

ABOUT CURRENT CONNECT

It gives us immense pleasure to present an innovative approach to master current affairs. Current is a passing wind and diverse issues happen at the same time. It is to an extent chaotic. Newspapers, magazines and various other sources report the chaos per se. With our experience of current affairs we have tried to give "the current" a medium to travel. It is the syllabus of the UPSC with their components that are the medium through which the "Current is Passed" to the readers. Ever since the new syllabus of the UPSC came into existence, current has been gaining significance both at prelims as well as mains examination. This book is meant to cover current affairs and related questions arising from those events. We have not only covered the current events for their factual contents but also presented it in such a way that any question asked from that topic gets covered. Moreover, topics are also "peppered" with the relevant facts/key concepts that are related to the theme. We have also given questions for practice both, subjective and objective, so that candidates are oriented to the examination mode. It is a collection covering myriad source yet in a manageable size. To use this book we recommend you to master the components of general studies (GS) syllabus as broken into rows and columns (provided in the beginning after preface). Each cell comprising of the portion of GS becomes the connect for the current and every news subsequently covered guides the reader to the address of the syllabus. It is logical to expect that same issue may be connected to more than one topic of the syllabus. Further, the news also has some additional vistas opened for the readers by adding a box with a title "PEPPER IT WITH" where we expect the students to build further around the theme.

We are also trying to reach the remotest part of the country with our spirit and zeal of "Mains Answer Writing", which has been admired by students, CSE rankholders and other scholars. Continuing in line with the effort, we have started with programs like 7 Question (7Q) Challenge, Shell Points, Stock Points, Content Enrichment Booklet etc.

When it comes to evaluation, we are altogether at a different level. We are also reaching every nook and corner with this expertise for the aspirants of CSE. Now you can write a Mains Answer and get it evaluated from our Expert Team and can get Feedback. [Drop a mail at evaluation@ksgindia.com](mailto:evaluation@ksgindia.com) for registering yourself in our race to perfection. Don't wait, it's your golden chance to crack this exam and fulfill your passionate dream.

Team KSG

Contents

POLITY

Child Rights and Corporal Punishment	5
Prevention of Money Laundering Act	8
Blasphemy and Hate Speech	13
Election Populism in India: Freebies and Welfare State.....	16
Custodial Deaths in India	18
Fundamental Duties.....	21
Criminal Procedure (Identification) Act, 2022	23

SOCIAL ISSUES SOCIAL ISSUES, GOVERNMENT SCHEMES, REPORT

National Intellectual Property Awareness Mission (NIPAM).....	26
Gender Gaps in Food	28
Digital gap in Government schools.....	29
The Eleventh Agricultural Census	31
UN Guidelines: Climate change and Displaced Children	32
Natural Resource Accounting (NRA)	34
National e-Governance Service Delivery Assessment.....	36
SMILE-75 Initiative.....	39

ECONOMY

Financial Inclusion Index.....	41
India's First global bullion exchange	42
World Investment Report	43
GST collections	45
Strengthening of Pharmaceuticals Industries.....	46
Distressed Discoms and the power sector of India	47
RBI Issues guidelines to regulate digital lending	48
Food inflation	51

INTERNATIONAL RELATIONS

CAATSA: INDIA and USA	53
Taiwan Conflict.....	55
Critical Mineral Alliance	57
India and Mauritius Comprehensive Economic Cooperation and Partnership Agreement (CECPA).....	59
The Big brother syndrome: India-Nepal Relations	61
Iran Nuclear deal.....	64

ENVIRONMENT

Groundwater Distress in India.....	66
------------------------------------	----

www.ksgindia.com

DELHI: VIJAY NAGAR 9717380832 & OLD RAJENDER NAGAR 9811293743 | JAIPUR: 8290800441 | PATNA: 7463950774 | RANCHI: 9939982007
BENGALURU: KORMANGALA 7619166663 & CHANDRA LAYOUT 7619136662 | BHOPAL: 7509975361 | INDORE: 7314977441 | IMPHAL: 9650245599
t.me/ksgindia | facebook.com/khanstudygroup | youtube.com/khanstudygroupksg | Instagram.com/khanstudygroup | WhatsApp 9868005599

State of Global Air: Report on Air Quality and Health in Cities	68
India's Updated Nationally Determined Contribution	70
India's Coastal Ecosystems	72
Arctic Amplification	74
Pyrene Remediation	76
Ethanol Plant	76
RAMSAR Sites	77

SCIENCE AND TECHNOLOGY

Risk From Space Junk	80
Alpha Fold	81
Google Street View	82
Antimicrobial Resistance and Cholera	85
African Swine Fever (ASF)	86
Langya Henipavirus	87
Electromagnetic Field (EMF) Emissions	89
Maiden flight of the SSLV	90
National Mission on Interdisciplinary Cyber-Physical Systems (NM-ICPS)	91

SECURITY

Technical upgradation of Indian Armed forces	93
Left Wing Extremism	95
Laser-guided ATGMs	99

ART AND CULTURE

Buddhism during Chola Era	100
Mandala art Buddhism	101
Martand Sun temple	102

MISCELLANEOUS

Kargil Vijay Diwas	103
Migratory monarch butterflies	103
Hatti community	103
Quit India movement	104
Concept Clearing Assignment	105
PT Oriented Questions	106

S. No.	1	2	3	4	5	6	7	8	9	10	11
GS – I	Culture-Art Forms, Literature and Architecture from ancient to modern times.	Indian history significant events, personalities, issues and the Freedom Struggle	Post independence issues, National boundary and disputes	Indian society features, issues, globalization and diversity	Women - issues and developments	Urbanization – problems and remedies	Distribution of industries and resources – India and world	Geophysical phenomena such as earthquakes, Tsunami, Volcanic activity, cyclone etc			
GS – II	Indian constitution- Amendments, acts and bills.	Legislative, executive and judicial processes.	Constitutional, non-constitutional, judicial, quasi-judicial, administrative and other types of bodies.	Federal structure and local bodies. Their powers and functions.	Government policies and various governance issues like transparency, accountability and – governance	Committees and schemes.	Non-government issues, self-help groups and role of civil society	Vulnerable sections of our society and social sector issues and initiatives.	International Relation-India and other countries, various Indian and international agreements, effects of other countries on India and international institutions.		
GS – III	Various measures to boost Indian economy- planning, policies, management.	Government budgeting and issues related to budget.	Agriculture, animal husbandry and transport	Food security- measures to boost food security and food processing. Issues related to land- land reforms	Industries and infrastructure- their growth and investment model	Space and technology, IT space, robotics and computer	Disease, biotechnology and human welfare	Innovations, intellectual property, Awards, POI and other important aspects of S&T	Environment; government initiatives, various judgments, pollution, degradation and conservation efforts	Disaster & Disaster Management	Challenges to internal security, Various Security forces and agencies and their mandate. Cybersecurity; money/land erring and its prevention.
GS – IV	Ethical issues related to family society, education, Corruption etc.	Ethics in public and private administration	Issues	Related laws and rules	Governance/e-Governance	Ethics in international issues	Person alities and their teachings	Other important topics			
Misc.											

POLITY

Child Rights and Corporal Punishment

News Excerpt

Despite several efforts of the government and civil society, menace of corporal punishment has not been eliminated in India. Incidents of excessive use of force against school students continues, they are being intimidated and often thrashed sometimes causing grievous injuries and, in some cases, even caused death.

Corporal Punishment

- There is no statutory definition of corporal punishment of children in Indian law. However, United Nations Committee on the Rights of the Child defines corporal punishment as "*any punishment in which physical force is used and intended to cause some degree of pain or discomfort, however light.*" It also includes non-physical form of punishment such as *belittling, humiliating, denigrating, scapegoating, threatening, scaring or ridiculing* the child.
- Problem of corporal punishment is quite rampant and this is even reflected in the study conducted by the Ministry of Women and Child Development children are facing physical abuses in the setting which were meant for care and protection of children such as *hostels, orphanages, ashram shalas, and juvenile homes* and even in the family setting.

Classification of Corporal Punishment under RTE Act 2009



Physical Punishment

- Causing Physical harm
- Make children assume an uncomfortable position
- Forced ingestion of anything
- Detention in any closed space

Mental Harassment

- It is detrimental to the academic and psychological well-being of a child.
- It includes Sarcasm, Name Calling, derogatory remarks, labelling and name calling



Discrimination

- Prejudiced behavior because of caste/gender, occupation or region and non-payment of fees.
- Denying mid-day meal or library books or uniforms or sports facilities to a child

Perception Issue

- Punishing children is regarded as normal and acceptable, it is often considered necessary in order that children grow up to be competent and responsible individuals.
- Despite its ineffectiveness and deleterious side-effects, it is made an essential part of child rearing practice. It creates such an acceptance among children's that even if they are hurt, they don't report the incident.
- The idea of entrusting school or other institutions as 'in loco parent' promotes the belief that cloak corporal punishment under the guise of love, care and protection, when it is actually an abuse of authority that harms the child.

Consequences of Corporal punishment

- ✓ It hampers the development potential of the children.
- ✓ It normalizes violence as an acceptable means of dealing with conflict, promoting culture of violence.
- ✓ It leads to adverse physical psychological and educational outcomes and leads to increased drop-out rate, school avoidance and school phobia.

Case studies:

Since 1979, all corporal punishment of children has thus been forbidden in **Sweden**. This means that corporal punishment is viewed as criminal assault, depending on the severity of the actions there is no exception (defense) of parental discipline.

- ✓ It causes low self-esteem, anxiety, somatic complaints, depression, suicide and retaliation against teachers – that emotionally scar the children for life.
- ✓ There is an association between corporal punishment meted out to children and maladaptive behavior patterns in later life, such as aggression and delinquency.
- ✓ Subtle and overt forms of discrimination are also known to have a negative effect on the emotional and intellectual health of children.
- ✓ Multiple studies around the world have found that corporal punishment is rarely a lasting solution to a disciplinary issue. Children were seen to misbehave more and show more aggression when spanked. They were also more likely to be disruptive in school and have a hard time concentrating. In adulthood, not only did they experience mental health problems, there was also a greater chance that they would smack their own children and so the cycle goes on.

Legal Provisions against Corporal Punishment

Constitutional Provisions

- Corporal punishment violates the multiple articles of the constitution such as-
 - Article 21- Right to life and dignity.
 - Article 21A- Free and compulsory education for children up to 14 years of age however fear of corporal punishment makes children more likely to avoid school or to drop out altogether.
 - Article 39(e) directs the State to make sure that the tender age of children is not abused.
 - Article 39(f) directs the State to ensure that children are given opportunities and facilities to develop in a healthy manner and in conditions of freedom and dignity and that childhood and youth are protected against exploitation and against moral and material abandonment.

The Right of Children to Free and Compulsory Education (RTE) Act 2009

- ✚ Section 17(1) and 17(2) prohibits physical punishment and mental harassment and makes it a punishable offence.
- ✚ Section 8 and 9 places responsibility on the government to ensure that there is no discrimination against children belonging to dis-advantaged group and weaker sections.

The Juvenile Justice (Care and Protection of Children) Act, 2000

- The act under Section 23 criminalizes acts that may cause a child mental or physical suffering.
- It makes corporal punishment punishable with imprisonment for a term which may extend to six months, or fine, or with both.

Role of National Commission for Protection of Child Rights (NCPCR)

- ❖ Statutory Body formed under section 3 of Protection of Child Rights (PCR) Act 2005.
- ❖ It is entrusted with the following:
 - Monitoring implementation of Right to Education.
 - Safeguards child rights provided under the PCR Act 2005
 - Recommend measures for effective implementation of rights provided under PCR Act 2005.
 - Enquire into any matters relating to child's right to free and compulsory education under RTE Act 2009.

Role of State Commissions for Protection of Child Rights (SCPCR)

- ❖ It's a statutory body formed under section 4 of Protection of Child Rights (PCR) Act 2005.
- ❖ In absence of SCPCR state government can appoint another competent authority which performs the functions which an SCPCR will perform.
- ❖ SCPCRs are the appellate authority to receive appeals from the aggrieved persons who would prefer such appeals when their grievances relating to children's right to education are not redressed by the designated local authorities.
- ❖ SCPCRs is also entrusted with the same functions which NCPCR performs.

- It covers anyone in a position of authority over a child, which would include parents, guardians, teachers and employers.

Scheduled Castes and Tribes (Prevention of Atrocities) Act, 1989

- Provisions of the act can be used to prosecute an adult in the general category who inflicts corporal punishment upon a scheduled caste or scheduled tribe child.

Protection of Civil Rights Act, 1955

- Provisions of the act prosecute a person/ manager/trustee as well as warrant resumption or suspension of grants made by the Government to the educational institution or hostel on the ground of untouchability.

What can be done to end corporal punishment?

Recognize that the child needs help and not punishment.

- > Many children are not ready or prepared for the demands of the school in terms of academics, social and interpersonal relationships. They deal with multiple environmental factors that carries emotional causality.
- > Therefore, need is to view their problem as a product of interaction of various psychosocial and biological factors. It will help in developing an understanding that the child needs help rather than punishment.


Developing Student-Teacher relationship

- > There is a need to develop alternative and effective strategies to handle difficult situations, and provide children with a good learning experience. One of the strategies for the same could be adhering to student-teacher ratio prescribed under RTE Act, 2009. This will help in avoiding

Life Skill Education


Life Skill Education

Life Skill Education Helps in Promoting




Communication and Interpersonal Skills

Life Skill Education Helps in addressing issues such as




Low Self Esteem


- Life Skill education should be an essential part of school curriculum.
- It helps all children participate in and contribute equally to the production of knowledge and make them capable of changing their reality, their lives, and the society they live in.




Builds Empathy




Develops decision making and critical thinking




Develops Self management skills



Aggression



Self Abuse



Lack of praxis

Corporal Punishment Monitoring Cell (CPMC)- Multidisciplinary Approach

- ❖ NCPCR recommends School managements to form a CPMC to look into cases of corporal punishment.
- ❖ It should consist of
 - Two Teachers
 - Two Parents (Elected by Parents)
 - One Doctor
 - One lawyer nominated by the District Legal Services Authority (DLSA).
 - One independent counsellor
 - One Independent women or child rights activist of the local area nominated by district child protection society
- ❖ Two students duly elected not from the highest class.
- ❖ To hear the grievances of corporal punishment, child sexual abuse, mental harassment and discrimination without any delay, preferably on the day of the occurrence.
- ❖ To ensure that students are not forced by the school authorities to testify in their favor before any authority.
- ❖ To see as to whether adequate steps have been taken to prevent corporal punishment, child sexual abuse, mental harassment and discrimination.
- ❖ The recommendations of the CPMC should be forwarded to the district level authority for such matters with a copy to the DLSA within 48 hours of the occurrence for appropriate action.
- ❖ It provides for two type of redressal primary redressal (the adjudication of the CPMC is accepted by the child and his/her family) and secondary redressal (where the child and family are not happy with the CPMC and the matter may have to be referred to the district level authority for action). Even in cases where the parents of the child are satisfied that no legal action needs to be followed, the matter should be inquired into by the CPMC.

www.ksgindia.com

DELHI: VIJAY NAGAR 9717380832 & OLD RAJENDER NAGAR 9811293743 | JAIPUR: 8290800441 | PATNA: 7463950774 | RANCHI: 9939982007
BENGALURU: KORMANGALA 7619166663 & CHANDRA LAYOUT 7619136662 | BHOPAL: 7509975361 | INDORE: 7314977441 | IMPHAL: 9650245599
t.me/ksgindia | facebook.com/khanstudygroup | youtube.com/khanstudygroupksg | Instagram.com/khanstudygroup | WhatsApp 9868005599

Page 7

overcrowding and unmanageable class providing more time to a teacher to understand their students.

- > There is a need to shift focus onto enablement and engagement processes that will allow for a child's participation in a democratic fashion. There is also a need to involve children in the process of framing regulations this will provide their perspective and generate a sense of commitment to follow the regulations.

Creating a learning and enabling environment

- > **Awareness** must be created among children, so that they do not accept any form of corporal punishment as normal and raise their voice against the same.
- > **Training Programme:** School management should run regular training programme that will make teachers understand and appreciate rights of children and spirit of the Right to Education. It should foster a spirit of inclusion care and nurture among children.
- > **Social Audit:** Schools should conduct an annual social audit that will compile all cases of corporal punishment and should be made public and accessible to the authorities, the parents and civil society.
- > **Undertakings:** All teachers should provide a written undertaking to both schools and district authorities they would not engage in any action that could be construed as corporal punishment.
- > Any **no-objection certificate (NOC)** under RTE for affiliation should only be issued when schools ensure that it had taken measures to end the practice of corporal punishment.

Conclusion

Incidents of corporal punishment in India is very unfortunate given our age-old "Guru-Shishya" tradition of ancient Gurukuls. The dawn of the modern age though created challenges in the teacher-student relationship, it also provided tools to overcome those challenges. As India celebrates, "Azadi ka Amrit Mahotsav" it is equally important to understand the role of child-rearing practices, right tools and approaches will create positive ripples effect for India's future while any lacunae can spell disaster.

PEPPER IT WITH
NCPCR, NHRC, National Women Rights Commission (NCW)

Prevention of Money Laundering Act

News Excerpt

Supreme Court of India upheld the constitutional validity of the Prevention of Money Laundering Act 2002. Court highlighted that principle of innocence of the accused is through a human right but this presumption can be interdicted by a law made by the legislature.

GS CONNECT										
GS	1	2	3	4	5	6	7	8	9	10
I										
II										
III										
IV										
V										

Pre-Connect

What is Money laundering (ML)?

- According to Black's Law of Lexicon laundering means a process where illegal is converted into legal money in a manner that original source of the money cannot be traced.
- The origin of money laundering can be traced back to American gangsterism which started with the prohibition of sale of alcoholic drinks in the US. To convert their ill-gotten money into a legitimate business they started investing in laundry business in US which was a cash business.
- Over the time these criminals moved further into business where use of cash was higher like casinos and narcotics.
- ML involves three basic steps which are:
 - **Placement-** In this stage the idea is to introduce illegal profits and money into formal financial system. Technique used here is called smurfing i.e., breaking down large volumes of cash into smaller and untraceable amounts. This money

can be used to buy high value goods such as in India purchase of gold, silver and bullion.

- **Layering-** In this fund are moved far away from their source of origin. In this wealth can be taken to a country with weak anti-money laundering laws and then can be used to legitimate investment instruments, for this bogus companies which exist only on paper are created.
- **Integration-** Money which is placed and integrated is brought back into the economy as a legitimate transaction into sectors like real-estate, luxury assets etc.

Black Money is the money whose source is not disclosed to the public authorities. ML is used to convert black money into white money, but in reality it only changes the appearance and the form of the money. So in reality black money gets only white appearance hence **once the black money, always the black money.**

Converting Black to White



Trusted Aides: Use of a family relative or a gullible person. Adding of multiple layers between the perpetrator and family relative. Mixing of illegitimate and legitimate earnings



Gift Options: Income Tax Act, 1961 doesn't tax income from gifts. This is heavily misused and plethora of gifts from gifts to cars to house are all tax free. For this a fictitious list is given to tax authority



Agriculture Land: Maintenance of land records is not proper in India. This loophole is misused and agriculture land is brought in cash. From this, land fake invoices are generated asserting cultivation of land. Laws in India not only exempts income from agrarian land but also exempts capital gains. This allows fulsome money laundering and all completely tax-free.

- Money laundering is a threat to national security as it led to loss of tax revenue to the government. In order to compensate government raises tax rates, this undermines tax equity and promotes **tax evasions**, thereby creating an un-ending cycle.
- Corruption is a source of ML as it generates large amounts of proceeds to be laundered. Corruption may also enable the commission of a ML offense and hinder its detection, since it can obstruct the effective implementation of a country's judicial, law enforcement and legislative frameworks.

Prevention of Money Laundering Act, 2002

- It was enacted in January 2003 and came into force from 2004. It was enacted to prevent and control money laundering. It provides for confiscation and seizure of properties derived from laundered proceeds.

Enforcement Directorate

- Founded on 1st May 1956 as enforcement unit under the Department of Economic Affairs for handling exchange control laws violation under Foreign Exchange Regulation Act (FERA) 1947.
- Agency play different role under different act which are:
 - Conservation of Foreign Exchange and Prevention of Smuggling Activities Act, 1974 (COFEPOSA)
 - ED is empowered to sponsor cases of preventive detention with regard to contraventions of FEMA.
 - The Foreign Exchange Management Act, 1999 (FEMA):
 - Investigation of suspected contraventions of the rules and regulations of Act
 - Adjudicate and impose penalties on the convicts under the act.
 - The Prevention of Money Laundering Act, 2002 (PMLA):
 - Enforce provisions of the PMLA and investigate and trace the assets derived from proceeds of crime.
 - Ensure prosecution and confiscation of the property by the special court.
 - The Fugitive Economic Offenders Act, 2018 (FOEA):
 - ED is mandated to attach the properties of the fugitive economic offender's and confiscate their properties.

- The act fulfills India's global commitment to deal with menace of money laundering proceeds these includes:
 - Vienna Convention
 - UN Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances 1988
 - Basel Statement of Principles, 1989
 - Forty + 9 recommendations of the Financial Action Task Force on ML (1990)
 - Political Declaration and Global Program of Action Adopted by the UNGA in 1990.
- Nodal Agency for the implementation of the act is Enforcement Directorate (ED) works under the Department of Revenue in the Finance Ministry.
- Act also provides for adjudicating authority and appellate tribunal to hear against the order of adjudicating authority.
- Government of India can enter into agreement with government of any country for enforcing provision of the PMLA. This will include information exchange for the prevention of offence and investigation of cases relating to any offence under PMLA.
- The act empowers Director of FIU-IND (Financial Intelligence Unit-India) to impose fines on the financial intermediaries if they fail to comply with the provisions of the act.

Important Sections of PMLA 2002	
Section 3	Any person who is connected to the proceeds of crime shall be guilty of offence of ML
Section 4	It provides maximum punishment to accused of rigorous imprisonment of upto 10 years and a fine with no upper limit.
Section 5	It allows ED officers to provisionally confiscate and attach property derived from criminal activities.
Section 18	It authorizes ED to undertake personal search operations of suspects.
Section 19	It empowers the investigating officers to arrest the accused persons. Supreme Court in V.Chandrasekhar v. Union of India case held that there is no requirement for a warrant of arrest, however ED should provide the grounds of arrest as soon as possible to the accused.

New amendments to PMLA and Issues

Government of India brought changes in the PMLA which includes:

- ✓ **Redefinition of crime:** not only it will include the properties derived from the scheduled offences but also include any other **properties obtained while indulging in the scheduled offence.**
 - It stopped looking ML in silos, rather started looking it in connection with another crime which are known as the predicate offences. It also made ML as stand-alone crime.
 - It recognized ML as offence of continuing nature and therefore person involved in the offence of money laundering till the time that person is getting the fruits of activities.
- ✓ **Expansion of the scope of crime: by amending Section 3 of MLA, now a person shall be accused if they are involved in crimes such as:**
 - Concealment
 - Possession
 - Acquisition
 - Use or claiming as untainted property

However, these amendments have raised several concerns such as:

- It is alleged the whole process was itself made the punishment and now it can be used for fulfilling **political vendetta.**

- **ECIR (Enforcement Case Information Report)**- This is considered as equivalent to an FIR however it is also considered as an internal report, not to be made available to the accused. So essentially a person won't even know the charges against him/her.
- In contrast to general criminal law, under PMLA the burden is on the accused to prove their innocence, once implicated they are assumed to be guilty.
- **Section 63** also makes a compulsion on the accused to provide information, if false or no information will constitute another offence. **This will violate the right against self-incrimination.**
- Bail conditions set under the act were also considered by some experts as arbitrary in nature.

Supreme Court Ruling

ON ECIR

- SC asserted that ECIR cannot be equalized with an FIR and hence it is not mandatory for the ED to disclose the grounds of arrest to the accused at the time of arrest.
- It upheld the validity of ECIR as internal document.

On Section 3 of the PMLA Act

- SC opined that the section carries a wider reach and any activity connected with the proceeds of crime is encompassed within the expression of section 3 of the legislation. Thereby upholding the validity of section 3.
- Court also made it clear that any offence under the section will be dependent on illegal gain of property resulting from the proceeds of the scheduled offence.
- This means that investigation agency had to establish the said link otherwise they cannot prosecute any person on notional basis.

On Section 5 of the PMLA Act

- Court upheld the powers of ED under section 5 and opined that the section provides for a balancing arrangement where it preserves the interest of the accused and also at the same time provide proceeds of crime remain in the manner provided by the act.

On Section 63 of the PMLA Act

- Court asserted that ED officials are not police officers and hence any statement recorded by them under Section 50 the Act will not violate Article 20 (3) of the constitution of India.
- This means ED under Section 63 of the act can compel person to be witnessed against himself.
- SC upheld bail conditions terming them as legal and not arbitrary in nature.

Role of ED in handling ML issue in India

ML is not just about stashing cash away from the eyes of the law, it has emerged as key threat to the stability of any country. The veins of ML provide oxygen of cash to various nefarious activities such as terrorism, Narco-trafficking, human-trafficking, illegal wildlife trafficking etc. ML destroys the economic planning of any country and devoid it of its legitimate sources of income, when it comes to India, its shadow economy had already suppressed its natural growth to a large extent. The resultant is that despite multiple policies and expenditure by public

exchequer poverty remains a cause of concern in India. Agencies like Enforcement Directorate has a huge role to play in combating the menace of ML and other related crimes in India.

