one umbrella for better results.
- No direct benefits or assistance has been extended through this Mission to the registered artists/institution,
 - So far 14.53 lakhs artists/artisans have been registered on NMCM portal.
- Cultural mapping has been recognized by UNESCO as a crucial tool and technique in preserving the world's intangible and tangible cultural assets.

Porunai-civilisation

- Recently carbon dated and analysed rice and soil found in a burial urn at Sivakalai archaeological excavation centre in Thoothukudi district of Tamil Nadu.
- The Porunai river [Thamirabarani] civilisation dates back to 3,200 years, almost as old as the Indus Valley Civilisation, in the northwestern part of the Indian subcontinent.
 - The spot where the river meets the Gulf was the location of Korkai, an important port of the ancient Tamil Pandyan Kingdom.
 - Korkai port was famous for the export of pearls.
- The only major perennial river in Tamil Nadu, Thamirabarani has been mentioned as Porunai, Than Porunai, Porunal and Poruntham in Tamil literature right from the Sangam era to Nayakar era (6th century BCE to 17th century CE).
 - Than Porunai finds a place in Tholkappiam, an ancient treatise on Tamil grammar.
 - Porunai is also mentioned in the Sangam work Puranaanooru.
 - One folk etymology says that the river was also called 'Tamraparani' in the classical period.
- In the first phase, studies would be undertaken at the ancient port of Muziris, now known as Pattanam, in Kerala.
- The Tamil Nadu Archaeology Department would conduct research at Quseir al-Qadim and PernicaAnekke in Egypt, which were once part of the Roman empire, as well as in KhorRori in Oman, to establish the Tamils' trade relations with these countries.
- The outcome of the excavations at Keeladi, Kodumanal and other sites in Tamil Nadu have corroborated the view that there might have been contacts between south India and north India as early as 600 BCE-700 BCE or even earlier.

Carbon dating: It is a method for determining the age of an object containing organic material by using the properties of radiocarbon, a radioactive isotope of carbon.

- The method was developed in the late 1940s at the University of Chicago by Willard Libby, who received the Nobel Prize in Chemistry to this work in 1960.

Langa-Manganiyar heritage

- The ballads, folklore, and songs of the Langa-Manganiyar artists are being preserved through an initiative for documentation and digitisation.
- The iconic and internationally acclaimed folk artistes have been hit hard by the COVID-19 pandemic that stopped their performances in India and abroad and poses a challenge to the very survival of the popular art form.
- Apart from the pandemic, this vital heritage is also facing a threat from changes in patronage and increased urbanisation in these districts.
- During the pandemic, a social media campaign, titled Maru Mani (jewels of desert), was launched to hold virtual events on safeguarding the intangible cultural heritage.

About

- The Langas and Manganiyars are hereditary communities of Muslim musicians.
 - They are residing mostly in western Rajasthan's Jaisalmer and Barmer districts and in Pakistan's Tharparkar and Sanghar districts in Sindh.
- The music of the two marginalised communities, who were supported by wealthy landlords and merchants before Independence, forms a vital part of Thar desert's cultural landscape.
- The Rupayan Sansthan has a collection of 20,000 hours of audio recordings of Langa-Manganiyar performances in analogue form.
 - The performances are in multiple languages and dialects including Marwari, Sindhi, Saraiki, Dhatti and Thareli.

Analytica

- ✓ The project is aimed at saving the rapidly disappearing narrative traditions of these communities.
- ✓ The preservation of oral traditions would encourage the local communities' involvement in the efforts to nurture audiences and protect the history of the desert region.

IAS 2023



OPTIONAL SUBJECTS For CSE

It pays to study with specialists...