Certain issues related to ED in India are:

- **Low conviction rate:**

- Experts often points towards the fact that ED has low conviction rate. According to data presented in Parliament between 2014-15 to 2021-22, out of 888 cases under ED, only 23 cases were under conviction.
- However, the point often missed is the fact that political will is compulsory to allow agencies like ED to fulfill its task.

- **Local Police vs Central agencies:**

- Earlier, white collar crimes were also investigated by the police and recently it has been alleged that local police are stripped of their power and cases were taken from them and given to central agencies without due diligence.
- The reality is however different in recent times, Government of India amended laws related to central agencies giving them more teeth and powers to fight against specialised nature of crime. Further, Police in India are in dire need to serious reforms without which their effectiveness will continues to decline, which is neither good for themselves nor for the country.
- ED is the only central agency that does not require permission from the government or any authority to summon accused on any background for inquiry into economic offences and financial crimes. Such powers allow ED to carry an element of surprise and doesn't allow the accuse to create a wall of defence.

- **Sensationalism vs Reality**

- It often alleged that ED is used a tool of fulfilling political vendetta. However, reality is quite different, ED makes high profile arrest only when it has sufficient evidences, as the nature of the crime they investigate are very complex in nature and therefore proving or establishing guilt is not easy, as a result no agency will make such a move without valid and conclusive evidences.

Money Laundering and Terror Financing

- The techniques used to launder money and to finance terrorist activities/terrorism are very similar and, in many instances, identical.
- An effective anti-money laundering/counter financing of terrorism framework must therefore address both risk issues:
 - It must prevent, detect and punish illegal funds entering the financial system and the funding of terrorist individuals, organizations and/or activities.
 - It should aim at attacking the criminal or terrorist organization through its financial activities.
 - It should use the financial trail to identify the various components of the criminal or terrorist network.

Way Forward

One thing in our fight against ML which we should keep in mind is that " Power Corrupts and Absolute Power Corrupts absolutely". Therefore, there is a need to take certain measures to ensure that ED's Midas touch continues such as:

- Instruments of internal checks and balances must be strengthened to ensure that any divergence from the path mentioned in PMLA is not possible and agency is not misused for political gains.
- Make sure that the expanded powers translate into expeditious resolution of cases with speedy trial and convictions. This will ensure that the process itself doesn't become punishment.

PEPPER IT WITH
Narcotics Control Bureau, CBI,
National Investigation Agency (NIA)

- Scrutiny must be done of the operations of the ED and PMLA can be amended where annual report of ED can be presented to the parliamentary committee for scrutiny.
- Just as the crimes are ever evolving and skin changing phenomena similarly laws should change adapt itself to the changing times. Therefore, a continues study of PMLA along with ED's role must done to ensure, no crime goes unpunished.

Blasphemy and Hate Speech

News Excerpt

Even as India celebrates the "Azadi Ka Amrit Mahotsav " ghost of hate speech, bigotry and resulting communal tensions still cast their shadow over the aspirations of developed India. National Crime Record Bureau (NCRB) data shows that there has been a significant increase in the cases registered under hate speeches in India. Another growing issue is the rise in protest in India demanding a separate set of blasphemy laws in India.

GS CONNECT											
GS	1	2	3	4	5	6	7	8	9	10	11
I											
II											
III											
IV											
M											

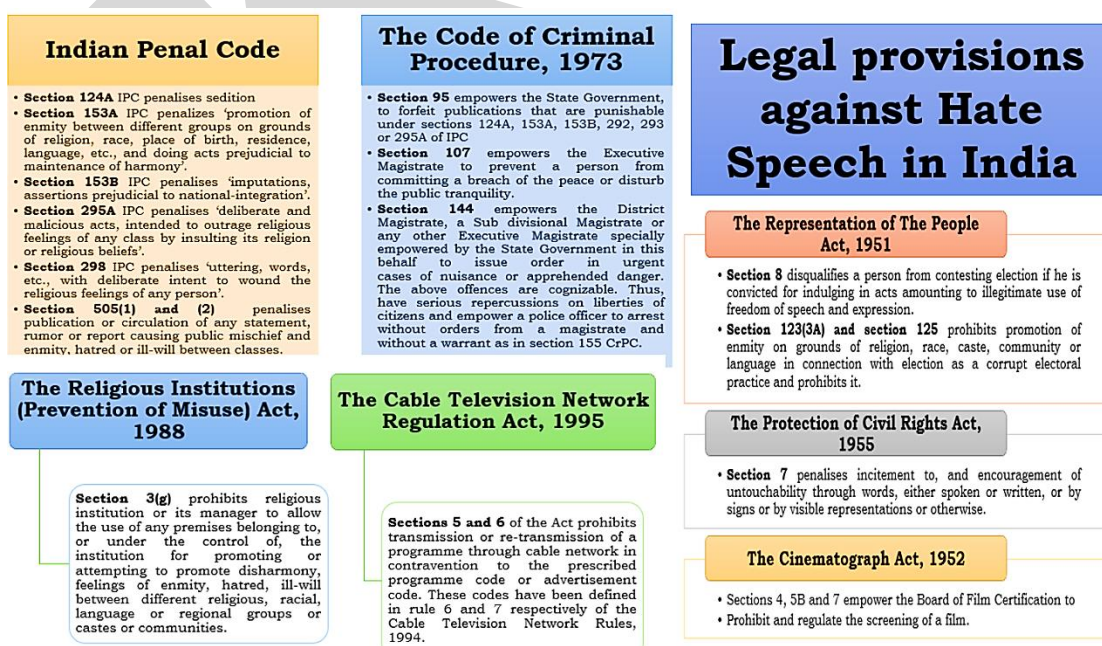
Pre-Connect

What is Hate Speech?

- There is no specific definition of hate speech in India. However, Law Commission in its 267th report termed hate speech generally is **an incitement to hatred** primarily against a group of persons defined in terms of race, ethnicity, gender, sexual orientation and religious belief.
- It also includes any word **written or spoken, signs, visible representations within the hearing or sight of a person with the intention to cause fear or alarm, or incitement to violence.**

What is Blasphemy?

- Blasphemy is generally defined as the act or offense of speaking sacrilegiously about God or sacred things, synonymous with irreverence and disrespect of God.
- Several countries like United States, Britain, Saudi Arabia, Iran, Pakistan etc. has criminalized blasphemy.



- However, in India, such activities are covered under Section 295(A) of the Indian Penal Code (IPC) which punishes any speech, writings, or signs that **“with premeditated and malicious intent”** insult citizens’ religion or religious beliefs with a fine and imprisonment for up to three years.

Court observation on Hate Speech and Blasphemy

- ✓ In ***Brij Bhushan v. State of Delhi*** case SC opined that public order was allied to the public safety and considered equivalent to security of the State. Hence, hate speech can be curtailed under Article 19(2).
- ✓ However, In ***Ram Manohar Lohiya v. State of Bihar*** case SC distinguished law and order, public order and security of State from each other as concentric circle. So now an act may affect law and order but not public order just as an act may affect public order but not security of the State.
- ✓ In ***Pravasi Bhalai Sangathan v. Union of India*** supreme court fearing judicial overreach doesn’t not provide and guidelines rather did not go beyond the purview of existing laws to penalize hate speech. At the same time court referred the matter to Law Commission.
- ✓ In ***Jafar Imam Naqvi v. Election Commission of India*** SC asserted that cannot consider speeches delivered during election campaign as public interest litigation and cannot legislate on matters where the legislative intent is visible.
- ✓ In ***Ramji Lal Modi v. State of U.P.***, SC upheld the constitutional validity of section 295A of IPC and reasoned that while Article 19(2) allows reasonable limits on freedom of speech and expression for the sake of public order. Hence the section penalizes only those acts which are perpetrated with the deliberate and malicious intention of outraging the religious feelings of that class.
- ✓ In ***Superintendent, Central Prison, Fatehgarh vs Ram Manohar Lohia*** case court held that the use of 295A must be when a causality is established between the speech spoken and public disorder caused. It also stated that state must meet a very high bar before using public disturbance as a justification for suppressing expression.

International Legal Regime on Hate Speech

- ❖ International Covenant on Civil and Political Right, 1966 under Article 20(2) prohibit of ‘advocacy of national, racial or religious hatred that constitutes incitement to discrimination, hostility or violence.
- ❖ International Convention on the Elimination of All Forms of Racial Discrimination, 1966 under Article 4 and 6 prohibits dissemination of ideas based on racial superiority or hatred, incitement to racial discrimination, as well as all acts of violence or incitement to such acts against any race or group of persons of another color or ethnic origin.
- ❖ Human rights council Report of the Special Rapporteur expressed that freedom of expression can be restricted on the following grounds, namely:
 - Child pornography (to protect the rights of children)
 - Hate speech (to protect the rights of affected communities)
 - Defamation (to protect the rights and reputation of others against unwarranted attacks)
 - Direct and public incitement to commit genocide (to protect the rights of others)
- ❖ Article 17, of the European Convention of Human Rights prohibits freedom of expression subject to abuse of rights by any State, group or person.
- ❖ The First amendment of the U.S. Constitution forbids the Congress from making law prohibiting the exercise of free speech.
- ❖ Canadian Charter of Rights and Freedoms guarantees freedom of thought, belief, opinion and expression however section 319 of the Criminal Code of Canada, RSC 1985 sanctions public incitement of hatred.

- ✓ In *Shreya Singhal* case SC held that the speech must amount to incitement in order to be restricted. This is an accepted norm to limit speech.

Supreme Court Guidelines on Hate Speech

- Supreme court provided three elements in 2020 to identify hate speech, however these are not watertight silos rather interconnected and linked these includes:
 - Content-based element-
 - It involved use of words and phrases generally considered to be offensive to the society.
 - It can include use of certain symbols and iconography
 - Intent-based element
 - It requires speaker intention only to promote hatred, violence or resentment against a particular class or group without communicating any legitimate message.
 - Harm based element or impact-based element
 - It refers to consequences of the hate speech which will include both physical harm to victim or mental stress or economic or social subordination.
- Court also asserted that one of the clearest markers of hate speech is that it has no legitimate purpose other than spreading hatred towards a particular group.
- Court further noted that not only content but context also matters, similarly occasion, time and circumstances also matter. It was also of the opinion the stature of person who delivered such speech also matters. All these play a crucial role in deciding outcome of any hate speech. Hence person of influence owes a duty and have to be very responsible in conveying their messages.

Supreme court Guidelines on Mob Violence

- SC provided guidelines under three heads preventive, remedial and punitive.
- It designated police officer of the rank of the Superintendent of Police (SP) as nodal officer assisted by a Deputy Superintendent of Police (Dy. SP) rank officer and they both have to constitute a special task force to gather intelligence about people who are likely to commit crimes of such nature.
- Those who disseminate irresponsible messages and videos should be booked under section 153 A of the IPC. Doesn't matter which platform was used.
- The Central and State government should use all the media platforms to broadcast message to people that any mob violence will invite serious consequences.
- It places complete responsibility on the district administration and it fails to stop mob violence then it will be considered as an act of deliberate negligence.
- State governments should form a scheme for compensation to families and ensure that victims are not harassed.

Hate Speech vs Blasphemy

- ✚ Section 295(A) has too wide interpretation and it is difficult to understand whether disrespect to religious sensibilities is necessarily tantamount to incitement.
- ✚ Supreme court had opined that perhaps the goal of hate speech statutes in Section 295(A) is to prevent prejudice and ensure equality. However, the wording of the law doesn't convey the same message and hence exploitations of law continue.
- ✚ There is also the need to understand that there is critical distinction between criticizing or ridiculing religion and encouraging prejudice or aggression towards individuals or a community. While criticizing is justified as it is compatible with principles of a democratic society in which there should be no screening of discourse and dissent.

- Therefore, there is need to distinguish between hate speech and Blasphemy. Later should be de-criminalized to make sure critical reasoning provided under the freedom of speech is upheld, while the former should be strongly punished under the provisions of law. The idea should be to keep blasphemy under the law but remain a non-criminal offence.

Conclusion

Blasphemy as an offence is quite subjective in nature anything anywhere might be blasphemous for someone while it might not for other. Prominent case in this regard is the case of Asiya bibi in Pakistan some find her conduct blasphemous while other don't. When it comes to legal parlance, then a law cannot be formed on subjective understandings of individuals, in law there are no grey shades only black and white. Further in a modern liberal society people should question practices which are wrong with their religion, this not only strengthen people faith but also make society progressive. In a secular country like India law on blasphemy will be futile and will contradict with fundamental rights. Therefore, the need of the hour is to define a legal definition of Hate Speech, add more stringent punishment to it and use Supreme court guidelines to identify the nature of speech. Though India is a secular country it is equally deeply religious, State might not have any religion, people do have, hence speeches and actions which are deliberative attempt to target religious beliefs in order to incite violence must be dealt with iron hand of law rather than going for a blasphemy law, which will open a Pandora box of litigation and political & personal vendetta in India.

PEPPER IT WITH

Sedition Law in India, Section 295(A) of IPC

Election Populism in India: Freebies and Welfare State

News Excerpt

Supreme Court of India has asked the government of India to assess the financial viability of the freebies distributed during election campaigns. Court also asked government to use the expertise of the finance commission in curbing the irrational poll.

GS CONNECT											
GS	1	2	3	4	5	6	7	8	9	10	11
I											
II											
III											
IV											
V											

Pre-Connect

What are Freebies?

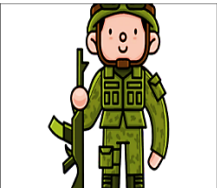


- Idea behind freebies is to provide relief to the population in form of subsidies which pushes them on the path of growth.
- However, in recent times political parties started a competition of offering free electricity or water or any form of cash allowances just to win votes without giving due consideration to state finances.
- The problem has aggravated to a level that in order to secure votes promises are being made to distribute gadgets like laptops, smartphones, etc.
- Excessive use of freebies as election strategy can shake the root of free and fair elections to a large degree. It will affect the informed decision-making by voters.

Idea of Welfare state

- Part IV of Indian Constitution- Directive Principles of State Policy as a foundation stone of establishing India's welfare state.
- Various schemes were result of this vision such as Public Distribution System (PDS), Free Covid Vaccine and Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA), Mid-Day Meal Scheme etc. In recent times, Rythu Bandhu of Telangana and Kalia of Odisha were forerunners of what is now Kisan Samman Nidhi.
- However, the concept was that state should provide such services whenever they have resources, however it was now being misused to serve vested political interest.

Reasons for Freebies in India

- ✓ Development of lesser developed- Lower level of development coupled with high population is the recipe for poverty in such situations freebies becomes necessary to push such population out of web of poverty.
- ✓ Growth propulsion system: Several expenditures in right direction from the state end helps in overall growth such as employment guarantee schemes, health insurance schemes, this proved beneficial especially in times of pandemic.
- ✓ General expectations- In India, election season is highly anticipated one, and people have huge expectations from the politicians and they look forward to promises to be made in election manifestos.

Public Good	Merit Good	Private Good
 <ul style="list-style-type: none"> • Such goods are non-excludable and non-rival in nature. These cannot be owned by any individual even if they wish to pay for it. • Few of the examples are national defence, railways, highways, public info, etc. 	 <ul style="list-style-type: none"> • These goods are provided by the market however, quantity is always a issue. • However, these can also be distributed by an individual who buys it for public distribution so that it becomes available for all. • Few examples are education, health, welfare services, public parks. 	 <ul style="list-style-type: none"> • These are privately owned goods fulfils personal satisfaction of the buyer and doesn't carry any social benefits. • There prices are determined by market forces based on the concept of demand and supply.

Negative externalities of Freebies

Economic Impact

- **Macroeconomic un-stability:** Politics of freebies distorts expenditure priorities and lead to an excessive and unnecessary drain on public spending. As a result, most of the Indian states suffer from a poor financial condition and have limited revenue resources. **Recent RBI state of finances have shown that 10 Indian states have highest debt loads roughly half of the total debt of country.**
- **Decline competitiveness of Industries-:** In order to maintain fiscal balance governments, start overcharging industrial and commercial contracts as a result competitiveness of growing industries get affected. This led to decline in growth potential of economy.
- **Increase fiscal deficit-** Fiscal capacity of states in India is always lesser than the fiscal expenses adding burden of freebies makes situation worse as a result state starting borrow more leading to double whammy of increase in fiscal deficit and crowding out effect.

Political Impact

- Irrational freebies attract unprivileged class and create a bias in their minds that they should vote only that person who offers them more goodies. As a result, democracy get undermined.
- Populism riding over freebies can result into breakdown of complete economic system of a country and as economy goes so does the political stability. One of the prime examples is Sri Lanka whose economic trouble brought anarchy in the country.

Social Impact

- Distribution of private goods in form of freebies doesn't create any tangible social benefits rather they defeat the whole purpose of the subsidies.
- Further, irrational freebies don't survive long at some point of time fiscal constraints forces government to withdraw benefits. This might create social troubles as by the time government withdraws them people already started assuming them as their right and might create law and order problems as they believe their right being snatched away.
- By distorting expenditure from growth-enhancing items freebies create intergenerational inequity.

Environmental Cost

- In India, one of the famous soaps as freebie is free electricity, the idea was to increase disposable income in the hands of people so that they could spend it other sector of economy. It was also believed that once a minimum quota of electric unit is given free, people will shy away from stealing electricity rather try to be in limit of the quota, this would save energy as well.
- However, in reality things are not as envisaged and discoms are suffering losses. Due to this factor, they are unable to actively encourage solar power and are unable to evolve tariff structures.
- Without able to actively promote and use renewable energy, India will fall back on its commitment towards sustainable development, consequences of which are disastrous.

Way Forward

For any government long term target should be Chinese proverb, **“Give a poor [wo]man a fish and you feed her for a day. You teach her to fish and you give her an occupation that will feed her for a lifetime.”**

Keeping this in mind several steps can be taken to deal with freebie situation:

- Rationality in Planning- Any subsidy program must provide a clear rationale with clear indication of funds meant for it. This will become possible when the fine line between welfare and freebie is understood. Targeted subsidy to benefit particular section or sector is always welcomed then free distribution for every person.
- Cooperative for growth- Both Central and State government should engage to understand and map the future growth plan through a National Development Agenda. This will end the practice of glorifying irrational freebies and lead to collective growth of the nation as a whole.
- Focus on welfarism- Focusing and implementing welfare schemes properly which develops skill set of people such as Mid-Day meal scheme or RTE, then infrastructure and development will take care of itself and the people will not require such kinds of freebies.
- Election Reforms- Election commission of India should amend Model Code of Conduct to check on the manipulation of voters through election manifesto. It should also start voter awareness program that can help in building consensus between regulating the irrational freebies and making sure voters don't get swayed by the irrational promises.
- Judicial contribution- Judiciary provided reforms and guidelines when the need arises and if parliament cannot discuss freebie issues, then Apex Court can provide meaningful guidelines which can put an end to nuisance of freebies.

PEPPER IT WITH

Directive Principles of State Policy, Election reforms, Political Parties in India.

Custodial Deaths in India

News Excerpt

Custodial death has been a cause of concern in India. While the number of people dying in police custody is increasing the conviction rate of guilty policemen is abysmally low. This presents a grim situation given the time and money being spent on training police personnel. A lot of emphasis is now placed on the scientific methods of investigation and still incidents of custodial deaths continue.

Pre-Connect

What does Custodial deaths (CDs) mean?

- CDs are the death of a person in police custody, it also includes death of a person in judicial custody i.e., undergoing trial and serving a sentence.
- It happens when interrogation frustrates officers and when they seem to arrive at a dead end they resort to torture and violence which could lead to the death of the suspect.

GS CONNECT											
GS	1	2	3	4	5	6	7	8	9	10	11
I											
II											
III											
IV											
M											

www.ksgindia.com

DELHI: VIJAY NAGAR 9717380832 & OLD RAJENDER NAGAR 9811293743 | JAIPUR: 8290800441 | PATNA: 7463950774 | RANCHI: 9939982007
BENGALURU: KORMANGALA 7619166663 & CHANDRA LAYOUT 7619136662 | BHOPAL: 7509975361 | INDORE: 7314977441 | IMPHAL: 9650245599
t.me/ksgindia | facebook.com/khanstudygroup | youtube.com/khanstudygroupksg | Instagram.com/khanstudygroup | WhatsApp 9868005599

- Custodial torture and other excesses often lead to death under police custody, however sometimes due to any health conditions which might be unknown to police, custodial death occurs.

Data on custodial deaths

- National Crime Records Bureau (NCRB) data shows that in the last 20 years, 1,888 custodial deaths were reported across the country, 893 cases registered against police personnel and 358 personnel charge-sheeted. But only 26 policemen were convicted in this period.
- Data also points towards the grim situation in which more than 2,000 human rights violation cases were also recorded against the police between 2000 and 2018. And only 344 policemen were convicted in those cases.
- Police administration often term custodial death as suicide or death during treatment and hence conviction rate remains low.

Constitutional Provisions against Custodial violence

- ❖ **Article 21:** "No person shall be deprived of his life or personal liberty except according to procedure established by law". It also provides protection from torture as fundamental right.
- ❖ **Article 22:** provides "Protection against arrest and detention in certain cases". It also includes right to counsel.

Reasons for Custodial Deaths

- ✓ Opacity in the whole prison system reduces accountability. In absence of prison reforms, Indian prisons are infested with poor conditions, overcrowding, acute manpower shortages and minimal safety against harm in prisons.
- ✓ There is no political consensus on the issue of the anti-torture legislation as result custodial violence is yet to criminalised.
- ✓ Proportional use of force still remains an elusive issue for the police across the country. They mostly resort to excessive use of force which can result in injuries and in some cases cause death.

<p>Indian Evidence Act, 1872</p> <ul style="list-style-type: none"> • Section 24 provides that any confession obtained by inducement, threat or promise from an accused would not be relevant in criminal proceedings • Section 25 of the Act provides that a confessional statement of an accused to police officer is not admissible in evidence and cannot be brought on record by prosecution to obtain conviction • Sections 26 provides that confession by an accused while in police custody could not be proved against him, unless it is subjected to cross examination or judicial scrutiny. • Section 27 provides that the statement of the accused is required to be split into its components and the admissible part of it is to be separated. Only those portions which were immediate cause of discovery would be admissible in evidence • Section 132 provides that witness cannot be compelled to give answers which can cause any arrest or prosecution, or be proved against him in any criminal proceeding. 	<p>Code of Criminal Procedure, 1973</p> <ul style="list-style-type: none"> • Sections 46(3) and 49 protect the person to be arrested and the detainee under police custody, who are not accused of an offence punishable with death or imprisonment for life. • Sections 50 and 56 are in conformity and consonance with Article 22 of the Constitution. A person arrested is to be informed of the grounds of arrest and right to bail. • Section 54 of the Code extends safeguard against any infliction of custodial torture and violence by providing for examination of arrested person by medical officer. • Section 57 requires the police to produce the suspect / accused before the nearest magistrate within 24 hours of arrest. It corresponds to Article 22(2) of the Constitution. • Sections 162, 163(1) and 315 disallow (i) forced confession and (ii) testimony, as inadmissible in the court of law and protect the accused against such confession. • Section 176 provides for compulsory magisterial inquiry on the death of the accused in police custody. 	<p>Legal Provisions Against Custodial Deaths/Torture in India</p>
<p>Indian Police Act, 1860</p>	<p>• Sections 7 and 29 provide for dismissal and other penalties to police officers who are negligent in discharge of their duties or unfit to perform the same.</p>	<p>Indian Penal Code, 1860</p>
<p>Armed Forces Special Powers Act, 1983</p>	<p>• Section 6 of the Act creates the concept of sovereign immunity as it protects the security forces against alleged crimes.</p>	<ul style="list-style-type: none"> • Sections 330, 331, 342 and 348 have, purposely been designed to deter police officers who are empowered to arrest a person and to interrogate him during investigation of an offence resorting to third degree methods, which may amount to torture. • Section 376(1)(b) provides for graver penalty in case of custodial rape committed by police officers. • Section 376C provides penalty for sexual intercourse by a person in authority.

- ✓ Lengthy and expensive formal processes followed by courts dissuade the poor and the vulnerable.

Role of Judiciary

- In **Kishore Singh Vs. State of Rajasthan (1981)** SC held that the use of third degree by the police is violative of Article 21 of the Constitution of India.
- In **Joginder Kumar Vs. State of UP & Ors (1981)** case SC held that those police should avoid arrest provided only in heinous offence. It opined that the existence of the power to arrest is one thing. The justification for the exercise of it is quite another.
- In **D. K. Basu Vs. State of West Bengal (1994)** case SC has established norms required to be followed during arrest and detention. This includes
 - It is the duty of the Police Officer not to use third-degree methods while having investigation and interrogation from the accused.
 - Attention must be required in checking the working environment, training, and orientation of the Police Officials with the basic human values.
 - Surprise inspections by Non-Official Visitors (NOVs) should also be made mandatory which would act as a preventive measure against custodial torture.
 - A balanced approach should be used by the police to extract the information from hardened criminals.
- In **Prakash Kadam Vs Ramprasad Vishwanath Gupta, (2011)** Supreme Court (SC) held that if crime by policemen, much harsher punishment should be given to them because they do an act totally contrary to their duties.

Best Practices

- ❖ In UK, Section 134 of Criminal Justice Act, 1988 makes it an offence for any public official to 'intentionally inflict severe pain or suffering on another in the performance of his official duties.
- ❖ Torture is prohibited throughout the United States. It is categorically denounced as a matter of policy and as a tool of State authority.
- ❖ France has set up its national preventive mechanism in the form of a fully independent Controller-General for Places of Deprivation of Liberty, responsible for ensuring that the fundamental rights of detainees are respected.

Way forward

- ✚ **Commit to cause:** Government of India should first commit to the cause of ending the menace of custodial death. For this it should ratify UN convention against torture. It will help India in tide over the difficulties faced by the Country in getting criminals extradited. This will also require a systematic review of colonial rules.
- ✚ **Police Reforms:** There is a need to educate and train officials at the highest level as unless senior officers understand the gravity of such issues, solutions cannot be found. Also, to keep police excesses in check, dissemination of information about the constitutional right to legal aid and availability of free legal aid services is necessary.
- ✚ **Prison Reforms:** Following the examples of Kerala Police, CCTV cameras must be installed in police stations cells and interrogation rooms. An unrestricted and regular access must be provided to independent and qualified persons to places of detention for inspection.
- ✚ **Amendment to Existing Statutes:** Several amendments can be done in existing laws such as:
 - Section 357B of CrPC can be amended to incorporate payment of compensation, in addition to payment of fine.
 - Insert Section 114B in Indian Evidence Act, 1872 which will ensure that in case a person in police custody sustains injuries, it is presumed that those injuries

have been inflicted by the police, and the burden of proof shall lie on the authority concerned to explain such injury.

- ✚ **Victim Protection:** An effective mechanism must be put in place in order to protect the victims of torture, the complainants and the witnesses against possible threats, violence or ill treatment.

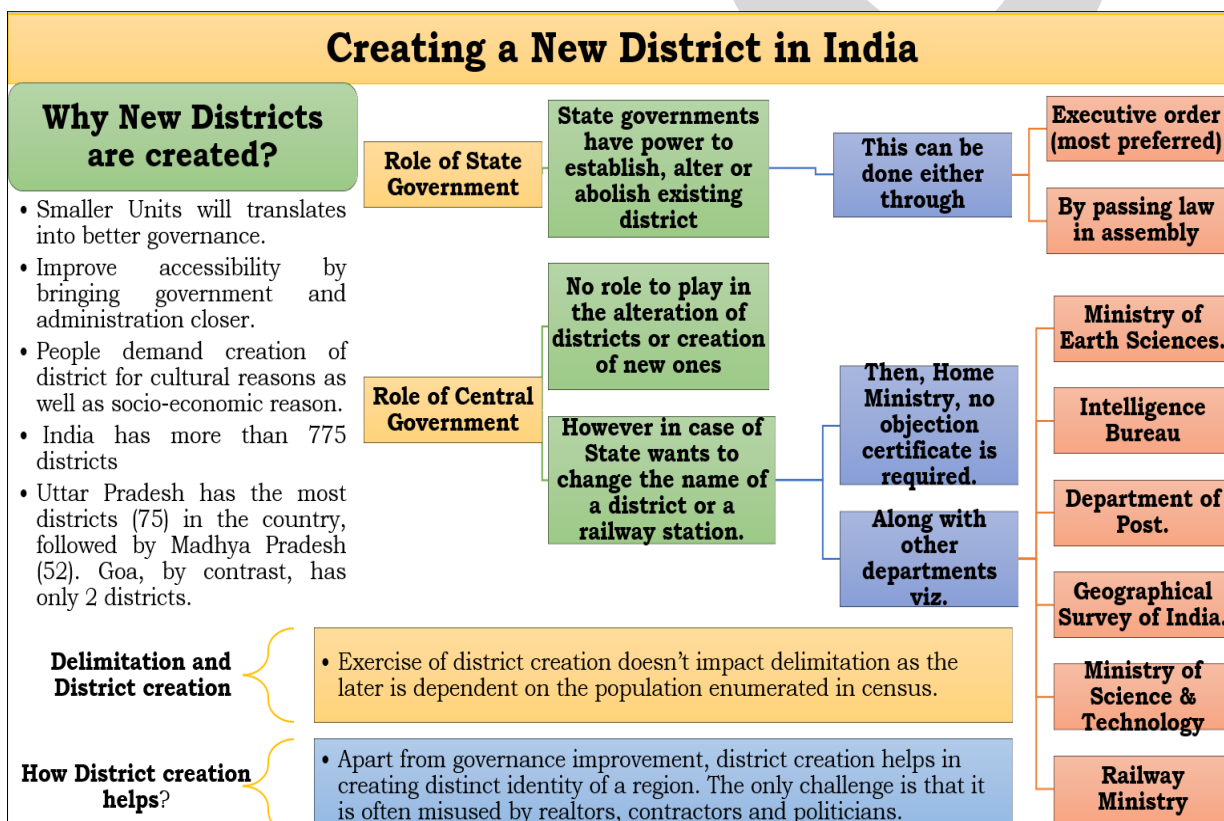
- ✚ **Own Up:** State should own the responsibility for the injuries caused by its agents on citizens, and principle of sovereign immunity cannot override the rights assured by the Constitution.

PEPPER IT WITH

International Covenant on Civil and Political Rights, 1966 (ICCPR), "The Prevention of Torture Bill, 2017, UN Convention on Torture.

Conclusion

Respect for human rights lies at the heart of good governance. In a democratic society, it is the responsibility of the State to protect and promote human rights. All State institutions whether they are the police department, the army, the judiciary or civil administration have a duty to respect human rights, prevent human rights violations, and take active steps for the promotion of human rights. The role of the police is especially significant in this respect.



Fundamental Duties

News Excerpt

Chief Justice of India had asserted that Fundamental duties in the Constitution does not merely serve a "pedantic or technical" purpose, they are meant to guide citizens engineer a social transformation.

Pre-Connect

- Idea of fundamental duties is borrowed from Constitution of Soviet Union.

GS CONNECT										
GS	1	2	3	4	5	6	7	8	9	10
I										
II										
III										
IV										
V										

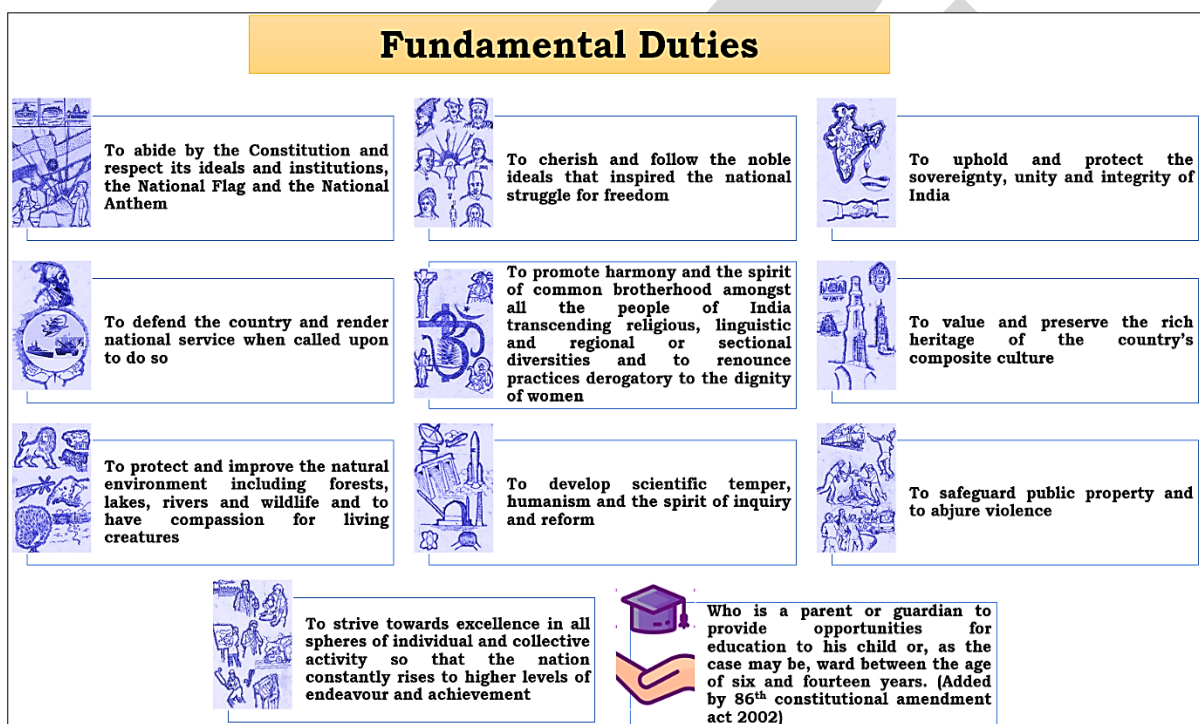
www.ksgindia.com

DELHI: VIJAY NAGAR 9717380832 & OLD RAJENDER NAGAR 9811293743 | JAIPUR: 8290800441 | PATNA: 7463950774 | RANCHI: 9939982007
BENGALURU: KORMANGALA 7619166663 & CHANDRA LAYOUT 7619136662 | BHOPAL: 7509975361 | INDORE: 7314977441 | IMPHAL: 9650245599
t.me/ksgindia | facebook.com/khanstudygroup | youtube.com/khanstudygroupksg | Instagram.com/khanstudygroup | WhatsApp 9868005599

- On the recommendations of Swaran Singh Committee, these were incorporated through 42nd Constitutional Amendment Act, 1976 in Part IV-A of the constitution. Later through the 86th Constitutional Amendment Act, 2002, added one more duty, now total number of duties stands at 11.
- These are non-justiciable in nature like Directive Principles of State Policy.

Verma Committee on Fundamental Duties of the Citizens (1999)

- ❖ Committee provided for provisions:
 - Under National Honour Act, 1971- Nobody can disrespect National Flag-Constitution of India and National Anthem.
 - The Protection of Civil Rights Act (1955) provided for punishments in case of any offence related to caste and religion.



Significance of Fundamental Duties

- Fundamental duties act as a reminder to every citizen that just like they have fundamental rights they also need to observe basic norms of democratic conduct and democratic behaviour.
- It serves as a warning to anti-social elements that disrespecting national symbols like burning flag, disturbing public peace will also bring consequences.
- It helps in the promotion of a sense of discipline and commitment towards the nation. This allows the active participation of citizens.
- It helps the Court in determining the constitutionality of the law. For instance, any law passed by the legislatures, when taken to Court for constitutional validity of the law, if it is giving force to any Fundamental Duty, then such law would be taken as reasonable.
- Compliance with fundamental duties helps in fulfilment of fundamental rights of **Articles 14 (Equality before Law), 19 (Protection of certain rights regarding freedom of speech) and 21 (Right to Life).**

PEPPER IT WITH
Fundamental Rights, DPSP,
Preamble of the constitution

www.ksgindia.com

DELHI: VIJAY NAGAR 9717380832 & OLD RAJENDER NAGAR 9811293743 | JAIPUR: 8290800441 | PATNA: 7463950774 | RANCHI: 9939982007
BENGALURU: KORMANGALA 7619166663 & CHANDRA LAYOUT 7619136662 | BHOPAL: 7509975361 | INDORE: 7314977441 | IMPHAL: 9650245599
t.me/ksgindia | facebook.com/khanstudygroup | youtube.com/khanstudygroupksg | Instagram.com/khanstudygroup | WhatsApp 9868005599

Supreme Court View

- ✓ In *AIIMS Students Union v. AIIMS* (2001) SC held that Fundamental duties are equally important like fundamental rights. They are prefixed by the same word fundamental which was prefixed by the founding fathers of the Constitution to 'right' in Part III.
- ✓ In *Ranganatha Mishra case* (2003) SC held that Fundamental duties should not only be enforced by legal sanctions but also by social sanctions.

Conclusion

Concept of "Kartavya" is embedded in Indian society. Feeling of performance of one's duties towards society, the country and especially towards one's parents is part of Indian culture. Therefore, a policy that calls for sensitisation, operationalisation and enforceability of fundamental duties can help citizens to be responsible.

Criminal Procedure (Identification) Act, 2022

News Excerpt

Criminal Procedure (Identification) Act, 2022 has come into force and will replace the Identification of Prisoners Act, 1920. It authorises police officers to take measurements of people convicted, arrested or facing trial in criminal cases.

GS CONNECT											
GS	1	2	3	4	5	6	7	8	9	10	11
I											
II											
III											
IV											
M											

Pre-Connect

- Code of Criminal Procedure (CrPC), 1973 is the primary legislation regarding the procedural aspects of criminal law.
- Section 53 or 53A of the CrPC allows police to collect data.
- In *State of UP vs Ram Babu Misra* case SC called for amendment for the CrPC and expand the scope of measurement.
- Law commission also called for several amendment in the CrPC act and asserted that there is a need to recognise more kinds of "measurements" that can be used by law enforcement agencies for investigation.
- Criminal Procedure (Identification) Act, 2022 will now act as a Legal sanction to the police to take physical and biological samples of convicts as well as those accused of crimes.

Identification of Prisoners Act-1920	Criminal Procedure Identification Act-2022
Measurement can be taken of <ul style="list-style-type: none"> • Convicted or arrested for an offence with rigorous imprisonment of 1 year or above. • On the order of Magistrate for the purpose of investigation of proceedings under CrPC. However such order might come only when the person was previously arrested for the same offence. • Ordered to give security for his good behaviour under CrPC 	Measurement can be taken of <ul style="list-style-type: none"> • Convicted for an offence punishable under any law • If detained under Preventive detention law. • On the order of Magistrate for the purpose of investigation of proceedings under CrPC. No requirement for previous offence. • Ordered to give security for his good behaviour under CrPC
Measurements allowed under the act <ul style="list-style-type: none"> • Finger Impression • Foot Impression • Measurement • Photographs 	Measurements allowed under the act <ul style="list-style-type: none"> • Finger Impression, Palm Print, Foot Print • Photograph: IRIS and Retina Scan and Biological sample • Hand writing and signature Behavioural attitude
Destruction of Measurement <ul style="list-style-type: none"> • In case of acquittal, discharge and release, if not previously Convicted or arrested for an offence with rigorous imprisonment of 1 year or above. 	Destruction of Measurement <ul style="list-style-type: none"> • In case of acquittal, discharge and release, if not previously Convicted or arrested for an offence with rigorous imprisonment of 1 year or above. For convicts records to be destroyed after 75 years of collection

Significance of Act

- It will make criminal data collection more tech savvy and capture appropriate body measurements.
- It will help the investigating agencies to gather sufficient legally admissible evidence and establish the crime of the accused person.
- It will make the investigation of crime more efficient and expeditious and will also help in increasing the conviction rate.

Issues

- ✓ **Right to bodily integrity and individual autonomy**
 - Section 6(1) of the act allows for forcible collection of measurement data. Therefore, it violates an individual's right against self-incrimination under **Article 20(3)** of the Constitution. Any coercive criminalisation of an individual is perpetuated without any consequences for the authorities, it robs the individual of a free and fair trial. Violating SC decree **in Selvi versus State of Karnataka (2010)**.
- ✓ **Administrative discretion or overreach**
 - Violating principles of Natural justice, it allows Magistrate to call order for the collection of personal data without providing any reason. It is a direct contravention of **Article 14** of the Constitution, which gives a person right against arbitrary and unreasonable State action.
- ✓ **Right to privacy: information or dissemination of public data**
 - In **Justice K.S. Puttaswamy (Retd.) versus Union of India** (2017), SC declared the right to privacy as a fundamental right under Article 21.
 - The Act collects plethora of personal data for 75 years under the guardianship of NCRB without a proper mechanism to regulate such vast public data.
- ✓ Under Section 4- Even for a person who has no previous record of conviction and is released without trial or has been discharged or acquitted by the court, destruction of personal data will be on the discretion of the Magistrate or court.
- ✓ It even violates the three-fold test upheld by the Supreme Court in **Jacob Puliyl versus Union of India**.
- ✓ the collection and analysis of such data borders on executive arbitrariness, when an individual's will to not share such data is explicitly criminalised. In fact, storing of such data has no reasonable justification, making it disproportional to the larger context of justice.
- ✓ Collection can also result in mass surveillance, with the database under this law being combined with other databases such as those of the Crime and Criminal Tracking Network and Systems (CCTNS).
- ✓ **Pre-conceived bias against individuals.**
 - Preventive detention laws work at the whims and fancies of the executive in India. Under preventive detention law, a detainee is already alienated from a free and fair process.
 - The Act further impinges on a person's right against self-incrimination, makes them even more vulnerable under the present process.
- ✓ **Other issues**
 - Since detainees lack awareness, it may be easy for the police to ignore their refusal rights under the act and later claim that they did get the detainee's consent.
 - It has provisions to collect samples even from protestors engaged in political protests. Therefore, a loophole which be misused to serve political vendetta.

PEPPER IT WITH

Right to Privacy, Criminal Justice Reforms.

Way Forward

- Strong data protection law that provides can stringent punishment for breaches, can help in addressing privacy issues.
- It is also important to provide law enforcement agencies with the latest technologies given the evolving nature of crime. Hence adding scrutiny measure can ensure no misuse of the law.
- There is also need to expand infrastructure capabilities in crime detection such as more experts to collect measurements from the scene of crime, more forensic labs, and equipment to analyse them to identify possible accused involved in a criminal case.

Issues with Parliamentary Privileges- As political protest over alleged misuse of central agencies intensified Vice President of India asserted that Members of Parliament must not remain under the assumptions that the parliamentary privileges will protect them from investigating agencies.

Defined under **Article 105** of the Indian constitution. Parliamentary Privileges are special rights immunities and exemptions enjoyed by MPs. These are available as long as person remains as MP. These exemptions are for civil liability and not for criminal liability.

Parliamentary Privileges are not codified they are rather based on:

- Provisions of Constitution
- Laws made by Parliament
- Parliament Conventions
- Rules made by respective parliament houses
- Judicial decrees

Opinions of Experts

- Alladi Krishnaswamy Ayyar and Dr BR Ambedkar opined that reliance on House of Commons culture for parliamentary privileges is a temporary measure till the Parliament/State legislature makes a law.
- Constitutional law expert, DD Basu argued on the need for legislation defining parliamentary privileges. He argued that there is no reason to hold that the power to legislate was conferred never to be exercised, for no provision of a Constitution is to be taken as superfluous or nugatory

Supreme Court Observation

- Justices DY Chandrachud and MR Shah rightly observed, "To claim exemptions (by legislators) from the application of criminal law would be to betray the trust which is impressed on the character of the elected representatives as the makers and enactors of the law."
- In State of Kerala Vs. K. Ajith and Others SC opined that privileges are not gateway to claim exemptions from the general law of the land. Those who indulge in vandalism and general mayhem cannot claim parliamentary privilege and immunity from criminal prosecution.

Moving Forward

- Parliamentary privileges must be in conformity with fundamental rights and MPs work for welfare of people. Hence any deviation will damage the very essence of the democracy and rights of citizens will be affected.
- There is need to codify the privileges so that members know their limit clearly and use their privilege wisely and not misuse them.



Freedom of Speech in Parliament

- It is different from what provided under **Article 19(2)** it is provided under **Article 105 (1)** and subject to rules and orders which regulate the proceedings of the parliament (**Article 118**).
- Under **Article 121** MPs are restricted from discussing the conduct of the judges of the Supreme Court and the High Court.



Freedom from Arrest

- In case of civil case, MPs cannot be arrested 40 days before and after the adjournment of the house and also when the house is in session. (Provided in Section 135A of the Civil Procedure Code, 1908.)
- Within the limit of the Parliament MPs cannot be arrested. For detention permission from presiding officer is compulsory.
- Outside the parliament, member can be arrested under Preventive detention Act, National Security Act among others.



Right to Prohibit the Publication of Proceedings

- Under **Article 105(2)** If an MP authorizes then no person can be held liable for publishing any reports, discussion etc.
- This is being done to make public aware of the proceedings in the Parliament.



Right to Exclude Strangers

- The members of the house have the power and right to exclude strangers who are not members of the house from the proceedings. This right is very essential for securing free and fair discussion in the house.

SUSPENSION OF MEMBER OF PARLIAMENT (MP)

Causes of Disruption

- Paucity of time available for MPs to raise issues.
- For Political and publicity reason.
- Retaliatory postures of treasury benches along with government unresponsiveness.
- Immediate actions is often not taken against member who interrupt proceedings.

Terms of Suspension

Suspended member loses right to enter chamber or meetings of committee.

Suspended member cannot give notice for discussion.

Suspended member cannot get a reply to his questions.

Suspended member can be suspended for maximum of the remainder of the session.

Rules of Procedure and Conduct:

Rule 374A: Speaker, In case found member in gross violation can suspend member of the house for five consecutive sittings or the remainder of the session, whichever is less.

Rule 373: Speaker directs the member to withdraw immediately and member had to do it forthwith and will remain absent during the remainder of the day's sitting.

Rule 255 (Rajya Sabha): Chairman suspend any member whose conduct in his opinion was not right or was disorderly.

Rule 374: Speaker can suspend a member for a period not exceeding the remainder of the session if member abuses the rules of the house willfully.

Rule 256 (Rajya Sabha): Chairman can suspend a member from the service of the Council for a period not exceeding the remainder of the Session.

Unparliamentary Words

Rules for Declaration of unparliamentary words

- Its up to presiding officer of the house to decide which words are unparliamentary. They keep out such words from the parliament records (under rule 380 and 381 of Procedure and Conduct of Business in Lok Sabha)
- Presiding officer uses references from various sources from debates of pre-independence assemblies. Commonwealth parliaments and previous Lok Sabha and Rajya Sabha.
- In 2009 Lok Sabha secretariat bought a book called unparliamentary expressions.
- Though MPs are not liable to any proceedings in any court in respect of anything said or any vote given by him in Parliament (Article 105) Nevertheless they are bound by the discipline of the Rules of Parliament.

Procedure of preparation of list

- Whenever a MP uses an indecent word which might be considered unparliamentary, Reporting section sends it to presiding officer with a recommendation to expunge them citing rules.
- Then a compiled list of such words are sent to presiding officer office and Sansad TV and the editorial service for information.
- From the editorial service a list prepared of all these expressions made in Parliament, to be released as the new addition to the existing list.

SOCIAL ISSUES SOCIAL ISSUES, GOVERNMENT SCHEMES, REPORT

National Intellectual Property Awareness Mission (NIPAM)

News Excerpt

National Intellectual Property Awareness Mission (NIPAM) has achieved target of imparting Intellectual Property (IP) awareness and basic training to 1 million students on 31st July 2022, ahead of the deadline which was 15 August 2022.

GS CONNECT										
GS	1	2	3	4	5	6	7	8	9	10
I										
II										
III										
IV										
M										

Pre- Connect:

- NIPAM, a flagship program to impart IP awareness and basic training, was launched on 8 Dec 2021 as a part of "Azadi Ka Amrit Mahotsav" celebrations.
- The program is being implemented by Intellectual Property Office, the Office of Controller General of Patents, Designs and Trade Marks (CGPDTM), **DPIIT** (Department for Promotion of Industry and Internal Trade) **Ministry of Commerce and Industry**.

About Intellectual Property Rights (IPR):

- Intellectual Property Rights are legal rights governing the use of creations of the human mind.
- These legal rights are given to the person who invented / created something new and different which had not been done before.
- The legal rights are given to the person for a period of time or his delegate to make full use of that particular idea. The recognition and protection of these rights is of recent origin.
- These rights are outlined in Article 27 of the Universal Declaration of Human Rights, which provides for the right to benefit from the protection of moral and material interests resulting from authorship of scientific, literary or artistic productions.
- India is also a member of World Intellectual Property Organization (WIPO), a body responsible for the promotion of the protection of intellectual property rights throughout the world.
- The importance of intellectual property was first recognized in the Paris Convention for the Protection of Industrial Property (1883) and the Berne Convention for the Protection of Literary and Artistic Works (1886). Both treaties are administered by the World Intellectual Property Organization (WIPO).

Intellectual property rights in India

- ❖ **Copyright** - Grants the protection of written or published works such as books, songs, films web content, and other artworks.
- ❖ **Patents** - The patent rights protect an invention, new business product, or the process.
- ❖ **Design** - Getting a design registration protects the design such as a drawing, color, pattern, or combination of designs.
- ❖ **Trademarks** - A trademark protects signs, symbols, logos, words, or sounds that distinguish between the products and services from the competitors.

Benefits of Intellectual property rights:

- ✓ Enhances the market value of your business
- ✓ Turn ideas and thoughts into profit-making assets
- ✓ Market your products and services

About TRIPS (Trade-Related Aspects of Intellectual Property Rights)

- ❖ The WTO Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) is the most comprehensive multilateral agreement on intellectual property (IP).
- ❖ It plays a central role in facilitating trade in knowledge and creativity, in resolving trade disputes over IP, and in assuring WTO members the latitude to achieve their domestic policy objectives.
- ❖ It frames the IP system in terms of innovation, technology transfer and public welfare.

- ✓ Access or raise finance for the business: Through the sale, licensing, or by using as collateral for debt financing an individual can monetize for debt Financing
- ✓ **Enhance the export opportunities of the business:** The intellectual property rights in India can also help in increasing the competitiveness in the markets.