SOCIOLOGY
Shekhar Sir
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JANUARY

GEOGRAPHY
**Mr. Panda &
Chandramouli Sir**
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JANUARY

PSIR
P.Madaan Sir
NEXT BATCH
14TH
JANUARY

FOUNDATION COURSE OFFLINE UPCOMING BATCHES

DATE	CENTRE	CONTACT NO
2 nd January	Delhi (Rajender Nagar)	9811 293 743
17 th January	Bengaluru (Chandra Layout)	7619 136 662
20 th January	Indore (Bhawar kuan)	9893 772 941
11 th June	Ranchi (Siromtoli Chowk)	9939 982 007
20 th June	Bengaluru (Koramangala)	7619 166 663
24 th June	Jaipur (Tonk Road)	8290 800 441
11 th July	Patna (Exhibition Road)	7463 950 774
22 nd July	Bhopal (M.P. Nagar)	7509 975 361

OUR TOPPERS

KANISHAK KATARIA
(AIR - 1)




TESTIMONIAL

I am highly indebted to Khan Sir and KSG for their guidance and feedback, especially for the interviews. Khan Sir was very motivating and available for one-to-one interactions. His critical analysis and pinpoint identification of my strengths and weaknesses helped me a lot. I also followed his video on Youtube which were quite beneficial. Thank You Sirs for your support & guidance.

Signature: 

AKSHAT JAIN
(AIR - 2)






TESTIMONIAL

I would like to thank KSG and Khan Sir for their guidance and motivation. The mock interview at KSG was particularly helpful in understanding the intricacies of the interview/personality test. It helped me identify my strengths and weaknesses in a timely manner, and work upon them accordingly.

Signature: 


SRUSHTI JAYANT DESHMUKH
(AIR - 5)

TESTIMONIAL

Thank you so much to the entire team of Khan Study Group! KSG's foundation course has been my starting point. It has helped me a lot. The focus on answer writing from Day-1 really contributed a lot.

A special thanks to Khan Sir, for his motivating aura and good words.

Signature: 

SHUBHAM GUPTA
(AIR - 6)




TESTIMONIAL



Khan Sir,

Thank you so much for always being encouraging and keeping a positive mindset. Your guidance for the personality test has helped me significantly in attaining the success that I have been able to. Your personal interaction with me has always motivated me to keep an inquisitive mindset and optimistic attitude.

Thanks again to you Sir and the entire KSG team.


Signature: 

VAISHALI SINGH
(AIR - 8)

TESTIMONIAL

I cannot thank KSG & Khan Sir enough for their guidance throughout the interview process. It was much needed and, it were his words which inspired me to perform well. Thank you so much!

Signature: 

GUNJAN DWIVEDI
(AIR - 9)




TESTIMONIAL

KSG played a very important role in my preparation. The excellent guidance I received from Khan Sir helped me achieve my childhood dream. Thank you for all the support.

Signature: 

DELHI NORTH	DELHI CENTRAL	JAIPUR TONK ROAD	BHOPAL M.P NAGAR, ZONE II	PATNA EXHIBITION ROAD	INDORE BHAWAR KUAN	BENGALURU KORAMANGALA	BENGALURU CHANDRA LAYOUT	RANCHI SIRAM TOLI CHOWK
2521, 1 st Floor Hudson Lane, Vijay Nagar Chowk, Near GTB Nagar Metro Station Delhi- 110009	56/4, Bada Bazar Marg, Old Rajender Nagar Market, Near Salwan Public School Gate No- 2, Delhi- 110060	403-404, 4 th floor Apex Tower, Lal Kothi, Tonk Road Jaipur- 302015	Plot No. 48, 1 st & 2 nd Floor, Behind Sargam Talkies, Zone II, M.P Nagar Bhopal- 462011	Above Toyota Showroom, CEAT Compound, Exhibition Road, Near Gandhi Maidan, Patna- 800001	232-233, 2 nd Floor, Veda Building, Near Apple Hospital, Bhawar Kuan Square Indore- 452001	116/C-1, 3 rd Floor, behind Airtel office 2nd Cross Road, KHB Colony, 5 th Block, Koramangala Bengaluru- 560095	94, 2 nd floor, Kasabha Hobli, Above Domino's Pizza, 4 th Main Rd., Maruthi Nagar, Chandra Layout, Bengaluru, Karnataka-560040	3 rd floor strawberry Hill New garden Siram Toli Chowk Ranchi - 834001
9717 380 832	9811 293 743	8290 800 441	7509 975 361	7463 950 774	9893 772 941	7619 166 663	7619 136 662	7463 950 774