Issues associated with IPR:

- **Patent Evergreening Prevention:** It is so that any person / company cannot patent by making minor changes to something forever. **Section 3(d)** in the Indian Patent Act 1970, is one of the biggest issues with the Intellectual Property Right which prevents evergreening of patents.
- **Subsidies and IPR:** The subsidies provided to people specially to farmers to decrease their financial strain. A big number of subsidies is food, subsidy, education subsidy, fertilizer subsidy etc. The Government of India should make a balance between giving Intellectual Property Rights and giving subsidies.
- **The Product Patent Process:** The problem lies that the patent is given for the process via which one makes the product rather than the product which reduces monopoly in the market. India is a part of Trade-Related Aspects of Intellectual Property Rights (TRIPS) agreement, this agreement needs that all members should change their patent regime from giving patent to process to giving patent to the product.
- India continues to remain on the **United States Trade Representative's (USTR's) 'Priority Watch List'** for alleged violations of intellectual property rights (IPR).
 - In its latest **Special 301** report released by the United States Trade Representative (USTR), the US termed India as "one of the world's most challenging major economies" with respect to protection and enforcement of IP.
- **Protecting Traditional Knowledge:** The Indian government has to protect the traditional knowledge by not allowing MNCs to take over the patents, to increase make in India and to not lose the employment of Indians. The government has specially made a Traditional Knowledge Digital Library (TKDL) to prevent patenting on traditional knowledge.
- **Enforcement of the Copyright act** is weak, and piracy of copyrighted materials is widespread.

Laws governing IPR in India:

- ❖ Trade Marks Act, 1999
- ❖ The Patents Act, 1970 (amended in 2005)
- ❖ The Copyright Act, 1957
- ❖ The Designs Act, 2000
- ❖ The Geographical Indication of Goods (Registration and Protection) Act, 1999
- ❖ The Protection of Plant Varieties and Farmers Rights Act, 2001
- ❖ The Information Technology Act, 2000

Government initiatives:

- ✚ **Indian Patent Act 1970:** This principal law for patenting system in India came into force in the year 1972. It replaced the Indian Patents and Designs Act 1911. The Act was amended by the Patents (Amendment) Act, 2005, wherein product patent was extended to all fields of technology including food, drugs, chemicals and microorganisms.
- ✚ **National Intellectual Property Rights (IPR) Policy:** The impact of IPR in India has led the government to take steps to enhance the IPR regime in the country. In 2016, it approved the National Intellectual Property Rights (IPR) Policy, which will lay the future roadmap for intellectual property in India. It aims to increase awareness, stimulate the creation of IPRs, ensure strong and effective IPR laws, redressal and modernization of IPR administration, among other things.

Way forward

For a long time, the level of IPR protection was very low in India. Copying, plagiarism, piracy and other IPR violations were rampant, causing huge losses to IPR owners. Protecting IPRs can be a tough proposition in India, where awareness is low and enforcement weak. But protecting patents, trademarks and copyrights are vital for innovation and development. However, even with rapid progress on the industrial, scientific and economic front, we lag behind countries like China. Good IPR protection will foster a culture of creativity and innovation that could help us close that soon.

Gender Gaps in Food

News Excerpt:

A humanitarian organization has found the gap between men and women's food security is growing worldwide. As many as 828 million people were affected by hunger in 2021. Among them, 150 million more women were food insecure than men.

GS CONNECT											
GS	1	2	3	4	5	6	7	8	9	10	11
I											
II											
III											
IV											
M											

Pre-connect:

- India accounted for 22% of the global burden of food insecurity, the highest for any country, in 2017-19. These estimates show that while 27.8% of India's population suffered from moderate or severe food insecurity in 2014-16, the proportion rose to 31.6% in 2017-19.
- The number of food insecure people grew from 42.65 crore in 2014-16 to 48.86 crore in 2017-19.

Gender inequality and food insecurity:

- A **CARE report** has highlighted a global link between gender inequality and food insecurity. It found that food security went down as gender inequality increased across 109 countries.
- Gender equality is highly connected to food and nutrition security at a local, national, and global level. To put it simply, the more gender inequality there is in a country, the hungrier and more malnourished people are.
- Even when both men and women are technically food insecure, women often bear bigger burdens.
- In Somalia, men report eating smaller meals and women report skipping meals altogether.
- Nations with high gender inequality, such as Yemen, Sierra Leone and Chad, experienced the lowest food security and nutrition.
- Women are also more likely than men to live in extreme poverty. This happens because women's work is underpaid or not paid at all. Even before the COVID-19 pandemic, women took on three times as much unpaid work as men.

Reasons for the existing Food insecurity in India:

- ✓ In rural and tribal areas, food insecurity is mainly due to lack of improvement in agricultural productivity owing to inadequate resources and markets needed to obtain agricultural stability. Lack of education and job opportunities in rural areas have further added to the problems.

State of malnutrition in the country

- ❖ According to findings of the 2019-21 National Family Health Survey (NFHS-5), nutrition indicators for children under 5 have improved over NFHS-4 (2015-16).
- ❖ Stunting has reduced from 38.4% to 35.5%, wasting from 21.0% to 19.3% and underweight prevalence is down from 35.8% to 32.1%.
- ❖ Women (15-49 years) whose BMI is below normal has reduced from 22.9% in NFHS-4 to 18.7% in NFHS-5.
- ❖ Despite the decrease, nutrition experts have said that India has one of the highest burdens of malnutrition in the world.

State wise performance:

- ❖ Meghalaya has the highest number of stunted children (46.5%), followed by Bihar (42.9%).
- ❖ Puducherry and Sikkim have the lowest percentage of stunted children.
- ❖ Maharashtra has 25.6% wasted children (weight for height) — the highest — followed by Gujarat (25.1%).
- ❖ Bihar has the highest number of underweight children (41%), followed by Gujarat (39.7%), and Jharkhand at (39.4%).
- ❖ Jharkhand has the highest percentage of women, between 15 and 49 years, who have a below-normal Body Mass Index (BMI).
- ❖ Bihar, Chhattisgarh, Gujarat, Madhya Pradesh, Maharashtra and Odisha also have high percentages of undernourished women.

- ✓ Climate change too, has an impact on the agricultural productivity, which affects the availability of food items and thus, food security. Major impact of climate change is on rain fed crops, other than rice and wheat.
- ✓ The key issue which catalyzes the problem of food insecurity in urban areas and needs to be addressed is the large proportion of informal workforce resulting in unplanned growth of slums which lack in the basic health and hygiene facilities.
- ✓ Inadequate distribution of food through public distribution mechanisms. Besides this, low quality of grains and the poor service at PDS shops has further added to the problem.
- ✓ Unmonitored nutrition programmes: Although a number of programmes with improving nutrition as their main component are planned in the country but these are not properly implemented. For instance, a number of states have yet to introduce the Mid Day Meal Scheme (MDMS).
- ✓ Lack of coherent food and nutrition policies along with the absence of intersectoral coordination between various ministries of government such as Ministry of Women and Child Health, Ministry of Health and Family Welfare, Ministry of Agriculture, Ministry of Finance etc have added to the problem.

Initiatives taken by Government to ensure food security:

- The National Food Security Act, 2013 which covers upto 75% of the rural population and upto 50% of the urban population for receiving subsidized food grains under Targeted Public Distribution System (TPDS), thus covering about two-thirds of the population.
- Nutrition Security is being addressed through the National cooked Mid-day Meal Programme, Integrated Child Development Services (ICDS) Scheme, Kishori Shakti Yojana, Nutrition programme for Adolescent Girls and Pradhan Mantri Gramodaya Yojana.
- National Food Security Mission (NFSM) was launched in 2007-08 to increase the production of rice, wheat and pulses through area expansion and productivity enhancement; restoring soil fertility and productivity; creating employment opportunities; and enhancing farm level economy.
- Pradhan Mantri Fasal Bima Yojna provides crop insurance against failure of the crop.

Achieving Sustainable Development goals through women empowerment:

- ✚ All the SDGs depend on the achievement of **Goal 5: Achieve gender equality and empower all women and girls**. Gender equality by 2030 requires urgent action to eliminate the many root causes of discrimination that still curtail women's rights in private and public spheres.

Analytica

The lack of collection and incorporation of sex-disaggregated data on global food security datasets leads global policymakers to overlook gender equality in food security solutions. As women keep feeding the world, we must give them the right space in our data collection methods and analysis to make the gaps they encounter visible and work with women themselves to find solutions to those gaps. Global datasets should be publishing sex disaggregated data on food—whether the focus is on gender or on food.

Way forward:

It is time to update our global understanding of food security and gender inequality, and, local actors, including women's organizations in crisis-affected communities, need to get the flexible funding and support desperately needed to protect women and girls from hunger-associated gender-based-violence and protection risks.

Digital gap in Government schools

News Excerpts:

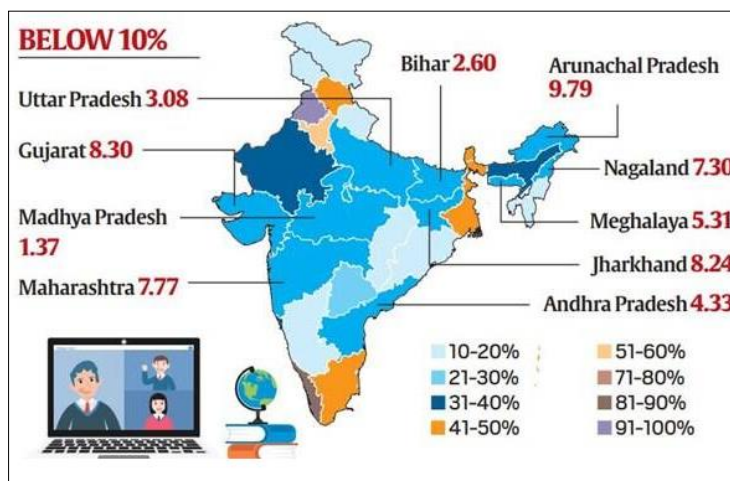
In at least 10 states in India, less than 10 per cent of schools are equipped with Information and Communication Technology (ICT) tools, according to data tabled by the government in the Lok Sabha.

GS CONNECT											
GS	1	2	3	4	5	6	7	8	9	10	11
I											
II											
III											
IV											
V											

Digital divide in education

Our analysis of the digital divide in education threw up a three-dimensional problem with sub-segments of all types.

- **The first dimensional gap** is between those who have access to hardware, network, software, authentic information, etc and those who don't. Let's call it the Accessibility divide. Bureaucracy, corruption, tech support, and infrastructure are some of the causes.
- **The second dimension** is the gap between generations – that is, between teachers and parents vs. students. Call this the Generational divide. Parents are wary of giving devices to kids because of misuse. They also don't know how to guide in the effective use of the digital media. Teachers are hesitant to change their pedagogy for fear of losing their relevance. As such they struggle to complete the syllabus in time.
- **The third dimension**, call it the Behavioural divide, is the gap between those who can learn on their own, with or without social setting, vs. those who can't. Many women, girls, minorities and migrants shun digital access for learning because it is either too boring to learn on their own or too antisocial. Many are incapable of learning on their own. This probably explains why only 2% of the millions who enroll for MOOCs complete the courses.



Initiatives taken to improve the digital divide in education:

- Digital Libraries project: The projects such as million books digital project, which aims to digitize the rare books in the country and make it available to the users freely i.e. keeping it as an open source is a step towards bridging digital divide.
- As a component of the Atma Nirbhar Bharat Abhiyan, PM e-Vidya, a comprehensive project that combines all activities connected to digital, online, and on-air education to offer multi-mode access to education, was launched on May 17, 2020. The project consists of the following elements-
 - DIKSHA, the country's digital infrastructure, provides high-quality e-content for classroom instruction in states and UTs, as well as QR-coded Energized Textbooks for all grades (one nation, one digital platform)
 - Each class from 1 to 12 has one Swayam Prabha TV channel set aside for it (one class, one channel)
 - Extensive use of Radio, Community radio and CBSE Podcast- Shiksha Vani
 - On the NIOS website and YouTube, special e-content for the deaf and hard-of-hearing has been created using the Digitally Accessible Information System (DAISY)

How can we reduce the digital gap further?

- ✓ India, currently, lacks the required infrastructure to teach its students digitally. We need stronger infrastructure to provide uninterrupted Internet connection and electronic devices to students if we are to narrow the digital divide.
- ✓ In remote rural areas and poor urban areas, access can be improved with community technology centres, or as former US President Clinton had done, internet-enable religious places, schools and libraries across the country.

- ✓ Introducing satellite-based access where fibre optic is not yet laid, enable mobile networks, speed-up Google balloons and so on. Lower cost and reasonable speed of access are critical.
- ✓ Schools and governments should assess current and future infrastructure requirements for digital age and bridge the gap.
- ✓ Different states and districts will need different approach not much different from the techno-readiness approach. For instance, Kerala will need to address the behavioural and generational divide instead of the Accessibility one.
- ✓ For correcting the behavioural divide, teachers and parents need to bridge the generational divide partly and mentor students to self-learning. They should also appeal to policy makers to shift the focus from current examination patterns and even push for open book exams.
- ✓ Teachers must be trained in the latest technology, curriculum and the use of digital media in pedagogy.

Way forward:

- We can stop our brain drain by improving our educational standards and it is imperative that the policy makers revamp the education sector “outside-in” and facilitate private sector to build Stanford-like institutions. Granting an eminence status to a handful of favored institutes – and freeing them up from AICTE/UGC/regulatory control – is not a solution. License Raj should be abandoned for all and bring in other certification forms that will promote self-regulation. We need over 50 plus multi-discipline research institutions with world-class standards. They should be allowed to develop their own curriculum, pedagogy and independent evaluations.

The Eleventh Agricultural Census

News Excerpts

The Union Minister for Agriculture and Farmers Welfare has launched the Eleventh Agricultural Census (2021-22) stating that this computation will bring huge benefits in a vast and agricultural country like India.

GS CONNECT											
GS	1	2	3	4	5	6	7	8	9	10	11
I											
II											
III											
IV											
M											

About 11th agricultural census

- This is the first time that data collection for the agricultural census will be conducted on smart phones and tablets so that data is available in time.
- Most of the States have digitized their land records and surveys, which will further accelerate the collection of agricultural census data.
- The use of digitized land records and the use of mobile apps for data collection will enable the creation of a database of operational holdings in the country.
- Thus, it will bring a major thrust towards **digital agriculture in India**.

Digital Agriculture

Digital technologies, such as artificial intelligence (AI) and machine learning (ML), remote sensing, big data, block chain and IoT, are transforming agricultural value chains and modernizing operations.

Initiatives taken to promote digital agriculture-

- **Digital Agriculture Mission 2021-2025:** Government signed five memorandum of understandings (MoUs) with CISCO, Ninjacart,

About Agricultural Census:

- ❖ The ministry is implementing an agriculture census scheme from **1970-71**.
- ❖ Conducted every 5 years, which is being undertaken now after delay due to corona pandemic.
- ❖ The **tenth edition** of the census was conducted with the reference year 2015-16.
- ❖ The agricultural census is the main **source of information** on a variety of parameters, such as the number and area of operational holdings, their size, class-wise distribution, land use, tenancy and cropping pattern, etc.
- ❖ The fieldwork of the Eleventh Agricultural Census (2021-22) will start in August 2022

Jio Platforms Limited, ITC Limited and NCDEX e-Markets Limited (NeML), to forward digital agriculture through pilot projects.

- **The Jio Agri (JioKrishi) platform:** launched in February 2020, digitises the agricultural ecosystem along the entire value chain to empower farmers.
- **National Agriculture Market (eNAM):** - pan-India electronic trading portal that links the existing Agricultural Produce Market Committee (APMC) mandis, to create a unified national market for agricultural commodities.
- **Direct Benefit Transfer (DBT) Central Agri Portal:-** Launched in January 2013, the DBT Agri Portal is a unified central portal for agricultural schemes across the country. The portal helps farmers adopt modern farm machineries through government subsidies
- **Unified Farmer Service Platform (UFSP):** UFSP is a combination of **Core Infrastructure, Data, Applications and Tools** that enable **seamless interoperability** of various public and private IT systems in the agriculture ecosystem across the country.
- **Other Digital Initiatives:**
 - Kisan Call Centres
 - Kisan Suvidha App
 - Agri Market App
 - Soil Health Card (SHC) Portal

Analytica:

- ✓ The government is focusing on increasing farmers' income. Besides, there is a need to change their standard of living, organize small farmers in order to empower them, attract them towards remunerative crops and ensure the quality of the produce at par with global standards. This is the time to make full use of technology in this computation.

UN Guidelines: Climate change and Displaced Children

News Excerpt

United Nations-backed agencies have issued guidelines to provide the first-ever global policy framework to protect children displaced due to climate change.

Pre-Connect

There is currently no global policy framework for addressing the needs and rights of children moving in the context of climate change. Where child-related migration policies do exist, they do not consider climate and environmental factors, and where climate change policies exist they usually overlook children's needs.

The Guiding Principles for Children on the Move in the Context of Climate Change

- It contains a set of nine principles that address the unique vulnerabilities of children who have been uprooted.
- The guidelines cover both internal as well cross-border migrations.
- The new guidelines aim to protect and empower children forced to flee their homes due to climate-related emergencies.
- The guiding principles provide national and local governments, international organisations, and civil society groups with a foundation to build policies that protect children's rights.

GS CONNECT											
GS	1	2	3	4	5	6	7	8	9	10	11
I											
II											
III											
IV											
M											

UN data on global migration:

- ❖ Nearly 10 million children were displaced following weather-related shocks in 2020 alone, according to UN reports.
- ❖ Nearly 5 million people in India internally displaced due to climate change, disasters in 2021: UN
- ❖ The annual Global Trends Report by the UN Refugee Agency (UNHCR) highlighted that globally 100 million people were forced to flee their homes last year due to violence, human rights abuses, food insecurity, the climate crisis, war in Ukraine, and other emergencies from Africa to Afghanistan.
- ❖ The largest displacements in the context of disasters in 2021 occurred in China (6.0 million), the Philippines (5.7 million), and India (4.9 million).

www.ksgindia.com

DELHI: VIJAY NAGAR 9717380832 & OLD RAJENDER NAGAR 9811293743 | JAIPUR: 8290800441 | PATNA: 7463950774 | RANCHI: 9939982007
BENGALURU: KORMANGALA 7619166663 & CHANDRA LAYOUT 7619136662 | BHOPAL: 7509975361 | INDORE: 7314977441 | IMPHAL: 9650245599
t.me/ksgindia | facebook.com/khanstudygroup | youtube.com/khanstudygroupksg | Instagram.com/khanstudygroup | WhatsApp 9868005599

1. Guarantee the rights of children on move in context of climate change
2. Best interests of the child
3. Be accountable to children for climate action
4. Involve children on the move in the context of climate change in decisions affecting them
5. Safeguard family unity for the children
6. Protect children from harm throughout their journey
7. Access to education, health care and social services
8. Ensure freedom from discrimination
9. Guarantee a right to nationality to the children on the move in context of climate change

Impact of climate change migration:

- **Forced migration and development:**
 - Forced migration hinders development in at least four ways; by increasing pressure on urban infrastructure and services, undermining economic growth, increasing the risk of conflict and leading to worse health, educational and social indicators among migrants themselves.
- **The urban flood:**
 - Increasing food and water scarcity due to climate change in rural areas will accelerate the dramatic rural-urban drift in the developing world. Urban areas offer access to the cash economy and can make it easier to provide services, leading to rapid and unplanned urbanization.
 - High population densities and high contact rates help to spread disease, while health and education services are often inadequate. In India, for example, unplanned urbanization has been associated with the spread of dengue fever.
- **Hollowed economies:**
 - Mass migration disrupts production systems and undermines domestic markets. In addition, the loss of “human capital” in the form of the labour force and investment in education undermines economic growth.
 - The “brain drain” effect from developing countries is already a serious problem. Climate change could accelerate the brain drain as it is typically those with larger reserves of financial and social capital who are able to move away.
- **Political instability and ethnic conflict:**
 - Large-scale population displacement will redraw the ethnic map of many countries, bringing previously separate groups into close proximity with each other and in competition for the same resources.
 - Large population movements are already recognized by the UN Security Council as constituting a potential threat to international peace and security, particularly if there are existing ethnic and social tensions.
- **Health impacts and welfare of forced migrants:**
 - Population displacement undermines the provision of medical care and vaccination programmes; making infectious diseases harder to deal with and more deadly. Forced migration in response to climate stresses can also spread epidemic disease.

Policy responses

- ✓ **Heads in the sand:** Despite the serious development implications of large-scale forced climate migration international capacity and interest in dealing with it is limited.
- ✓ Bold speeches and elaborate commitments to the pursuit of noble goals like refugee rights, environmental protection and sustainable development typically fall prey to narrow geopolitical interests when the time for action comes.

- ✓ The result is that forced climate migrants fall through the cracks of international refugee and immigration policy. There is no “home” for forced climate migrants, either literally or figuratively.

Conclusion:

- Environmental, economic and political degradation are connected – though the categories are permeable. Anthropogenic climate change exacerbates existing environmental, economic and social vulnerabilities. It follows that adaptation to climate change has to be broader than tackling the marginal increased impact of anthropogenic climate change.
- There is a need for international recognition of the problem, a better understanding of its dimensions and a willingness to tackle it. This should take several forms-
 1. The international community needs to acknowledge formally the predicament of forced climate migrants.
 2. Development and adaptation policies in potential source countries of forced climate migrants need to focus on reducing people’s vulnerability to climate change, moving people away from marginal areas and supporting livelihoods that are more resilient. In particular more efficient use of existing resources would offset some of the predicted impacts of climate change.
- The international regulation of labour migration, adaptation to climate change and capacity building in vulnerable countries are inherently intertwined. Migration will be used by some households in vulnerable countries as a means of adapting to climate change. Clearly there has to be a balance of policies that promotes the incentives for workers to stay in their home countries whilst not closing the door of international labour mobility.

Natural Resource Accounting (NRA)

News Excerpt:

Recently, the Comptroller and Auditor General of India has stated to release a report on Natural Resource Accounting (NRA).

Pre-connect:

Conventional accounting captures data only of the measurable economic activity and doesn’t weigh environmental inputs. NRA intends to interplay between the natural environment and the economy.

About the Natural Resource Accounting:

Natural resource accounting refers to the method of calculating the monetary value of natural assets whose environmental degradation and depletion are triggered by economic activities. It is based on the idea that measurement of a resource leads to better management of that resource.

- **Interrelation between economy and environment**- Quantifies the non- renewal damage to the environmental resources and assists in determination of development in real terms.
- **Aid to policy framing** –sound database – to help policy makers to understand the potential impact of their decisions
- **Managing SDGs** - four of 17 goals **directly** related to sustainability of natural resources
- **Combating Climate change** – Asset and flow accounts have been recognized as a useful framework for monitoring, measuring and analyzing climate change.
- **International commitments** :SDGs

International efforts to implement NRA:

- Recognising the importance of Natural Resources, there was an attempt to develop accounting systems to help monitor their responsible utilisation, which will in turn lead to sustainability.

GS CONNECT										
GS	1	2	3	4	5	6	7	8	9	10
I										
II										
III										
IV										
M										

- The need for NRA was first identified at the 1970 Stockholm Conference of the United Nations (UN) when the relationship between economic development and environmental degradation was addressed for the first time.
- The Brundtland Commission articulated the idea of a close relationship between the environment and economic activities in 1987, which was followed by environmental accounting and the Rio de Janeiro Earth Summit in 1992.
- The UN has adopted (2012) the System of Economic and Environmental Accounting (SEEA) - Central Framework which is the latest internationally accepted framework, for NRA. NRA has deep inter-linkages with the SDGs as 4 out of the 17 goals directly relate to management of natural resources and their accounting.

Progress made by India so far:

- ✓ Government Accounting Standards Advisory Board (GASAB) was constituted by the CAG of India in 2002 with representation from all accounting services in GoI, regulatory authorities like RBI, ICAI and State Governments on rotation for improving standards of Governmental accounting and financial reporting.
- ✓ CAG of India is a member of an international body of Supreme Audit Institutions, called WGEA (Working Group on Environmental Auditing), which suggested (2010) that the audit institutions should aid their countries to adopt Natural Resources Accounts.
- ✓ GASAB prepared a Concept Paper on NRA in July 2020, inter-alia, envisaging short, medium and long term goals starting from 2020:

CAG: Constitutional mandate under Article 150 to advice on forms of accounts. Section 23 of CAG's DPC Act- Guidelines for general principles for Govt Accounting

GASAB: Mandated to formulate Government Accounting Standards and other pronouncements with a view to improve Governmental accounting and financial reporting

Short term goals	Mid-term goals	Long term goals
<ul style="list-style-type: none"> • Preparation of Asset Accounts on mineral and energy resources in States • Initiation and preparation of disclosure statement on revenues and expenditure related to NRA (2019-20 to 2021-22) 	<ul style="list-style-type: none"> • Preparation of National Asset Accounts on mineral and energy resources • Preparation of Asset Accounts in respect of other three resources namely water, land and forest resources in the States • Preparation of supply and use tables in physical and monetary terms showing flow of natural resource inputs, products and residuals (2022-23 to 2024-25) 	<ul style="list-style-type: none"> • Preparation of the economic accounts highlighting depletion adjusted economic aggregates; and • Preparation of functional accounts recording transactions and other information about economic activities undertaken for environmental purposes. (2025 - 26 onwards)

- ✓ Besides preparing the paper, GASAB and CAG decided to continue its engagement to assist the State Governments in the preparation of Asset Accounts which is the first of the four stages in the preparation of Natural Resource Accounts.

- ✓ NRA Cells in States were also constituted in all 28 States and 2 UTs (Delhi and JK) with unique collaboration of Accountants General (Audit, A&E) and the State Government Departments to steer the project.
- ✓ As on date, all 28 States and 1 UT (J&K) have prepared the Asset Accounts for 2020-21. They are being verified and validated by various stakeholders including the State Governments and our field Offices.
- ✓ To ensure automated collection and compilation of data from 2022-23, GASAB has developed SOPs for guiding the States. Besides the dataflow, the Guidelines and SOPs also suggest recommendations for end-to-end mapping of supply and use of resources which would help the States in mopping up due revenues due from these resources and also plug the leakage and wastage.

NRA: How countries have progressed?

- Different countries have adopted different approach based on their country specific need- flexibility allowed in SEEA.
- Major thrust on mineral and energy resources – non-renewable resources
- Flexibility adopted – country specific needs (selection of resources, incremental processes)
- Bigger countries generating Accounts at national and provincial levels
- Developed countries have reached to the level of generating Green GDP

Challenges Related to Accounting of Natural Resources

- ✚ There is lack of proper training and capacity building among state officers.
- ✚ Limitations in preparing the asset accounts - mapping the periodicity of data.
- ✚ Multiple agencies are involved in data collection for resources; it may give rise to the issues of data sharing/data conflict.

Way Forward:

To handle operational issues close co-ordination between the State and the Government Departments is required. State Government may support with required data/information. Close monitoring and supervision from State Governments. Need for installing systems for regular data capture on usage/sale of resources to cross verify extractions and monitor illegal mining.

National e-Governance Service Delivery Assessment

News Excerpt:

The Ministry of Home Affairs (MHA) bagged the first spot under the Central ministries' portal in a national e-governance service delivery assessment (NeSDA) conducted by the Department of Administrative Reforms and Public Grievances (DARPG).

GS CONNECT											
GS	1	2	3	4	5	6	7	8	9	10	11
I											
II											
III											
IV											
M											

Pre-connect:

- NeSDA framework, launched in August 2018, was conceptualized with an overall objective to measure the depth and effectiveness of existing e-Governance service delivery mechanisms. NeSDA is first of its kind initiative in India.
- The first edition - National e-Governance Service Delivery Assessment 2019 was released during 23rd National e-Governance Conference in February 2020 held in Mumbai.

Performance of various states:

- Among the North-East and Hill States, Meghalaya and Nagaland are the leading State Portals with an overall compliance of more than 90% across all assessment parameters.
- Among Union Territories, Jammu & Kashmir ranked the highest with an overall compliance of nearly 90%.
- Among the Remaining States, Kerala, Odisha, Tamil Nadu, Punjab, Karnataka and Uttar Pradesh had a compliance of more than 85%.

- Amongst all the States and UTs, Kerala had the highest overall compliance score.

Ranking of central ministries:

- ✓ Among the focused Central Ministries, Home Affairs, Rural Development, Education, and Environment, Forest & Climate Change are the leading Ministry Portals with an overall compliance of more than 80% across all assessment parameters.
- ✓ The Ministry Portal of Home Affairs had the highest overall compliance score.
- ✓ The Central Public Procurement Portal, Digital Police Portal, and Bhavishya Portal are the leading Ministry Services Portals with an overall compliance of more than 85% across all assessment parameters.

4.3 Key Assessment Parameters

	Accessibility With respect to e-Governance services, accessibility may be defined as the extent to which a user is able to access a portal and its services irrespective of the device in use, technology or ability.
	Content Availability Availability of updated, authentic, relevant and user-friendly information in different/ local languages, which can be easily understood and shared through multiple sources such as portal, email and social media.
	Ease of Use Degree to which a user believes that usage of a system shall be free from effort or difficulty. It includes easy content exploration, findability, task efficiency and automation.
	Information Security & Privacy Relationship between the collection and dissemination of information, technology, citizen expectation of privacy and the legal and regulatory structure that binds it all together.
	End Service Delivery End Service Delivery measures the citizens' satisfaction with faster delivery of end services, elimination of manual processes, reduction of time/ manual effort to obtain a particular service.
	Integrated Service Delivery A sophisticated level of e-Government in which Government services are integrated together and accessible to citizens irrespective of the Government agency or agencies.
	Status and Request Tracking A mechanism through which the citizen can get to know the stage at which his / her service request is at using the unique Service Request Number or Application Number.

Other initiatives taken by Government to promote the use of ICT in service delivery system:

- National e-Governance Plan: (NeGP) is an Indian government plan to make all government services available to the citizens of India via information and communication technology.
- Digital India Program: aim to provide Wi-Fi services to 2.5 lakh schools, Broadband internet connectivity 2.5 lakh villages and a wide range of mobile phone connectivity by 2020. Following are the important aspects of Digital India Program:
 - Digital locker system to minimize usage of physical documents
 - MyGov.in as an online platform to engage citizens in governance through a "discuss, Do and Disseminate" approach
 - Swachh Bharat Mission Mobile app to achieve the goals of this mission
 - E-Sign framework
 - E-Hospital System for important health care services
 - National scholarship Portal for direct benefits to students
 - BSNL's large scale deployment of Wi-Fi hotspots throughout the country
 - Broadband Highways for better service delivery

Merits of ICT enabled Services delivery system:

- ✚ **Information Exchange:** can easily exchange the information with citizens, businesses or other government departments.
- ✚ **Rapid Working:** Information and communication technology based services delivery system is rapid in its working.

- ✚ **Time and cost saving:** ICT enabled services delivery system has a great impact on time and cost saving while delivering the services to the public.
- ✚ **Improving internal controls:** it improves the internal controls of administration while doing the job because of the automation process.
- ✚ **Increasing revenue:** Information and communication technology increase the revenue also because of the automation of the tax collection system which diminish the corruption.
- ✚ **Efficiency and Effectiveness:** It increases the efficiency and effectiveness of the public services delivery system by providing quality services to the stakeholders.

Limitations of ICT enabled Services delivery system:

- > **Privacy and Security:** Prime limitation to enable ICT driven services is the security and privacy of information shared on the web.
- > **Expenditure:** The other important factor affecting the ICT enabled services delivery system particularly in India is the investment in the development of infrastructure of ICT to enable the services.
- > **Digital Divide:** Another major problem in the field of ICT enabled services is the gap between the society which can not use the ICT as services provider and the society which can use the ICT as service provider. It creates a huge digital divide between the educated and educated societies.
- > **Trust:** It is the other important factor that affects this new system very much because the people who are using conventional mode of services they will take time to build up the trust in ICT enabled services.

Learnings from Global Digital Government Trends:

To keep pace with global trends, the following suggestions are made in terms of digital government trends that governments are encouraged to adopt.

- **Integrated Service Delivery:** that allows for collaboration across departments and between levels through institutional arrangements which create a robust system of holistic, synergistic and coordinated delivery of public services. This needs to be supported through political and administrative will.
- **Data Centric e-Government:** Data is increasing in importance as a strategic asset and governments need to adopt a strategic approach to the use of data and technology to strengthen government intelligence, support policy making, service design, and services delivery.
- **Policy Framework for adoption of New Age Technologies:** In order to encourage adoption of new age technologies, the Government needs to provide a policy framework for adopting new technologies in delivery of government services.
- **Continuous Monitoring, Evaluation and Improvement:** Seeking user feedback is essential, but it is equally important to share results and let citizens know they are being heard and their input is guiding meaningful changes.
- **Cyber resilience:** Government websites need to adopt a harmonized set of security policies and technology against the misuse of information, thereby establishing minimum security criteria and accreditation schemes for software applications and systems
- **Future Workforce for Governments:** Every Government's strategy roadmap for a digital government should also incorporate plans for talent retention, knowledge development, overcoming talent shortages and enhancing the delivery of public services. The Government officer of the future should be able to build on people's values and ambitions and drive a culture of people-first governance
- **e-Literacy for Inclusiveness:** While a variety of measures are undertaken, governments must ensure that content and trainings are available in local languages.
- **Service Affordability:** Services such as quality education, health care, energy, and water supply should be made affordable to citizens across all socio-economic levels. Approaches that do not involve the government to bear all the costs should also be explored.

Way forward:

While NeSDA 2021 has provided encouraging findings for the journey of e-Services excellence across India, there continues to be room to improve. Enhance the usability and utility of the portals, which would increase the acceptance and usage of portals among citizens. The recommendations build on the suggestions that had been provided during NeSDA 2019 but are yet to see widespread adoption across the country. In particular, work still needs to be done for embracing new age technologies. Also, more promotional campaigns need to be undertaken for e-Literacy to reduce the digital divide.

SMILE-75 Initiative

News Excerpt

Ministry of Social Justice & Empowerment has identified 75 Municipal Corporations under the SMILE (**Support for Marginalized Individuals for Livelihood and Enterprise**)-75 initiative, in collaboration with NGOs and other stakeholders, that will cover several comprehensive welfare measures for persons who are engaged in the act of begging.

About SMILE Scheme:

- The scheme was formulated by the central government to address the problem of destitution and beggary.
- 'SMILE', includes two sub-schemes – 'Central Sector Scheme for Comprehensive Rehabilitation for Welfare of Transgender Persons' and 'Central Sector Scheme for Comprehensive Rehabilitation of persons engaged in the act of Begging'.
- A total budget of Rs.100 crore is allocated by the Ministry of Social Justice & Empowerment for the SMILE project (2025-26),
- The sub-scheme, 'Central Sector Scheme for Comprehensive Rehabilitation for Welfare of Transgender Persons' includes providing scholarships for transgender students studying in IX and till post-graduation to support them in completing their education.
- It further includes the Housing facility in the form of 'Garima Greh' ensures food, clothing, skill development opportunities, medical support etc. to both the marginalised community.
- The National Portal & Helpline will ensure important information and solutions to them.

Reasons for existence of Begging in India:

- **Economic causes:** Poverty, landlessness, unemployment or underemployment, calamities or famines, and other conditions of destitutions are all forms of economic causes of beggary in the first sense. Destitution is one of the main factors that compel people to beg as they have no sufficient means to support themselves or their families.
- **Religious causes:** In the Indian scenario, beggary is related to religion and culture. Religious destitution is not only tolerated by a large section of Hindus, Muslims, and the Christian population but even supported on religious grounds. Beggary is treated as a tool by fake sanyasis, who find it easy to beget a good amount of money from god-fearing and superstitious masses.
- **Social causes:** The disorganization of social institutions relating to lepers, lunatics, orphans, widows, divorces, infirm and aged, and other socially handicapped categories are because of lack of resources and uncertainty of the policy. This leads to an increased number of beggars.

GS CONNECT											
GS	1	2	3	4	5	6	7	8	9	10	11
I											
II											
III											
IV											
M											

Status of Beggars in India

- ❖ According to the Census 2011, India has 4,13,670 beggars (including 2,21,673 males and 1,91,997 females) and West Bengal tops the list followed by Uttar Pradesh and Bihar.
- ❖ Delhi had the largest number of beggars 2,187 followed by 121 in Chandigarh among the Union Territories.
- ❖ Among the northeastern states in India, Assam tops the list with 22,116 beggars.

- **Biological causes:** Sickness or diseases, physical disability or deformity, mental infirmity, and old age can be characterized as biological causes of beggary.

Begging is a state subject

- ✓ It is significant that begging is a state subject with no central law governing this.
- ✓ Many states and Union Territories used the **Bombay Prevention of Begging Act, 1959** as the basis for their own laws.
- ✓ The Act **defines a “beggar”** as anyone having no visible means of subsistence, and wandering about or remaining in any public place in such condition or manner, as makes it likely that the person doing so exists by soliciting or receiving alms
- ✓ The Bombay Act enables police to arrest individuals without a warrant and also empowers magistrates to detain them (including family) in a detention centre for up to 3 years on the commission of the first “offence”, and up to 10 years upon the second “offence”. Any individual not abiding by the rules is liable for punishment including imprisonment.

Court perspective:

- **The Supreme Court** refused to ban the act of begging and stated that “it is a socio-economic problem, and people are forced to beg to eke out their livelihood due to the absence of education and employment”.
- In decriminalising begging, the court has validated the idea that poverty is a human rights issue. It has emphasised that the denial of the right to life, livelihood and dignity to the poor is a patent violation of fundamental rights that cannot and should not be tolerated in a country governed by rule of law.
- The judgment recognises the Constitution as a transformative document, which seeks to undo legacies of injustice and lift up all individuals and communities to the plane of equal citizenship.
- **The Delhi High Court** has decriminalised beggary by striking down Delhi Prevention of Begging Rules, 1960, formulated under the Bombay Prevention of Begging Act, 1959 as unconstitutional.
- The court has held that the Begging Act violated Article 14 (equality before law) and Article 21 (right to life and personal liberty) of the Constitution.
- The court noted that the definition of begging under the Act was arbitrary.
- It also held that under Article 21 of the Constitution, it was the state’s responsibility to provide the basic necessities for survival (food, clothing, shelter), to all its citizens. Poverty was the result of the state’s inability or unwillingness to discharge these obligations.

Analytica

Beggary is one of the biggest and most crucial social issues of India. The reasons for beggary range right from Poverty to Infirmary. Many would agree that it is also used as a method to scam good Samaritans by adhering to rules of deception to get easy money. It is important to know that Begging has grown across the country by many folds, but as a citizen of this society believe that the correct rehabilitation, reformation and restoration of this evil we can overcome this problem of Beggary.

ECONOMY

Financial Inclusion Index

News Excerpt

According to RBI, India's financial inclusion index for the year ending March 31, 2022 improved to 56.4 from 53.9 in the previous year, with growth seen across all its sub-indices. This shows rapid improvement in the reach of financial services over the past five years.

GS CONNECT											
GS	1	2	3	4	5	6	7	8	9	10	11
I											
II											
III											
IV											
M											

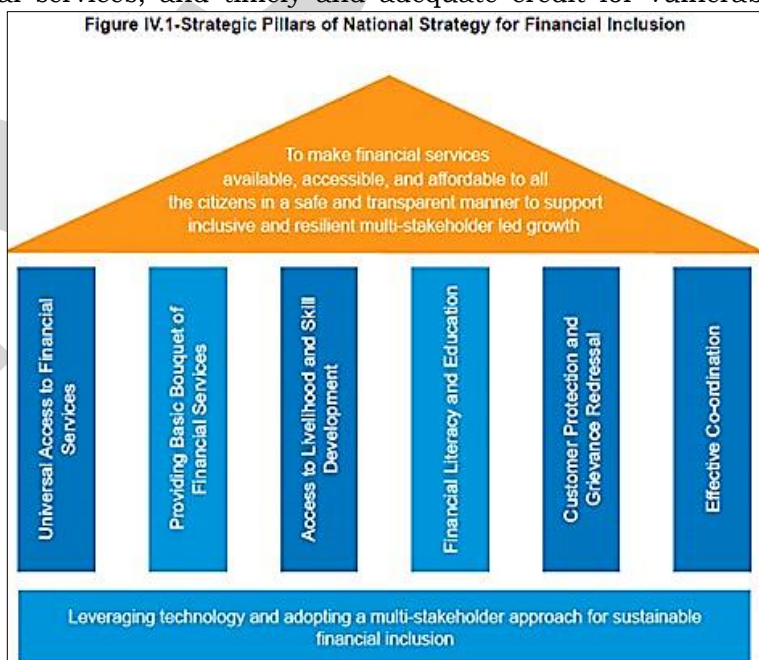
Pre-Connect

- Reserve Bank of India (RBI) launched a Financial Inclusion Index (FI-Index) to track the process of ensuring access to financial services, and timely and adequate credit for vulnerable groups such as weaker sections and low-income groups at an affordable cost.
- The Fi-Index is a comprehensive index, incorporating details of banking, investment, insurance, postal, as well as the pension sector in consultation with government and respective sector regulators.
- Parameters of FI-Index:
 - Access (35 percent)
 - Usage (45 percent)
 - Quality (20 percent)
- A unique feature of the Index is the Quality parameter, which captures the quality aspect of financial inclusion as reflected by financial literacy, consumer protection, and inequalities and deficiencies in services.
- The FI-Index has been constructed without any 'base year' and as such it reflects cumulative efforts of all stakeholders over the years towards financial inclusion.

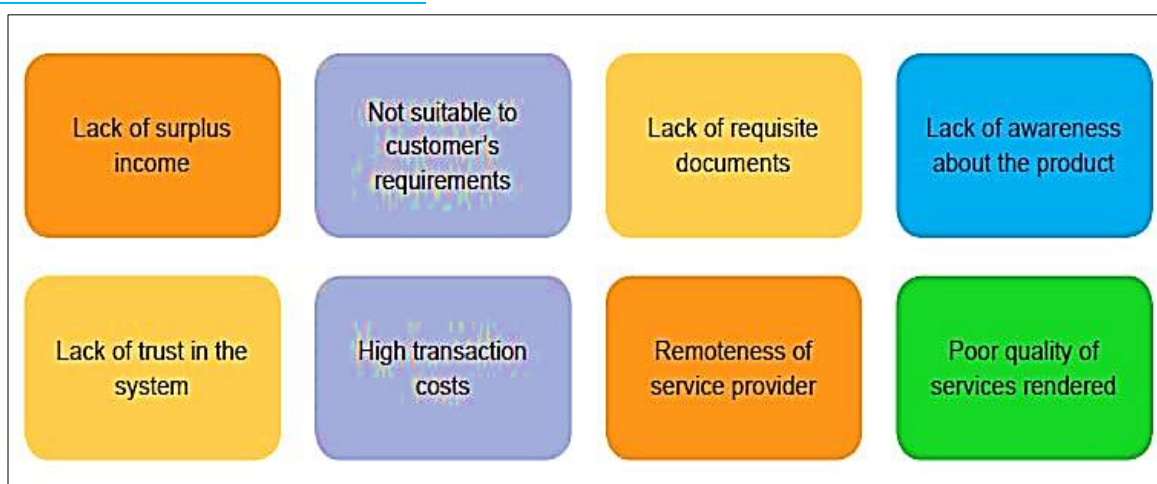
National Strategy for Financial Inclusion 2019-2024

- **What is Financial Inclusion:** The report refers to financial inclusion as the process of ensuring access to financial services, and timely and adequate credit for vulnerable groups and low-income groups at an affordable cost.
- **Importance of Financial Inclusion:** Financial inclusion has a multiplier effect in boosting overall economic output, reducing poverty and income inequality, and in promoting gender equality and women empowerment.
- The Reserve Bank of India (RBI) released the National Strategy for Financial Inclusion 2019-2024.
- It sets forth the vision and objectives of financial inclusion policies in India.
- The strategy was prepared by the RBI with inputs from:
 - The central government and
 - Financial sector regulators (Securities and Exchange Board of India, Insurance Regulatory and Development Authority of India and Pension Fund Regulatory and Development Authority of India).

Figure IV.1-Strategic Pillars of National Strategy for Financial Inclusion



Causes of Financial Exclusion



Steps taken to Improve Financial Inclusion

- ✓ Pradhan Mantri Jan Dhan Yojana (PMJDY)
- ✓ Linking Jan Dhan bank accounts with Aadhaar and mobile numbers
- ✓ Pradhan Mantri Mudra Yojana (PMMY)
- ✓ Pradhan Mantri Jeevan Jyoti Bima Yojana (PMJJBY)
- ✓ Pradhan Mantri Suraksha Bima Yojana (PMSBY)
- ✓ Strengthening of the Unified Payment Interface (UPI) by NPCI
- ✓ Issuing Kisan Credit Cards (KCC)
- ✓ Opening of bank branches in remote areas
- ✓ Linkage of self-help groups (SHGs) with banks

Way Forward

- Greater financial inclusion (FI) is crucial for a wider, inclusive and sustainable growth. According to Governor of RBI, Shaktikanta Das, **"We must continue our efforts for greater financial inclusion in pursuance of the goal of sustainable future for all"**.
- For providing universal access to financial services, while schemes such as PMJDY have created the required banking infrastructure to enable financial inclusion, efforts are required to improve access to insurance and pension services.
- Similarly, for financial literacy and education, specific modules for target audience (children, entrepreneurs, senior citizens) should be developed through the National Centre for Financial Inclusion and centres for financial literacy should be expanded to reach every block in the country.

PEPPER IT WITH

Pradhan Mantri Jan Dhan Yojana, Centre for Financial Literacy (CFL) Project, JAM trinity, NPCI

India's First global bullion exchange

News Excerpt

Prime Minister of India launched India's first international bullion exchange in Gandhinagar. It aims to standardize the gold pricing in India. It further seeks to make it easier for small bullion dealers and jewellers to trade.

GS CONNECT											
GS	1	2	3	4	5	6	7	8	9	10	11
I											
II											
III											
IV											
M											

Pre-Connect:

- India's first international bullion exchange has been launched at Gujarat International Finance Tec-City (GIFT-City), Gujarat.
- India is the world's second biggest consumer of gold.

www.ksgindia.com

DELHI: VIJAY NAGAR 9717380832 & OLD RAJENDER NAGAR 9811293743 | JAIPUR: 8290800441 | PATNA: 7463950774 | RANCHI: 9939982007
BENGALURU: KORMANGALA 7619166663 & CHANDRA LAYOUT 7619136662 | BHOPAL: 7509975361 | INDORE: 7314977441 | IMPHAL: 9650245599
t.me/ksgindia | facebook.com/khanstudygroup | youtube.com/khanstudygroupksg | Instagram.com/khanstudygroup | WhatsApp 9868005599

What is bullion?

- Bullion refers to physical gold and silver of high purity that is often kept in form of bars, ingots or coins.
- Bullions can sometimes be considered as legal tender and is often held as reserves by central banks or held by institutional investors.

India International Bullion Exchange (IIBX)

- ✓ IIBX is India's first International Bullion Exchange set up at the GIFT City.
- ✓ Finance ministry in the 2020 Union Budget announced the setting up of India International Bullion Exchange (IIBX) at International Financial Services Center (IFSC) at GIFT City in Gandhinagar, Gujarat.

Need of IIBX

- The country accounts for 25% of the world's gold demand. But, so far, India has not been a global price setter for the yellow metal
- India's bullion market lacks organization and structure.

Significance of IIBX

- A bullion spot exchange will facilitate efficient price discovery and ensure standardisation, quality assurance and sourcing integrity.
- The broader aim is to set up an exchange on the lines of the Shanghai Gold Exchange and Borsa Istanbul to make India a key regional hub for bullion flows.
- It will allow qualified jewellers to directly import gold, a change from current rules where only some banks and nominated agencies approved by the central bank can do so. It will widen importer base and foster transparency.
- It will lead to standard gold pricing in the country and make it easier for small bullion dealers and jewellers to trade in the precious metal.
- The trade will be in the form of bullion depository receipts denominated in dollars.
- The trades will be exempt from local duties, unless goods are moved outside the city.
- In early stage Gold with high purity will be traded. Later Silver trading will also start.

IFSCA

- ❖ The International Financial Services Centres Authority (IFSCA), headquartered at GIFT City, Gandhinagar Gujarat, has been established under the International Financial Services Centres Authority Act, 2019.
- ❖ It works as a unified authority for the development and regulation of financial products, financial services and financial institutions in the International Financial Services Centre (IFSC) in India. At present, the GIFT IFSC is the maiden international financial services centre in India.

PEPPER IT WITH

GIFT city, NSE IFSC-SGX
Connect, Special Economic
Zone (SEZ)

World Investment Report

News Excerpt

According to UNCTAD World Investment Report (WIR) 2022, India has improved one position to 7th rank among the top 20 host economies for inflow of Foreign Direct Investment in 2021. According to Ministry of Commerce, Singapore and USA have emerged as top 2 sourcing nations in FDI equity flows into India in FY2021-22.

Pre-Connect

- Foreign Direct Investment (FDI) is the investment through capital instruments by a person resident outside India (a) in an unlisted Indian company; or (b) in 10 percent or more of the post issue paid-up equity capital on a fully diluted basis of a listed Indian company.

GS CONNECT											
GS	1	2	3	4	5	6	7	8	9	10	11
I											
II											
III											
IV											
M											

- Foreign direct investment (FDI) is when a company takes controlling ownership in a business entity in another country. With FDI, foreign companies are directly involved with day-to-day operations in the other country. This means they aren't just bringing money with them, but also knowledge, skills and technology.
- India received the highest ever annual FDI inflows of USD 84,835 million in FY 21-22 overtaking last year's FDI by USD 2.87 billion.
- Singapore, United States and Mauritius are the top investing country in India.
- FDI comes under the **Capital account heading of Balance of Payment**.
- India is net receiver of FDI.
- Top 5 sectors receiving highest FDI Equity Inflow during FY 2021-22 are
 - Computer Software & Hardware (24.60%),
 - Services Sector (Fin., Banking, Insurance, Non Fin/Business, Outsourcing, R&D, Courier, Tech. Testing and Analysis, Other) (12.13%),
 - Automobile Industry (11.89%),
 - Trading 7.72% and
 - Construction (Infrastructure) Activities (5.52%).
- Top 5 States receiving highest FDI Equity Inflow during FY 2021-22 are
 - Karnataka (37.55%),
 - Maharashtra (26.26%),
 - Delhi (13.93%),
 - Tamil Nadu (5.10%) and
 - Haryana (4.76%).
- Routes through which India gets FDI
 - Automatic route: The non-resident or Indian company does not require prior nod of the RBI or government of India for FDI.
 - Govt route: The government's approval is mandatory.
 - The company will have to file an application through **Foreign Investment Facilitation Portal**, which facilitates single-window clearance.
 - The application is then forwarded to the respective ministry, which will approve/reject the application in consultation with the Department for Promotion of Industry and Internal Trade (DPIIT), Ministry of Commerce.
- FDI prohibition: There are a few industries where FDI is strictly prohibited under any route. These industries are:
 - Atomic Energy Generation
 - Any Gambling or Betting businesses
 - Lotteries (online, private, government, etc)
 - Investment in Chit Funds
 - Nidhi Company
 - Agricultural or Plantation Activities (although there are many exceptions like horticulture, fisheries, tea plantations, Pisciculture, animal husbandry, etc)
 - Housing and Real Estate (except townships, commercial projects, etc)
 - Trading in TDR's
 - Cigars, Cigarettes, or any related tobacco industry

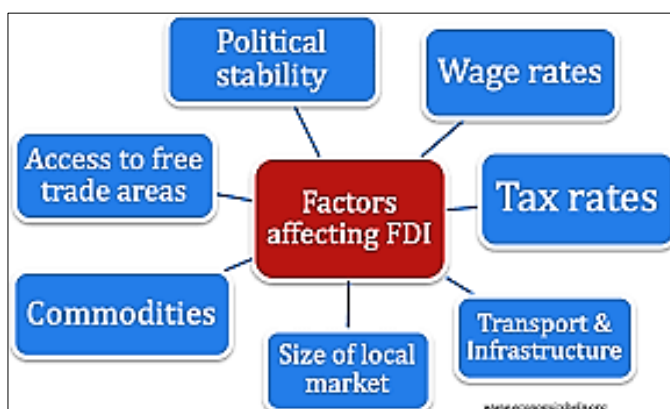
Benefits of Foreign Direct Investment for the host countries

- Economic stimulation
- Development of human capital
- Increase in employment
- Access to management expertise, skills, and technology
- For businesses, most of these benefits are based on cost-cutting and lowering risk. For host countries, the benefits are mainly economic.

Disadvantages of Foreign Direct Investment

Despite many benefits, there are still two main disadvantages to FDI, such as-

- ✓ Profit repatriation: Profit earned in India will be sent back to the source country. The primary concern is that firms will not reinvest profits back into the host country. This leads to large capital outflows from the host country.
- ✓ The entry of large firms, such as Walmart, may displace local businesses. Walmart is often criticized for driving out local businesses that cannot compete with its lower prices.



Government Initiatives

- In recent years, India has become an attractive destination for FDI because of favourable government policies. India has developed various schemes and policies that have helped boost India's FDI.
- Some of the major government initiatives are:
 - Increase in FDI in the defence sector by increasing it to 74% through the automatic route and 100% through the government route.
 - Foreign direct investment (FDI) limit in the insurance sector increased to 74% from 49%.
 - Amended rules of the Foreign Exchange Management Act (FEMA), allowing up to 20% FDI in insurance company LIC through the automatic route.
 - In telecom sector, 100% FDI via the automatic route is allowed, up from the previous 49%.
 - The implementation of measures such as PM Gati Shakti, single window clearance and GIS-mapped land bank will push FDI inflows.
 - International agreements: India and the UK agreed for an investment boost to strengthen bilateral ties for an 'enhanced trade partnership'.

PEPPER IT WITH
Foreign Portfolio Investors,
P-Notes, FEMA, FERA

GST collections

News Excerpt

According to data by the finance ministry, the gross Goods and Services Tax (GST) collections have increased by 28 per cent year-on-year to Rs 1,48,995 crore for July, the second highest level since July 2017 rollout of the indirect tax regime.

GS CONNECT											
GS	1	2	3	4	5	6	7	8	9	10	11
I											
II											
III											
IV											
M											

Pre-Connect

- GST was introduced in India by the Constitution (101st Amendment) Act, 2016.
- The GST is paid by consumers, but it is remitted to the government by the businesses selling the goods and services.

Features of GST

- It is a value-added tax (VAT) levied on most goods and services sold for domestic consumption.
- GST is applicable on 'supply' of goods or services as against the old concept on the manufacture of goods or on sale of goods or on provision of services.
- Multiple slabs to tax different items.

www.ksgindia.com

DELHI: VIJAY NAGAR 9717380832 & OLD RAJENDER NAGAR 9811293743 | JAIPUR: 8290800441 | PATNA: 7463950774 | RANCHI: 9939982007
BENGALURU: KORMANGALA 7619166663 & CHANDRA LAYOUT 7619136662 | BHOPAL: 7509975361 | INDORE: 7314977441 | IMPHAL: 9650245599
t.me/ksgindia | facebook.com/khanstudygroup | youtube.com/khanstudygroupksg | Instagram.com/khanstudygroup | WhatsApp 9868005599

- Destination-based consumption taxation. So, A good produced in Tamil Nadu and Consumed in Delhi will be taxed in Delhi.

Advantages of implementing GST:

- Unified National market.
- Avoided cascading effect of taxation or to eliminated tax on tax.
- Export from India will be more competitive because exports are zero rated.
- Ease of Doing Business because of completely paperless digital interface.

GST Council

- Article 279A of the Constitution provides for GST Council.
- **Recent Supreme Court Decision:**
 - The recommendations of the GST Council were not binding on the central and state governments and they only had a persuasive value.
 - Parliament and state legislatures could equally legislate on GST.

PEPPER IT WITH
Tax buoyancy, MAT,
GST compensation,
CBIC

Reason for jump in GST collection

- ✓ High inflation rate which increased price of items and hence absolute tax on it.
- ✓ Buoyancy in consumption patterns triggered by the economic recovery.
- ✓ Greater enforcement actions against anti-evasion activities.

Conclusion

Seamless implementation of GST is important for both cooperative federalism and fiscal health of the country. Increased revenue will allow the government to take up more capital expenditure and invest more on areas like health and education.

Strengthening of Pharmaceuticals Industries

News excerpt

The Ministry of Chemicals & Fertilisers has launched Schemes for 'Strengthening Pharmaceuticals Industry' (SPI) keeping in view the strategic role of MSMEs.

GS CONNECT											
GS	1	2	3	4	5	6	7	8	9	10	11
I											
II											
III											
IV											
M											

Pre-Connect

- The pharmaceutical industry in India is currently valued at \$41.7 bn. India is a major exporter of Pharmaceuticals, with over 200+ countries served by Indian pharma exports.
- India is the largest exporter of generics (by volume) in the world, accounting for 20% of global export volume.
- India supplies over 50% of Africa's requirement for generics, ~40% of generic demand in the US.
- India is also the largest producer of vaccines in the world and supplies 62% of global demand for vaccines, and is a leading supplier of DPT, BCG and Measles vaccines.
- **Status:**
 - Indian pharma exports witnessed a growth of 103% since 2013-14, from INR 90,415 Crores in 2013-14 to INR 1,83,422 Crores in 2021-22.
 - Exports achieved in 2021-22 is the Pharma Sector's best export performance ever.

About the 'Strengthening Pharmaceuticals Industry' (SPI) scheme

- Strengthening of Pharmaceutical Industry (SPI) scheme addresses rising demand in terms of support required to existing Pharma clusters and MSMEs across the country to improve their productivity, quality and sustainability.
- The Centre has assigned an outlay of ₹500 crore for the period from fiscal FY 21-22 to FY 25-26.

- In the Scheme, financial assistance to pharma clusters will be provided for the creation of Common Facilities. Such will not only improve the quality but also ensure the sustainable growth of clusters.
- SIDBI (Small Industries Development Bank of India) is the **Project management Consultant** for implementing the scheme.
- To upgrade the production facilities of SMEs and MSMEs so as to meet national and international regulatory standards (WHO-GMP or Schedule-M), interest subvention or capital subsidy on their capital loans will be provided under the scheme, which will further facilitate the growth in volumes as well as in quality.
- **The scheme has 3 components/sub-schemes.**
 - **Assistance to Pharmaceutical Industry for Common Facilities (APICF)**, to strengthen the existing pharmaceutical clusters' capacity for their sustained growth by creating common facilities
 - **Pharmaceutical Technology Upgradation Assistance Scheme (PTUAS)** to facilitate Micro, Small and Medium Pharma Enterprises (MSMEs) of a proven track record to meet national and international regulatory standards
 - **Pharmaceutical & Medical Devices Promotion and Development Scheme (PMPDS)** to facilitate growth and development of Pharmaceutical and Medical Devices Sectors through study/survey reports, awareness programs, creation of database, and promotion of industry.

PEPPER IT WITH

Production Linked Incentive (PLI) Scheme, Promotion of Bulk Drug Parks Scheme, Traditional knowledge in medicine, NPPA

Some Challenges for the Indian Pharmaceutical Industry

- ✓ **Heavy import dependency for raw materials:** India is heavily dependent on other countries for active pharmaceutical ingredients (API) and other intermediates. 80% of the APIs are imported from China.
- ✓ **Quality-related issues:** This includes inadequate or poor quality systems implementation, data integrity issues, inadequate validation of various processes used in manufacturing or testing, and product contamination.
- ✓ **A lack of a stable pricing and policy environment:** The challenge created by unexpected and frequent domestic pricing policy changes in India.
- ✓ **Lack of Research and development:** It means that while India is a leading player in generic drugs, we lag behind in new drug discovery.

Conclusion

Changing times call for changes in practices and MSME sector should take up the expansion on quality and technology required to meet global demands. While APICF scheme will help in strengthening of clusters and ensure better compliance of various regulatory requirements, PTUAS scheme will help the MSMEs in technology upgradation and meeting global standards.

Distressed Discoms and the power sector of India

News Excerpt

Indian states and union territories (UTs) owe over Rs 1 trillion to the gencos and Rs 62,931 crore to the discoms. In 2022, India saw the worst shortfall in the supply of electricity in over six years. Some areas from Jammu and Kashmir to Andhra Pradesh saw power cuts ranging from 2-8 hours daily in April.

GS CONNECT										
GS	1	2	3	4	5	6	7	8	9	10
I										
II										
III										
IV										
M										

Pre-Connect

- Electricity is a concurrent subject & the responsibility of distribution rests with States. Govt. of India facilitates the efforts of States to provide power to consumers in an improved manner.
- India is the third-largest producer and second-largest consumer of electricity worldwide, with an installed power capacity of 401.01 GW as of April 30, 2022.

- As per the National Infrastructure Pipeline 2019-25, energy sector projects accounted for the highest share (24%) out of the total expected capital expenditure of Rs. 111 lakh crore (US\$ 1.4 trillion).
- 100% FDI allowed in the power sector has boosted FDI inflow in this sector. Total FDI inflow in the power sector reached US\$ 15.89 billion between April 2000-March 2022.
- India had committed to achieving 40 per cent of its installed electricity capacity from non-fossil energy sources by 2030. The country has achieved this target in November 2021 itself.

Causes of distress in the power sector

➤ **Free Electricity:**

- The power ministry's data showed that Delhi, Haryana, Andhra Pradesh, Rajasthan, Kerala, Punjab and Bihar faced the worst power crisis. Most of it can be attributed to these state governments' promise of free electricity to the citizens.
- These promises lead to delayed payments to the power generation companies (gencos) and the power distribution companies (discoms).

- #### ➤ **High Debt** - According to the data from the office of the chief economic advisor (CEA), Indian states and union territories (UTs) owe over Rs 1 trillion to the gencos. Additionally, they owe Rs 62,931 crore to the discoms. Also, discoms are yet to receive Rs 76,337 crore from the state governments in subsidies.

- #### ➤ **Transmission loss** - In India, the average transmission losses stand at over 20 percent. It is much higher than the average of 5-8 percent in developed countries. To get close to that range, India needs to improve its infrastructure.

ROAD AHEAD

- ❖ In the current decade (2020-2029), the Indian electricity sector is likely to witness a major transformation with respect to demand growth, energy mix and market operations.
- ❖ The Government of India is preparing a 'rent a roof' policy for supporting its target of generating 40 gigawatts (GW) of power through solar rooftop projects by 2022. It also plans to set up 21 new nuclear power reactors with a total installed capacity of 15,700 MW by 2031.
- ❖ The Central Electricity Authority (CEA) estimates India's power requirement to grow to reach 817 GW by 2030. The government plans to establish renewable energy capacity of 500 GW by 2030.

Way Forward

- ✓ While making use of government succour in the form of revival schemes — the latest one is a Rs 3-trillion package, states governments need to make the subsidy payments to discoms in time and also ensure that government departments/local bodies pay their bills duly, just like ordinary citizens.
- ✓ Tariffs must be revised incrementally to factor in fuel, O&M and salary costs, and to facilitate capital expenditure necessary to strengthen the distribution system. States must follow Kerala-Himachal Pradesh model and switch to the direct transfer of electricity subsidy to the consumers.

PEPPER IT WITH

Central Electricity Authority, Pradhan Mantri Sahaj Bijli Har Ghar Yojana, National Infrastructure Pipeline, Ujwal DISCOM Assurance Yojana

RBI Issues guidelines to regulate digital lending

News Excerpt

The Reserve Bank of India (RBI) issued the first set of guidelines for digital lending, to crack down on illegal activities by certain players. This follows the recommendation of a Working Group on Digital Lending (WGDL) that had submitted its report recently.

GS CONNECT											
GS	1	2	3	4	5	6	7	8	9	10	11
I											
II											
III											
IV											
M											

Pre-Connect

- Digital Lending involves lending through web platforms or mobile apps, utilizing technology for authentication and credit evaluation.
- Over 190 million Indian adults don't have any kind of bank account thereby representing a huge opportunity. Over the years, the digital lending market in India has significantly expanded. The value of digital lending rose from USD 33 billion in FY15 to USD 150 billion in FY20 and is projected to reach USD 350 billion by FY23.

RBI has categorised digital lenders into three groups:

- Entities that are regulated by the RBI and are allowed to carry out lending business.
- Entities that are authorized to carry out a lending as per other statutory or regulatory provisions but are not regulated by the RBI.
- Entities lending outside the purview of any statutory or regulatory provisions.

Why increased popularity of Digital lending?

- Digital lending is mostly preferred by those who are generally not able to avail of any credit through formal sources of finance like banks.
- One of the prime examples is the increase in adoption by Micro, Small & Medium Enterprises (MSMEs). Online lending platforms have gained massive popularity among MSMEs post-Covid as they were unable to secure finance through traditional lending institutions and thus had to switch to digital loans.
- Increase in digital literacy and wider penetration of smartphones and the internet.

Advantages of Digital loan market in India

- ✓ **Efficient processing** - NBFCs, fintech and digital lending companies have more efficient decision-making. They have the technology to examine buyers' credibility with a single click. They can immediately decide whether to give the loan or not and for what amount.
- ✓ **High-end metrics** - Data is processed at speed. Lending companies have a better understanding of the profile of the customer. At the same time, analytics allow the digital loan platform to make safer decisions.
- ✓ **Strong integration** - Companies with the business model of digital lending depend on strong integration for their seamless functioning. They have a good cloud-based connection with data sourcing agencies and credit bureaus.
- ✓ **Customer-centric approach** - The main ambition of India's digital loan market is to provide ease of documentation and processing. Millennials who are salaried or own a small business love this time-consuming and convenient experience of getting a loan.

Some of the key challenges of the current digital lending landscape include

- Absence of a regulatory framework for digital loans such as consumer loans, instant loans, etc.
- Absence of pre-emptive safeguarding mechanisms against fraudulent lending platforms.
- Lack of monitoring mechanisms for LSPs (Loan Service Providers) and digital lending apps.

Guidelines by RBI

- ✚ The RBI has mandated following regulations in order to check mis-selling to customers, unethical business conduct, exorbitant interest rates, and excessive engagement of third parties in digital lending transactions.
- ✚ All loan disbursements and repayments are to be executed between the bank accounts of the borrower and the entity. This eliminates the presence of a nodal pass-through or pool account of the LSP.
- ✚ Lenders must inform the borrower about all the fees, charges, and the annual percentage rate (APR) in a standardised format.

- ✚ Charges payable to LSPs in the credit intermediation process will be paid directly by the bank and not the borrower.
- ✚ No automatic increase in credit limit can be made without the explicit consent of the borrower.

RBI regulates Fintech Companies

- ❖ RBI has termed fintechs as direct service providers or DSPs, thus giving it official status of DSAs or direct selling agents, often the link between banks and customers in the traditional world.
 - ❖ Any loan related transaction, whether execution of loan documents, disbursement, or repayment, is now mandated to be directly transacted between the borrower and the regulated entities. This ensures that money and the paper trail is not left with the intermediary or the DSP.
 - ❖ In a bid to improve transparency and secure the trust of the customer, the regulations state that the cost of the transaction will now have to be borne by the regulated entity and like with any loan product, all-inclusive cost of the loan should be revealed to the customer. The room to charge exorbitant fees by fintechs is now set to disappear. The issue of customer's credit score getting hurt without their knowledge is also effectively addressed.
 - ❖ The RBI has mandated to report all lending transactions done through DSPs to credit information bureau. Therefore, whether a customer is onboarded through a third party fintech app or directly by the bank, the onus of running a check on the customer's credit worthiness fully vests with the regulated entity. This also addresses the issue of evergreening of loans.
 - ❖ The RBI is insisting that data on transactions through the loan apps must be preserved within the country. Likewise, it is now stipulated that the app cannot collect customer-related data without customer consent and that data collected should be need-based. An audit trail of such data is also now necessary.
- ✚ Data collected by digital lending apps must be need-based, with the borrower's prior consent, and can be audited if required.
 - ✚ Banks and the LSPs associated with them must appoint a nodal grievance redressal officer to deal with fintech- or digital lending-related complaints.
 - ✚ The borrower can complain to the Integrated Ombudsman Scheme of the RBI if their grievance is not resolved by the bank within 30 days.
 - ✚ Regulated Entities are required to ensure that any lending carried out through digital lending apps has to be reported to Credit Information Companies (CICs).
 - ✚ Lending through the Buy Now Pay Later (BNPL) mode also needs to be reported to the CICs.

PEPPER IT WITH

WealthTech, India Stack, NPCI, Payments Infrastructure Development Fund, Centre for Financial Literacy project, Joint Working Groups on Fintech

Conclusion

- > The fintech companies which mushroomed in recent years have had a large role to play in helping retail borrowers tide over financial exigencies, especially during the pandemic. But many of these companies are operating beyond regulatory purview, have been using unethical and coercive tactics to collect dues and charge exorbitantly high rates of interests and fees.
- > In this backdrop, the regulatory framework for digital lending framed by the Reserve Bank of India is welcome as it addresses the concerns of the borrowers in this segment.

Food inflation

News Excerpt

Due to International prices falling and a good monsoon, it is expected that food inflation will ease faster than expected.

Pre-Connect

- In India, the most important category in the consumer price index (combined) is Food and beverages (45.86 percent of total weight).
- WPI Food Index has a total weight of 24.38% in WPI.
- Food Inflation is largely caused by supply side disruptions like a failure of monsoon or Russia-Ukraine war or extreme climatic events caused Climate Change.

GS CONNECT											
GS	1	2	3	4	5	6	7	8	9	10	11
I											
II											
III											
IV											
M											

Food Inflation

- ❖ The Asian Development Bank made public its extensive survey of the impacts of food price rise on health. The survey covered 63 developing countries. It measured the impacts of food inflation on infant mortality, child mortality and undernourishment during 2001-2010. It found that a one per cent increase in food inflation leads to an increase of 0.3 per cent in both infant and child mortalities, and 0.5 per cent in undernourishment. Among the developing countries, the impacts are more severe in poorer countries.
- ❖ Given that an average household in India spends nearly 50 per cent of its earning on food—the poor spend more than 60 per cent—price rise will precipitate a crisis. The poor faces double whammy: one, they will be forced to spend much more on food by diverting funds for other purposes and two, their health will further deteriorate.
- ❖ In 2007, when the Planning Commission released the poverty estimate, decline in poverty was credited to low food inflation in the previous year. During 2008-2012 food inflation has averaged 10 per cent per year.
- ❖ This warrants a political and policy response. The political response must be a search for the reasons behind price rise, while the policy response must be to fix these reasons. Since 1996-97 when India opened up its agriculture sector to international market, it has been subjected to global changes. Practically, Indian agriculture cannot be delinked from global developments. But it can definitely be protected at the local level through political and policy interventions. A policy intervention can be as simple as distributing subsidised food more efficiently. Or a political intervention can be as simple as bringing food self-sufficiency back on the national agenda. These articulations sound clichéd but they need to be emphasised.

Global factors leading to Inflation

There were four major supply-side shock drivers of the great global food inflation from around October 2020: weather, pandemic, war, and export controls.

- **Weather** - The droughts in Ukraine (2020–21) and South America (2021–22), which particularly affected sunflower and soybean supply, and the heat wave in March–April 2022, which wiped out India's wheat harvest, were among the weather-related shocks.
- **Pandemic** - The supply-side effects of the pandemic were particularly noticeable in Malaysia's oil palm farms, where migrant workers primarily from Bangladesh and Indonesia gather fresh fruit bunches.
- **War** - The Russo-Ukrainian Conflict caused supply interruptions from the two nations, which exported 28.5% of the world's wheat, 18.8% of its maize, 34.4 percent of its barley, and 78.1 percent of its sunflower oil in 2019–20.
- **Export Controls** - Russian export restrictions were initially put in place in December 2020 due to concerns about domestic food inflation brought on by record-breaking high

temperatures. Similar moves were made in March–May 2022 in wheat by India and palm oil by Indonesia, the world's top producer–exporter of both commodities.

Why it is expected that food inflation will ease now?

- ✓ All four shocks occurring one after the other within 1.5 years created a perfect storm, but it now appears to be dissipating.
- ✓ The restoration of exports from Ukraine across the Black Sea is its most apparent sign.
- ✓ Since late May, Indonesia has removed its restriction on the export of palm oil. This is taking place as big soybean crops are about to be harvested in the US, Brazil, Argentina, and Paraguay.

Relieving Domestic Factors

- **The southwest monsoon** is the most significant. From June through August 7, the season's total rainfall was 5.7 percent more than the long-term historical normal for this time frame. During this Kharif (monsoon) season, above-average rainfall in the South Peninsula, Central, and Northwest India has increased the amount of land planted for most crops.
- **Rice Buffer** - as of July 1, the amount of rice in government godowns was 47.2 mt, which was 3.5 times the 13.5 mt "buffer" that was required. This should make the total rice issue manageable, as well as the fact that paddy is planted during the rabi (winter-spring) season as well.
- **International exportable surpluses** - International exportable surpluses for Chickpea and Red lentil are up by roughly 0.5 mt each over last year, largely from Canada and Australia.
- **Government policy** - The government's decision to extend the deadline for duty-free imports of arhar, urad, and Masur will help to maintain a lid on total pricing,

PEPPER IT WITH

Russia-Ukraine conflict, Food Price Index, FAO, MSP, Food Security

Conclusion

Overall, there are strong local and international arguments for India's food inflation to "trend down," even if not "reduce swiftly." Edible oils are already exhibiting this. The monsoon's increased soybean and cotton output ought to increase the supply of oil cakes. A favorable monsoon would result in more food and water for animals, which would help lower the cost of livestock inputs and inflationary pressures on milk, eggs, and meat. The country's largest reservoirs currently have water levels that are 25.1 percent above average storage for the past ten years and 5.9 percent higher than a year ago. Furthermore, if there are no new setbacks in a global order, the Reserve Bank of India's monetary policy council might not need to raise interest rates any further.

INTERNATIONAL RELATIONS

CAATSA: INDIA and USA

News Excerpt

The US House of Representatives has passed a legislative amendment to the **National Defence Authorization Act (NDAA)** that approves a waiver to India against the punitive CAATSA sanctions for its purchase of the S-400 missile defence system from Russia.

GS CONNECT											
GS	1	2	3	4	5	6	7	8	9	10	11
I											
II											
III											
IV											
M											

Pre-Connect

- The National Defense Authorization Act (NDAA) is legislation that Congress passes each year to make changes to the policies and organization of United States defense agencies and provide guidance on how military funding can be spent.
- Dollar hegemony in currency market makes American economic sanctions a potent weapon. It cripples ability of a country to have any economic cooperation, India faced the same situation with Iran during the development of Chabahar Port. To counter this India had developed Rupee-Riyal conversion method, however in large projects problems continues due to diversified supply chains.

Countering America's Adversaries through Sanctions Act (CAATSA) and India:

- It is a USA law that allows the American government to impose sanctions on any country that has **"significant transactions with Iran, North Korea or Russia"**.

India-USA defence partnership:

- ❖ The US has recognised India as a **"major defence partner"**.
- ❖ Both countries engage in 2+2 dialogue involving foreign affairs and Defence ministers of both sides.

India and the US have finalised troika of **"foundational pacts"** for deep military cooperation:

- ❖ Logistics Exchange Memorandum of Agreement (LEMOA)
- ❖ Communications Compatibility and Security Agreement (COMCASA)
- ❖ Basic Exchange and Cooperation Agreement (BECA)

Joint Exercises:

Malabar, Yudh Abhyas, Vajra Prahar etc.

India's Russian Defence Dependence

- ✓ Soviet Union was a close ally on India and supported India's defence requirement in its tough times. However, after the fall of Soviet Union, India realised the peril of placing all its egg in one basket for its defence requirements. Accessing spare parts and service becomes difficult.
- ✓ Though India in recent times has focused on both indigenous manufacturing and diversification of defence exports involving partners like France, Israel, and the US, Russia remained a key player.
- ✓ However, geopolitics combined with geoeconomics raised alarm bell for India on its Russian dependence. As Russia-China comes closer, India loss any surprise element of its defence technology as China would be acquiring the same.
- ✓ Russia is also expanding its defence market by luring Pakistan and even conducted military exercises with it. Some experts expressed this tendency of Russia as an signal to India so that India maintains a proper distance from the US. However, these efforts are result of Russian economic problems then any quid pro quo with India.

- The law entails economic & financial penalties for any nation that transacts with Russia on arms. The law has been in force since **August 2017**.
- The law came **in response to Russia's annexation of Crimea** in 2014 and its alleged meddling in the 2016 US presidential elections.
- The sanctions are intended to economically hurt Russia over its international actions. CAATSA primarily allows the US government punish any country that engages in transactions with Russian defence and intelligence sectors.
- Russia being an important defence ally for India, threat of sanctions loomed large over future of India-Russia defence cooperation. The test of which came with India's decision to buy S-400 air missile defence system. However, in a turn of event US levied sanctions on China and Turkey for buying Russian equipment's and at the same time provided a leeway for India.

Analytica

Why US Decided to give India Waiver?	
	Turning the Clock Back <ul style="list-style-type: none"> Any Sanction on India would have broke the trust of India on US. It would have brought back the era of sanctions of 1998 after India's nuclear test. Its good that US realised the fact that India will make national security and foreign policy decisions squarely in its interests.
	PLA Threat <ul style="list-style-type: none"> China has been a major cause of concern for the US. Especially, PLA Navy has increasingly deployed warships to the Indian Ocean. Indian ocean carries more than 75 percent of the world's trade and borders with resource rich areas. China's hegemony in the region will unseat US as the leader of the international order. In such a situation, India is US best bet and it was reflected when US renamed its Asia- pacific command as Indo-pacific Command
	Multilateral Engagement <ul style="list-style-type: none"> US and India are engaged in several key multilateral forum. They are also engaged in strategic grouping of Quad and I2U2 and therefore any sanction on its partner doesn't sound as a good diplomatic decision on its part. Further, US is also actively trying to make India a NATO+ ally.
	New Defence Market <ul style="list-style-type: none"> US also want India to reduce its dependence on Russian weaponry and provide its defence solutions as alternative. Being a capitalist economy it wishes a major buyer like India to become its customer.
	Diaspora and Population factor <ul style="list-style-type: none"> In the age where "Data is considered as new Oil", Indian population is the biggest customer to High-tech US industries. Indian diaspora is considered as the important contributor to US GDP.

Implications of USA waiver for India:

- ✓ Waiver itself is a symbol of India's diplomatic victory and signals an understanding in the US about India's strategic interest.
- ✓ It will allow India to maneuver its strategic interest without the fear of economic sanctions. One of its expressions can culminate into a deeper India-Iran Cooperation and India can resume Chabahar Port development, thereby establishing link with Central Asia and have an alternate route to Afghanistan.
- ✓ India's dependency on Russian for defence equipment's is a reality cannot be changed for decades even if it stops all Russian purchases. Russia is also a trusted partner of India; it was visible when Defence Minister reached Russia as border issues with China emerged at Galwan in 2020.
- ✓ As the Ukraine crisis extends, US will try to noose over Russia with economic sanctions, In this situation, India's being an anomaly to CAATSA will emerge as potential customer for Russia. However, this time it would be buyer's market and India will have greater bargaining capacity in bilateral engagement and could get Russian goodies at better prices.

- ✓ Internal economic situation in India, also cannot bear any sanction. With pandemic induced inequality and inflation, India is also facing a challenge of rupee depreciation and therefore this waiver will give much needed respite.

Conclusion

CAATSA waiver will surely bring India-US close and will the deepen the engagement. Though Russia termed this move by the US as its weakness and an attempt to lure India into its realm of influence, they do understand the fact that exemption to India will serve their interest and India has always followed principles of sovereignty when it comes to international relations. For India, this waiver provides an opportunity to try and deepen its engagement with Iran and play the same role which Pakistan played in building a rapprochement between US and China under Regan Presidency. This along with I2U2 can not only bring peace in the middle east but also allow greater economic cooperation which will benefit both India and US.

PEPPER IT WITH
QUAD, NATO, LEMOA, COMCASA, BECA US-India Initiative on Critical and Emerging Technologies (ICET)

Taiwan Conflict

News Excerpt

A recent visit by US speaker Nancy Pelosi to Taiwan created a full-blown diplomatic crisis with China calling US move as a “betrayal of China”. It retaliated by conducting a series of military drills against Taiwan and halted cooperation with the United States (US) over military and climate change issues.

GS CONNECT										
GS	1	2	3	4	5	6	7	8	9	10
I										
II										
III										
IV										
M										

Pre-Connect

China-Taiwan Conflict

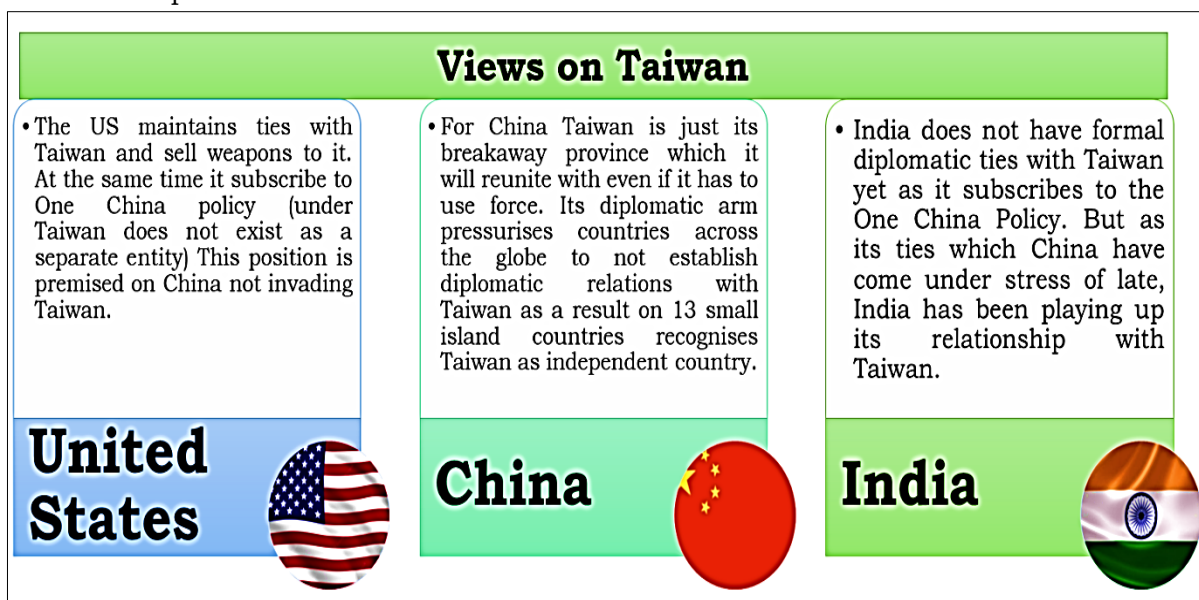
- Foundation of China-Taiwan conflict lies in the Chinese Civil War of 1945-1949, wherein Communist forces of China defeated Kuomintang government and forced them to flee towards Taiwan an island located off the coast of China across the Taiwan Strait.
- Ever since the formation of People Republic of China (PRC) by communist party it considers Republic of China (ROC) government of Taiwan as its province that awaits reintegration. This territorial want of China lead to Taiwan Strait Crisis in 1950s.
- In 1970s a rapprochement between US and China led to dramatic turn of events wherein ROC was stripped off of its permanent seat in UNSC and was given to PRC. This event also gave birth to One China Policy.

Understanding US-China Rivalry

- ❖ US and China are a product of their frontier experiences and expansionist attitude. Expansionism is civilisational value for both the countries. This essentially promoted the ‘us’ versus ‘them’ mentality as a result both nations validating themselves by perpetuating the other as the enemy.
- ❖ The post-2008 Global Financial Crisis saw a rise of a proactive China and slew of policies followed from ‘March West’ policy to Belt and Road Initiative. The counter also came from US in form of Rebalance to Asia and Pivot to Asia.
- ❖ China’s periphery strategy conceives East Asia, South Asia, Central Asia, or Asia-Pacific as its new frontier forming one organic whole to the Chinese Central Kingdom. This naturally pits against the US idea of frontier underscored in the Indo-Pacific strategy.
- ❖ Indeed China-US Rivalry is not simply a power competition to dominate the globalised world order, but it is more about a clash of frontiers between the two, each motivated to universalise its core values while marginalising the other. And in the process, the goal of the clash is to establish the frontier as the new core.

One China Principle and One China Policy

- One China Principle makes PRC as a sole legitimate China with Beijing as capital and Taiwan as its province.
- US on the other hand follows One China Policy- Taiwan is not a separate entity but China doesn't have sovereign rights over Taiwan. In other words, US acknowledges Chinese position but at the same time maintains as strategic ambiguity to maintain the status quo over Taiwan.

**Relevance of Taiwan****For China**

- ✓ China sees Taiwan as a renegade province and one whose reunification with the mainland is both inevitable and necessary for the completion of a fully unified China.
- ✓ Taiwan is also biggest export partner of China with an export value of 515 billion dollars from 2017 to 2022, more than double the US.
- ✓ China has started a new policy wherein it is flexing its economic and military clout in the region using tools like wolf-warrior diplomacy to economic debt traps for fragile economies.
- ✓ This has raised alarm bell especially in the backdrop of Russia-Ukraine crisis. The way Russia moved into Ukraine can inspire China to do the same in Taiwan.

First Chain Islands

- ❖ It comprises the Kuril Islands the Japanese Archipelago, Ryukyu Islands, Taiwan, northwest Philippines and ending at Borneo.
- ❖ It is also the first line of defence and serves as the maritime boundaries between the East China Sea and the Philippine Sea and the South China Sea and the Sulu Sea.
- ❖ In this chain are located the Bashi Channel and the Miyako Strait which are critical chokepoints for China.

For US

- US is bound by law (Taiwan Relations Act 1979) to provide means for defence to Taiwan.
- The position of Taiwan as the world's leading semiconductor manufacturer and key part of global supply chain makes Taiwan key player for its Indo-Pacific strategy as well as a key element of QUAD and AUKUS. This is because Taiwan can not only support critical and emerging new technologies but also can rebuild and recreate resilient supply chains.

PEPPER IT WITH

QUAD, Indo-Pacific, AUKUS, G-7, Middle Kingdom theory, Taiwan Strait

Taiwan and India

- ✚ India has approached ties with Taiwan cautiously, keeping Chinese red line in mind. The consistent compliant from Taiwan is that India always shies away from political support while happily engaging in other areas.
- ✚ In 2018, Parliamentary committee on external affairs urged the government to reconsider its “deferential foreign policy towards China. It suggested that if China does reconsider its stance on outstanding border issues and sovereignty concerns, India should “contemplate using all options including its relations with Taiwan.
- ✚ Therefore, India needs a new approach in dealing with Taiwan it should focus on:
 - India and Taiwan concluded a bilateral investment agreement in 2018, although talks of a free trade agreement seem to have sputtered. Hence, it should focus on trade volume and promote Taiwanese investment in India. Such an investment could lead to thousands of new jobs while helping meet burgeoning domestic demand.
 - India should join the G-7 in backing observer status for Taiwan in technocratic international bodies. This public support would firmly establish India as a friendly player to Taiwanese businesses
 - Further India should rekindle the India-Taiwan Parliamentary Friendship Forum, established in 2016 and promoted regular visits.

India should move quickly with its diplomatic offensive in Taiwan and in present situation, it may find a warm reception in the country. India's Taiwan moment has arrived and it would be wise to seize it.

Critical Mineral Alliance

News Excerpt

The government of India had raised concern over the exclusion of India from the newly formed Mineral Security Partnership (MSP). MSP is a US-led initiative aimed at developing a secure supply chain, which is not China dependent as well shockproof.

GS CONNECT											
GS	1	2	3	4	5	6	7	8	9	10	11
I											
II											
III											
IV											
M											

What are Critical Minerals?

- They are essential components of several modern-day appliances, including smartphones and computers. Major usage in aerospace, defence, fighter jets, drones etc.
- They are building blocks of green technologies like solar panels and wind turbines and are indispensable for the transition to electric battery-driven cars.
- The International Energy Agency expects the demand for some of these minerals, such as lithium, to grow more than 40 times in the next two decades. This is likely to intensify the competition in the field.
- Minerals like Cobalt, Nickel, and Lithium are required for batteries used in electric vehicles, rare earth minerals are critical, in trace amounts, in the and high-end electronics manufacturing.

Criticality of “Critical Minerals”

- Just like Coal and Iron powered First Industrial revolution, Critical minerals will power the Fourth Industrial Revolution (4IR) and its applications which will drive the green energy transition and power the low carbon economy of the future.
- Demand for Critical Minerals are bound to increase due to mix of international agreements between states to fight climate change such as the Paris Climate Accords, the UN Sustainable Development Goals etc.
- To limit global warming to 1.5°C under a net-zero scenario supply of clean energy technology materials has to increase by four times the current demand at the minimum and at even six times by 2050.
- Geopolitics of Critical minerals is fraught with weak institutions, high political uncertainty, or authoritarian rule. China for instance produces 60 percent and refines 90 percent of the world's rare earth. This has led to an awakening and realization that China could leverage

its position to deny or delay benefits to others. China had already done this in its conflict with Japan in 2010

- The real challenge lies in the processing of critical minerals even US sends its rare earths ores to China for processing before it gets reimported for downstream manufacturing.
- Energy bargain is always costly and in case of critical minerals, China is in advantage position. Nations often become helpless when it comes to energy security it can be assessed from the fact that Europe's heavy reliance on Russian gas and oil restricted its response in Russia-Ukraine conflict.
- In emerging geopolitics there is surety that States will seek to secure access to critical materials or deny others the access to maintain or expand their economic and military powers.
- In such situation, States should focus on innovation and the through technological and structural changes and explore new areas such as developing biotech to extract rare earths in an environmentally responsible way. Further as States develops a sufficient stockpile of materials focus should be on the recycling.
- States should develop policies for securing sufficient supplies, developing stockpiles, reducing or substituting materials, ensuring sustainable production, and supporting a level playing field in the global trade of critical materials.

**Major Countries
that have
abundance of
Critical Minerals**

- China
- Brazil
- Chile
- Congo
- France
- South Africa
- Turkey
- US

About MSP

- ✓ Other than US, initiative includes USA, Canada, Australia, Finland, Germany, France, Japan, South Korea, Sweden, the UK and the European Commission.
- ✓ It will ensure that critical minerals are produced, processed, and recycled in a manner that supports the ability of countries to realize the full economic development benefit of their geological endowments.
- ✓ It will focus on minerals such as Cobalt, Nickel, Lithium and also the other 17 rare earth minerals.

Analytica:

Significance of the alliance

- The MSP will help catalysed investment from governments and the private sector for strategic opportunities across the full value chain that adhere to the highest environmental, social, and governance standards
- As countries around the world scale up their transition towards clean energy and digitalization, these critical resources are key to the ecosystem that fuels this change.
- Any supply shock can severely imperil the economy and strategic autonomy of a country over-dependent on others to procure critical minerals.

Why India's exclusion from the alliance is a concern:

- ✚ **Availability of critical minerals:** One of the key elements of India's growth strategy is powered by an ambitious shift in the mobility space through the conversion of a large part of public and private transport to electric vehicles, as well push to electronic manufacturing.

PEPPER IT WITH

Rare Earth Metal, Deep Sea Mission, Indian Australia critical minerals partnership

- ✚ **Dependency on Other Countries:** Some REEs are available in India — such as Lanthanum, Cerium, Neodymium, Praseodymium and Samarium, etc. Others such as Dysprosium, Terbium, and Europium, which are classified as HREEs, are not available in Indian deposits in extractable quantities. Hence, there is a dependence on countries such as China for HREEs, which is one of the leading producers of REEs, with an estimated 70 per cent share of the global production

www.ksgindia.com

DELHI: VIJAY NAGAR 9717380832 & OLD RAJENDER NAGAR 9811293743 | JAIPUR: 8290800441 | PATNA: 7463950774 | RANCHI: 9939982007
BENGALURU: KORMANGALA 7619166663 & CHANDRA LAYOUT 7619136662 | BHOPAL: 7509975361 | INDORE: 7314977441 | IMPHAL: 9650245599
t.me/ksgindia | facebook.com/khanstudygroup | youtube.com/khanstudygroupksg | Instagram.com/khanstudygroup | WhatsApp 9868005599

- ✚ **Technology know -how:** Industry watchers say that one reason India would not have found a place in the grouping is because the country does not bring much expertise to the table. **The year 2022 is likely to be an inflection point for battery technology — with several potential improvements to the Li-ion technology**, with alternatives to this tried-and-tested formulation being in advanced stages of commercialisation. **India has an ambitious plan** to convert a large percentage of its transport to electric, and would require these minerals. **According to the plan, 80 per cent of the country's two- and three-wheeler fleet, 40 per cent of buses, and 30 to 70 per cent of cars will be EVs by 2030**

India and Mauritius Comprehensive Economic Cooperation and Partnership Agreement (CECPA)

News Excerpt

The Cabinet has approved signing of the Comprehensive Economic Cooperation and Partnership Agreement (CECPA) between India and Mauritius. The High-Powered Joint Trade Committee had been constituted as per the mandate of the India-Mauritius Comprehensive Economic Cooperation and Partnership agreement (CECPA), to review the general functioning and implementation of the India-Mauritius CECPA which entered into force on 1st April, 2021.

OS CONNECT										
GS	1	2	3	4	5	6	7	8	9	10
I										
II										
III										
IV										
M										

About CECPA:

- CECPA is the **first trade Agreement** signed by India with a country in Africa.
- The Agreement is a limited agreement, which will cover Trade in Goods, Rules of Origin, Trade in Services, Technical Barriers to Trade (TBT), Sanitary and Phytosanitary (SPS) measures, Dispute Settlement, Movement of Natural Persons, Telecom, Financial services, Customs Procedures and Cooperation in other Areas.
- CECPA provides for an institutional mechanism to encourage and improve trade between the two countries
- Indian exporters have to obtain a Certificate of Origin (CoO) from the authorised Indian agencies to avail the preferential benefits under the CECPA.

Benefits from the pact:

- The CECPA between India and Mauritius covers 310 export items for India, including food stuff and beverages, agricultural products, textile and textile articles, base metals and articles thereof, electricals and electronic item, plastics and chemicals, wood and articles thereof, and others.
- **Mauritius will benefit** from preferential market access into India for its 615 products, including frozen fish, speciality sugar, biscuits, fresh fruits, juices, mineral water, beer, alcoholic drinks, soaps, bags, medical and surgical equipment, and apparel.
- **As regards trade in services**, Indian service providers will have access to around 115 sub-sectors from the 11 broad service sectors, such as professional services, computer related services, research & development etc.
- India has offered around 95 sub-sectors from the 11 broad services sectors, including professional services, R&D, other business services, telecommunication, financial, distribution etc.
- Both sides have also agreed to negotiate an Automatic Trigger Safeguard Mechanism (ATSM) for a limited number of highly sensitive products within two years of the Signing of the Agreement.

The outcome of High-Powered Joint Trade Committee as per the mandate of the India-Mauritius Comprehensive Economic Cooperation and Partnership agreement (CECPA):

- ✓ Both sides noted that the traditionally close, strong economic ties between the two countries touched a new high with the signing of the landmark CECPA.

- ✓ **The bilateral merchandise trade** between India and Mauritius, which rose to USD 786.72 million in 2021-22 from USD 690.02 million in 2019-20, both sides agreed to enhance bilateral collaboration to further increase bilateral trade and realize the true potential of the bilateral relationship especially under the CECPA
- ✓ Both sides agreed to the **inclusion of the General Economic Cooperation (GEC) Chapter and Automatic Trigger Safeguard Mechanism (ATSM) in CECPA.**
- ✓ **ATSM:** It protects the country from sudden increase in imports. Under it, if the imports of a product are rising dramatically, then after reaching a certain threshold, both can impose safeguard duties on imports.
- ✓ **GEC:** The GEC will enable enhancement of export competitiveness and enlarging the existing scope for collaboration, inter-alia, in the fields of Investments, Financial Services, Textile, Small and Medium Enterprises etc.
- ✓ **In Services sector** with regard to establishing equivalence in certification, skills and licensing requirements of various professional bodies and exploring collaboration/cooperation arrangement between Ministry of Skill Development & Entrepreneurship and its counterpart in Mauritius on developing skill-sets. Mauritian side, while conveying the shortage of professionals in Mauritius in various sectors such as ICT, Financial Services, Film production, Engineering, Health, Tourism/Hospitality and Ocean Economy etc., welcomed movement of high skilled professionals from India to Mauritius.
- ✓ Both the sides expressed willingness to enter into a **Customs Mutual Administrative Assistance Agreement (CMMA)** and agreed to initiate discussions on the Agreement soon.

Economic relations:

- ✚ India had given a '**Special Economic Package**' of USD 353 million to Mauritius in 2016. **The supreme court** building project is one of the projects implemented under this package. This was jointly inaugurated by both the countries in 2020.
- ✚ **In 2020, India exported \$438M to Mauritius.** The main products exported from India to Mauritius were Rice (\$43.9M), Packaged Medicaments (\$43.2M), and Refined

MIST (Myanmar/Malaysia-India-Singapore Transit) cable system

About

- ❖ The MIST is an international submarine cable communication network that will traverse undersea to connect India with countries such as Myanmar, Thailand, Malaysia and Singapore has a length of 8100 km.
- ❖ It is a transnational fibre optic cable system connecting Mumbai in India to Tuas in Singapore, via Chennai.
- ❖ The union environment ministry's expert appraisal committee (EAC) on Coastal Regulation Zone (CRZ) matters has given its go-ahead for its construction. Out of a total project length of 8,100 km, **523.50 km fell in the Coastal Regulation Zone (CRZ)**
- ❖ **This will be the 17th cable system to be landed in Mumbai and expected to be ready by 2023.**
- ❖ The total initial cost of the MIST cable system is approximately US\$400million. Global technology provider NEC Corporation (NEC) wins the agreement to build the MIST Cable System.

Purpose

- ❖ It will provide secure, reliable, robust and affordable telecom facilities in Asia
- ❖ It will boost telecom connectivity between India and other Asian countries.

Submarine cable system

A submarine cable system consists of a communication cable laid on the sea bed between cable landing stations (CLS) on the land to carry telecommunication signals across stretches of ocean. They use optical fibre cables to carry international traffic.

Petroleum (\$42.3M). During the last 25 years the exports of India to Mauritius have increased at an annualized rate of 4.04%, from \$163M in 1995 to \$438M in 2020.

- India and Mauritius have jointly **inaugurated the Metro Express Project** and the **ENT hospital** also built under the special economic package.
- Mauritius** was the **second** top source of FDI into India in **2019-20**.
- During **covid times**, 100000 covi-shield vaccines were given to Mauritius.

PEPPER IT WITH

Types of Trade Agreements,
List of India's FTA (From
Economic Survey)

Conclusion

Due to changing geopolitical landscape, new challenges emerges in Indian Ocean Region (IOR). India and Mauritius share cultural history and a special partnership in recent years. The agreement reflecting a common desire of both sides to enhance further trade and investment, removing any bottlenecks hampering bilateral trade and investments. Need to identify bilateral focal points to further strengthen bilateral institutional cooperation.

The Big brother syndrome: India-Nepal Relations

News Excerpt

Prime Minister of India had visited Lumbini in Nepal to laid the foundation of Buddhist Vihara to be built with Indian assistance.

Pre-Connect

- India and Nepal share an age old historical, cultural, and economic linkages.
- Relations between both countries had evolved from tenets of Hinduism and Buddhism to familial ties in form of Roti-Beti Ka Rishta.
- In modern times, relations between both the countries are defined by the India-Nepal Treaty of Peace and Friendship of 1950
- Treaty is based on the idea of reciprocal treatment of each other citizens in arena of residence, property, business movement. It also establishes and national treatment for both businesses therefore once a good is it is treated as imported domestic goods. It also provides Nepal access to weaponry from India

Significance of Nepal for India

- There are 5 Indian states that borders Nepal such as Uttarakhand, Uttar Pradesh, West Bengal, Sikkim and Bihar. These area shares social, cultural as well as economic exchange with Nepal.
- Nepal is also strategically important as it act as buffer state between India and China.
- It also plays vital role in ensuring India's national security. In recent times, reports of its being used as terror launchpad by ISI has become common.
- Rivers originating in Nepal forms perennial river systems of India in terms of ecology and has hydropower potential.
- Hindu and Buddhist religious has sites in Nepal forms an ancient link between both the countries.

Key Recent Developments

Infrastructure

- ✓ Government of India is building Integrated Check Posts (ICPs) on either side of the Indo-Nepal border. ICP will systematize the movement of cross-border cargo trucks between two countries and will bring customs and immigration facilities under one roof.
- ✓ India having operationalized a 35 Km cross-border rail link between Jayanagar (Bihar) to Kurtha (Nepal) will be further extending it to Bijalpura and Bardibas.

Energy

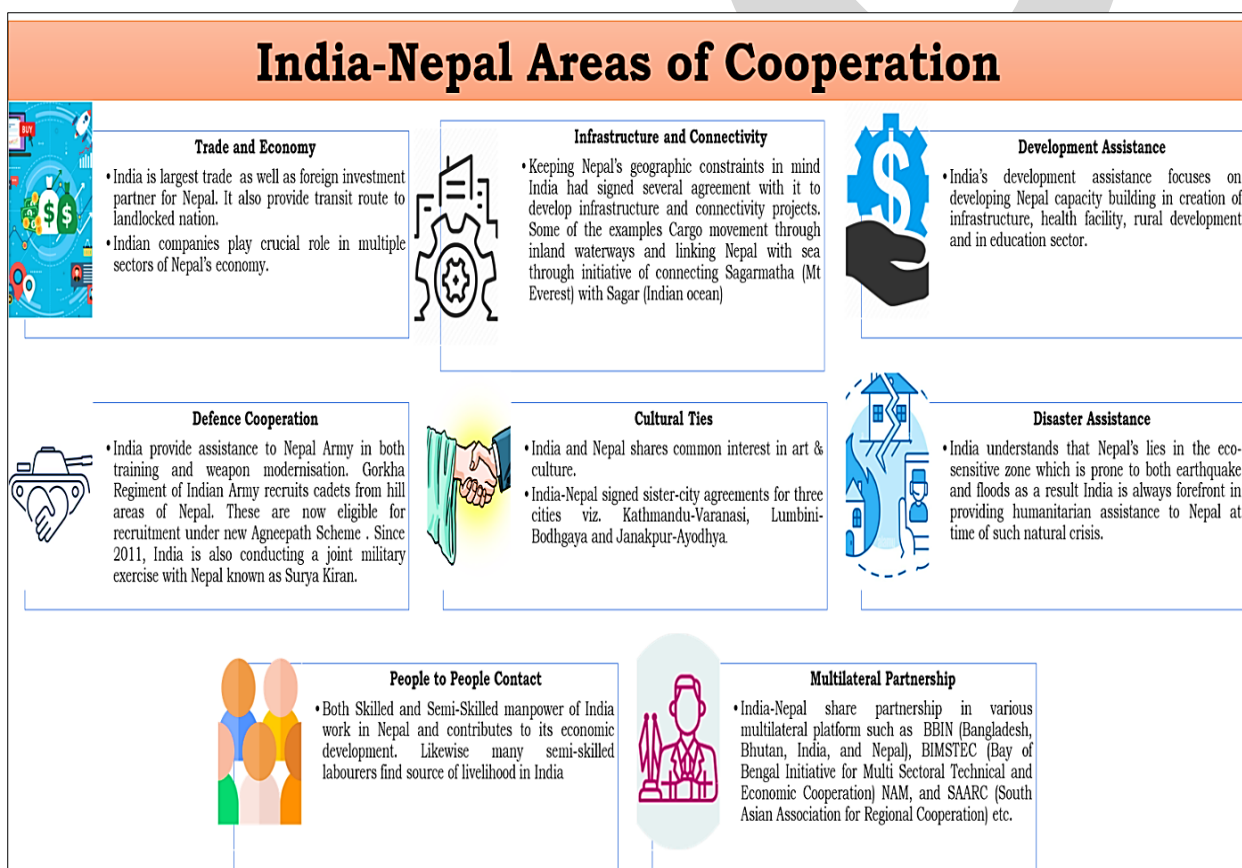
- Several hydroelectric projects in Nepal are build with India helps these includes:

GS CONNECT											
GS	1	2	3	4	5	6	7	8	9	10	11
I											
II											
III											
IV											
M											

- Arun-3 hydro project on Arun River in Eastern Nepal
- Arun-4 Hydro power project to be developed jointly by Satluj Jal Vidyut Nigam (SJVN) and Nepal Electric Authority (NEA)
- Pancheswar Multipurpose project came after Mahakali Treaty
- West Seti Hydropower Project.
- A double circuit transmission line between connecting Tila (Solukhumbu) to Mirchaiya (Siraha).
- Motihari-Amlekhgunj oil pipeline project it will transport fuel from the Barauni refinery in Bihar to Amlekhgunj in south-east Nepal and is the first cross-border petroleum products pipeline in South Asia.
- Close cooperation between Indian Oil Corporation and Nepal Oil Corporation on ensures regular supplies of petroleum products in Nepal.
- India had also inducted Nepal in International Solar Alliance.

Cultural and Human resource development

- ✚ India will be developing an India International Centre in Lumbini, Nepal for Buddhist Culture and Heritage in the Lumbini Monastic Zone. The center will allow people to enjoy the essence of spiritual aspects of Buddhism. It will also cater to scholars.
- ✚ India will be establishing a satellite campus of IIT in Rupandehi, Nepal.



Challenges in Indo-Nepal Ties

Boundary Issue

- Nepal released new maps claiming Indian territory during the Kalapani controversy. It claimed three areas viz. Kalapani, Limpiyadhura and Lipulekh of Uttarakhand and the area of Susta of Bihar.
- By publishing maps Nepal made the bilateral issue into an international one and as a result negotiation on the issue will now be a diplomatic quagmire.

Peace and Friendship Treaty

- Nepal seeks revision of terms of Peace and Friendship treaty as it envisages India-Nepal relations as a relationship of unequals. However, this demand of Nepal still awaits a concrete response from India.

China Factor

- China considers Nepal as an important element in its growing South Asian footprint.
- It has concluded with Nepal Agreement on Transit Transportation, that provides Nepal with access to four sea ports and three land ports.
- China provided military aid to Nepal and also conducted joint military exercises.
- Sino-Nepalase economic ties have grown dramatically over the last few years. China has overtaken India as the largest source of foreign direct investment.
- All this can render Nepal status as a buffer between China and India useless. Especially when Chinese debt trap is forcing major economic crisis in India's neighborhood and other South Asian economies.

Security Issues

- Nepal and India have a porous border with minimum checks and the region is also close to restive North East.
- This situation makes Nepal a favorite destination for ISI of Pakistan from 1998 Kandahar Highjack of IC-814 to arrest of terrorist like Yasin Bhatkal shows the vulnerability of Indian borders vis-à-vis Nepal.
- All sorts of crime ranging from human trafficking to Narco trafficking to fake and counterfeit India currency happens through Nepal borders.
- If London is the preferred choice of a fugitive economic offender to runaway from the long arm of law in India, Nepal is the choice of every criminal and terrorist.

Trust Issues and Big Brother Syndrome

- Ethnic groups in Nepal especially in the hilly areas think that India prefer hegemony of the people of plain region due to roti-beti-rishta they share with Madhesi people of the plains.
- Nepal often accuses India of infringing in its sovereign issues and using coercive methods to make sure that Nepal toes the line which is in the interest of India and not in Nepal. They call it big brother and small neighbor syndrome. While India deny such charges and opined that India is an elder brother and not big brother, signaling that any move by Nepal which jeopardizes India's national interest will not be tolerated.

Way Forward

- > There is need to go beyond rhetoric on territorial nationalism and have a pragmatic outlook towards resolution of new border dispute. For this model adopted during Land Border Agreement between India and Bangladesh can provide valuable lessons.
- > There is need to appreciate Nepal sensitivity towards issue which are sovereign in nature by allowing Nepal to have independent policy choices can help foster deeper friendship with India. India

PEPPER IT WITH

Anglo-Nepalese war and treaties, Mahakali Treaty, Haldiya Port, BBIN, BIMSTEC, NAM, SAARC, BIPPA, Integrated Check Posts

www.ksgindia.com

DELHI: VIJAY NAGAR 9717380832 & OLD RAJENDER NAGAR 9811293743 | JAIPUR: 8290800441 | PATNA: 7463950774 | RANCHI: 9939982007
BENGALURU: KORMANGALA 7619166663 & CHANDRA LAYOUT 7619136662 | BHOPAL: 7509975361 | INDORE: 7314977441 | IMPHAL: 9650245599
t.me/ksgindia | facebook.com/khanstudygroup | youtube.com/khanstudygroupksg | Instagram.com/khanstudygroup | WhatsApp 9868005599

has already done that under its neighborhood first policy. Further, with the rise of China, neighboring countries do hold a blackmail card and hence our tactical diplomacy can make sure that this card is not redeemed at the expense of India's national interest.

- > On the economic front, India is needed to cleanup the mess created during the exercise of demonetization that left many Nepali businessman high and dry. Further power purchase agreements should allow purchase of power from Nepal without fluctuation in tariff that frustrates Nepal economy.
- > The Bilateral Investment Promotion and Protection Agreement (BIPPA) signed between India and Nepal should promote India's foreign investment over China's. Though cartels in Nepal doesn't wish the same, government of Nepal need to understand that a strong future of Nepal lies with India.

Iran Nuclear deal

News Excerpt

Efforts are being taken to revive the Iran nuclear deal also known as Joint Comprehensive Plan of Action (JCPOA) after US withdrew from the deal unilaterally in 2018. US wants Iran to not only shed its nuclear ambition but also check on its conduct in the middle east.

GS CONNECT											
GS	1	2	3	4	5	6	7	8	9	10	11
I											
II											
III											
IV											
M											

Pre-Connect

- Signed in 2015, between Iran and a coalition of world powers including the US, the UK, China, Russia, France, and Germany (collectively known as P5+1), JCPOA was seen as much needed harbinger of peace in the middle east.
- However, the US administration under ex-President, Donald Trump criticized JCPOA as a license given to Iran to do its bidding in the region and undermine US interest. It believed that though JCPOA put a stop on Iran nuclear ambitions, it failed to bring any behavioral changes in Iran's attitude and it continues its mischievous activities in the middle east.
- Close allies of the US in middle east both Saudi Arabia and Israel were against JCPOA and alleged that this agreement will bring more instability in the region.
- The decision of US was criticized by its allies as they were of opinion that as long as Iran comply with IAEA (International Atomic Energy Agency) standards it doesn't violate JCPOA and hence US decision is unfortunate. They even decided to support Iran against sanctions, however they were unable to materialize economic relief.

Importance of Iran Nuclear Deal

- JCPOA helped in avoiding a military conflict between US and Iran and avoided a major humanitarian crisis in a region which is already facing the blunt of sectarian violence.
- The deal was an imperfect yet practical first step towards a meaningful dismantling of the status-quo between Iran and Western powers by bringing Iran's nuclear programme under international regulation and scrutiny.
- It is seen as a critical factor of achieving a stable security infrastructure in the Middle East. It helped in creating a domino effect of propping up of nuclearized states in the region, who are capable to launch a nuclear armageddon.

- It brought the Iran not just on the negotiating table, but beyond, to a dotted line as well, keeping the nuclear question on the front burner, prioritising international security over regional.

Major Impediments in Iran-Nuclear Deal



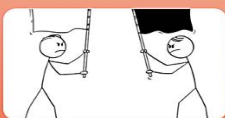
Issue of IRGC

- US has designated Iran elite force known as Islamic Revolutionary Guard Corps (IRGC) as a "foreign terrorist organisation". Iran wants US to remove the group from list while US is unwilling to do so, for their role in Lebanon and Yemen.



Regional "Great-Game"

- Middle East is myriad in regional conflicts and prime among them is Saudi-Iran conflict based on sectarian divide. Saudi being US ally is pressuring for the failure of deal especially as it faces heat from Iran in Yemen. Saudi doesn't want Iranian economic growth as that will strengthen Iranian support to Houthi rebels in Yemen.
- Israel on the other hand is facing, Iranian threat from terrorist organization such as Hezbollah (Lebanon) and Hamas (Palestine). Therefore, Israel is also not in favor of revival of JCPOA.
- With Abraham Accords and I2U2 in place, interest of Saudis and Israel converge and this convergence is pressuring US so that it doesn't give away any concession to Iran.



Unending Hostilities

- Iran had taken down security cameras installed by IAEA to counter the resolution by US and its ally's resolution that sought to censure Iran over its nuclear programme. Continuation of such one-upmanship promotes hostilities rather than ceasing them. Most often US ends up in imposing new sanctions despite the intention of the new US administration in ending those sanctions.



Anti-Americanism of Iran

- A deep anti-American psyche of Iranians doesn't allow Iran to come to any agreement with the US. With Iranian hardliners in power, chances of a agreement is low.

Significance of JCPOA for India

- ✓ Iran for India is a gateway to Central Asia. Infrastructure projects such as Chabahar Port and Chabahar-Zahedan railway. American sanctions earlier choked the development of port and though India developed a firewall against American economic sanctions in form of Rupee-Riyal agreement things didn't pace up as it was expected. India also invested in Farzad-B gas field through ONGC Videsh Limited.
- ✓ JCPOA allowed India to expand its operations in Iran and pace up infrastructure projects in the region through Chabahar and International North-South Transit Corridor (INSTC). It also allowed India to gain access to cheap Iranian oil.
- ✓ In absence of JCPOA and with addition of CAATSA India's dealing with Iran becomes difficult. Further, with Indian investment drying up in Iran, China is becoming an attractive partner for Iran and with Chinese investments in picture, propping up Chabahar against Gwadar won't be possible for India.
- ✓ Good relations between US and Iran, allows India to play an active role in Central Asia. Both, India and US can jointly develop a Central Asia policy that can counter China's influence in the region.

PEPPER IT WITH

Abraham Accords,
IPI Gas Pipeline,
CAATSA

Conclusion

US should realise that imposing sanctions has not worked in the case of the demands of a nuclear deal with Iran. If it continues to push for more sanctions, the potential for Iran to move away from compliance with the JCPOA guidelines will increase. Hence, finding an alternative approach is the need of the hour. There is need to acknowledge that without the extension of an 'olive branch' by any of the stakeholders, the likelihood of success remains minimal. To return to consensus in the Iran nuclear deal for all parties, the negotiations must establish a common ground to incentivise both US participation and Iran compliance.

ENVIRONMENT

Groundwater Distress in India

News Excerpt

The Central Ground Water Board (CGWB)'s Monitored wells registered a decline in groundwater levels in the range of 0 – 2 m.

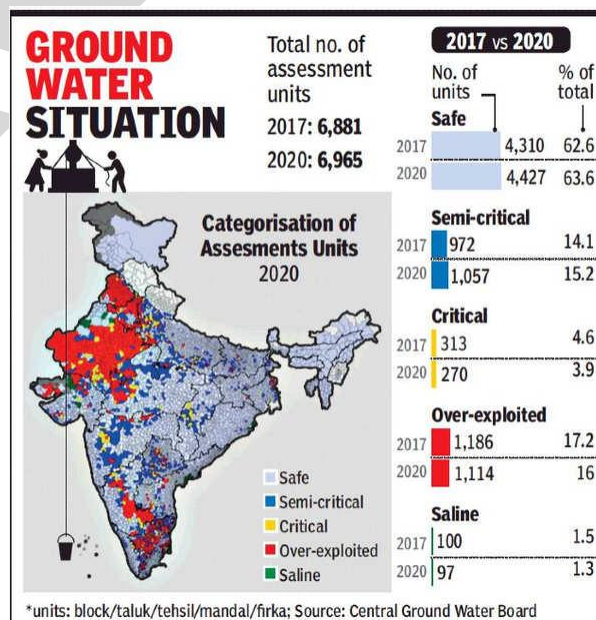
Pre-Connect

- CGWA is constituted under Section 3 of the Environment (Protection) Act, 1986.
- The Body is formed to regulate and control of groundwater development and management in the country.
- Presently, the Easement Act of 1882 provides every landowner with the right to collect and use groundwater or water under the land and on the surface.
- Water is mentioned under the State List of the Constitution. Therefore, the state legislative assemblies can make laws on the subject.

Major central level water institutions responsible for ground water management	
Institution	Role
Central Water Commission	Initiating and coordinating schemes for the conservation and utilisation of water resources in the country in collaboration with state governments; and monitoring water quality
Central Ground Water Board	Developing and disseminating technology related to sustainable use of ground water; monitoring and implementing policies for the sustainable management of ground water resources; estimating ground water resources
Central Ground Water Authority	Constituted under Section 3(3) of the Environment (Protection) Act, 1986 to regulate and control development and management of ground water resources; can resort to penal actions and issue necessary regulatory directives
Central Pollution Control Board	Implementation of the Water (Prevention and Control of Pollution) Act, 1974 which seeks to restore water quality

State of Water in India

- CGWB statistics show that the contribution of groundwater is nearly 62 per cent in irrigation, 85 percent in rural water supply and 50 percent in the urban water supply.
- According to government data, Five states -- Uttar Pradesh, Rajasthan, Bihar, Madhya Pradesh, and Kerala -- account for 49 percent of the overall extraction of groundwater in the entire country.
- The stage of groundwater extraction is very high in Delhi, Haryana, Punjab and Rajasthan. In these states, the annual groundwater consumption is more than annual extractable groundwater resources.
- In States like Himachal Pradesh, Tamil Nadu, Uttar Pradesh and UTs of Chandigarh and Puducherry, the stage of groundwater Extraction is between 70-100 percent.



- In 2021, As per CGWB, Nearly one-sixth of India's 6,965 groundwater assessment units are 'over-exploited' and this along with two other categories of concern — 'critical' and 'semi-critical' — account for 35% of total assessed units.
- According to the NITI Aayog's Composite Water Management Index (CWMI) 2018, 21 Indian cities could face Day Zero in the coming years.
- Day Zero refers to the day when a place is likely to have no drinking water of its own. Bengaluru, Chennai, Delhi and Hyderabad are among the most susceptible.

Reasons for depleting groundwater

- ✓ **Increased demand for freshwater:** The warmer temperatures, scorching summer and climate change encourage the use of groundwater. An increase in frequency affected the groundwater table adversely.
- ✓ **Industrialization:** Continuous pumping of water, discharge of industrial effluents, domestic sewage, use of fertilizers and pesticides, waste dump and over-exploitation of the resources have had impact on groundwater sustainability.
- ✓ **Agricultural Subsidies:** Power subsidies encourage the farmer to exploit more volume of groundwater. Freebies in electricity also contribute to the depletion of groundwater. Moreover, the cultivation of water-intensive crops further makes the level of water on an alarming level.
- ✓ **Lack of replenishment:** Construction of hard surfaces on the earth retard percolation in the ground, erratic rainfall, and climate change are other factors that delay the replenishment of aquifers.
- ✓ **Urbanisation:** It is often believed that with the urban growth, the impermeabilization and ground sealing effect might contribute to a decrease in groundwater.

Implications

- **Food Security:** Groundwater is a critical resource for food security, groundwater depletion could result in a reduction in food crops.
- **Land Subsidence:** As underground water disappears from aquifers, drawn out excessively, the matter underneath becomes the sole entity for managing the load, and the land may suddenly or gradually sink, leading to a phenomenon known as land subsidence.
- **Water Distress:** lack of enough groundwater will promote drought-like conditions, as agricultural productivity will be undermined due to inadequate availability of water.
- **SDGs:** Groundwater is most explicitly linked to ensuring availability and sustainable management of water and sanitation for all' (Goal 6), Groundwater also contributes to poverty eradication (Goal 1); food security (Goal 2); gender equality (Goal 5); sustainability of cities and human settlement (Goal 11); combating climate change (Goal 13) and protecting terrestrial ecosystems (Goal 15). The progress on such goals will be derailed.

Atal Bhujal Yojana

- ❖ The Government is implementing Atal Bhujal Yojana (Atal Jal), a Rs. 6000 crore Central Sector Scheme with World Bank assistance.
- ❖ Government of India launched Jal Shakti Abhiyan (JSA) in 2019 in 256 water stressed districts in the country.
- ❖ 'Mukhyamantri Jal Swavlamban Abhiyan' in Rajasthan, 'Jalyukt Shibir' in Maharashtra, 'Sujalam Sufalam Abhiyan' in Gujarat, 'Mission Kakatiya' in Telangana, 'Neeru Chettu' in Andhra Pradesh, 'Jal Jeevan Hariyali' in Bihar, 'Jal Hi Jeevan' in Haryana, and 'Kudimaramath' scheme in Tamil Nadu etc.

Goa Becomes the 1st 'Har Ghar Jal' State

Sets a Precedent in Providing Tap Water Connection to Every Household

- 100% Functional Household Tap Connections in rural areas covering 2.30 lakh households
- Fully saturated assured piped water supply in 191 GPs of 1.65 lakh & 98,000 rural households of North Goa & South Goa respectively
- The state now plans for sensor-based service delivery monitoring system to monitor functionality of supply
- The State to get 14 NABL accredited water quality testing laboratories



Way Forward

- Groundwater planning and management can capitalize on groundwater's natural buffering capacity by employing targeted actions like artificial recharge of groundwater and/or the preservation and protection of natural recharge zones.
- There is a dire need to focus on the Integrated Water Resource Management framework. It promotes the coordinated development and management of water, land and related resources.
- Provision for wastewater recycling and its reuse to promote the circular economy of one water cycle will also help in source sustainability and groundwater pollution mitigation.
- Interventions like rainwater harvesting, stormwater harvesting, rain-garden and bio-retention ponds that intercept rainfall with vegetated land are low-maintenance alternatives to conventional systems. These help in groundwater recharge and urban flood mitigation.

PEPPER IT WITH

Rain Water Harvesting, Radio active contamination of ground water, BhuvanBhujal Portal, Jal jeevan mission, Har Ghar Jal

State of Global Air: Report on Air Quality and Health in Cities

News Excerpt

According to the Global Air report on air quality and health in cities, New Delhi and Kolkata are the most polluted cities in the world.

Pre-Connect

- According to the report, Air pollution was the 4th leading risk factor for early death worldwide in 2019, around 6.67 million death have occurred.
- The main source contributing to air pollution are vehicle exhaust, heavy industry including power generation, small-scale industries including brick kilns, and resuspended dust on the roads due to vehicle movement and construction activities.
- Earlier this year, a global report – the World Air Quality Report 2021 – listed New Delhi as the capital city with the most polluted air for the fourth consecutive year.
- Particulate matter is released in the atmosphere as air pollutants-
 - PM10 : inhalable particles, with diameters that are generally 10 micrometers and smaller.
 - PM2.5 : fine inhalable particles, with diameters that are generally 2.5 micrometers and smaller.

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

Key Points of the Reports

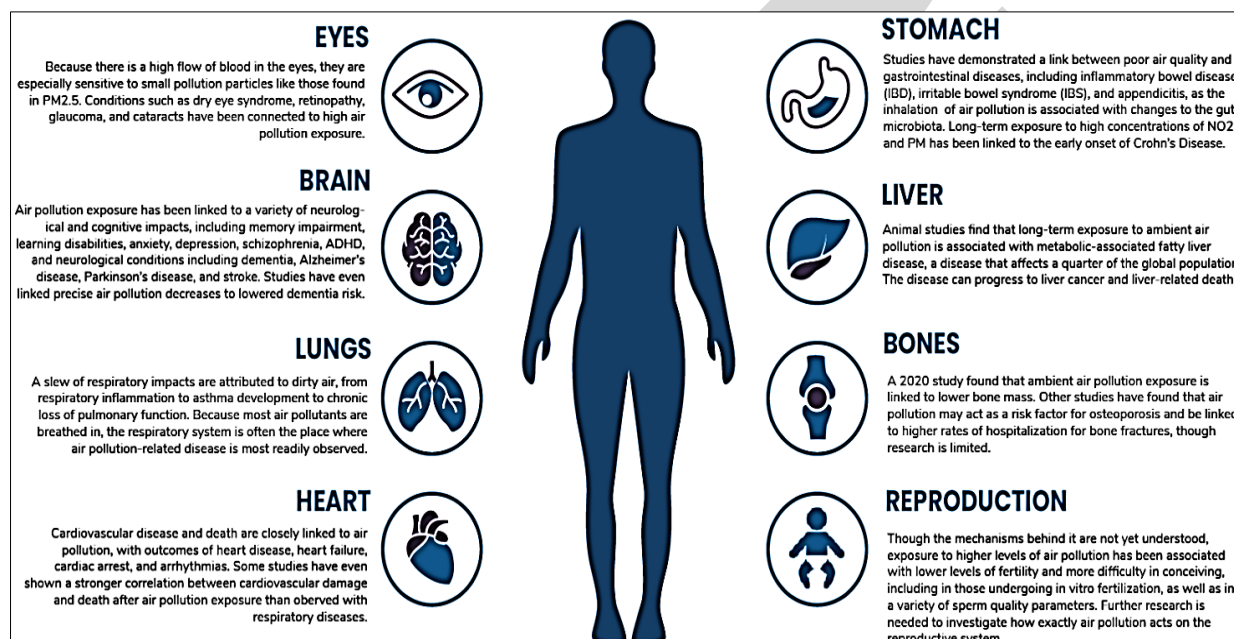
- New Delhi and Kolkata are the most polluted cities in the world. These cities rank the highest, based on levels of fine particulate matter.
- PM2.5 levels in Delhi averaged 110 µg/m³, making it the world's most polluted city in this respect.
- Kolkata came second in the list, with average PM2.5 levels of 84 µg/m³. Mumbai too found a place here, ranking 14th with average PM2.5 levels of 45.1 µg/m³.

www.ksgindia.com

DELHI: VIJAY NAGAR 9717380832 & OLD RAJENDER NAGAR 9811293743 | JAIPUR: 8290800441 | PATNA: 7463950774 | RANCHI: 9939982007
BENGALURU: KORMANGALA 7619166663 & CHANDRA LAYOUT 7619136662 | BHOPAL: 7509975361 | INDORE: 7314977441 | IMPHAL: 9650245599
t.me/ksgindia | facebook.com/khanstudygroup | youtube.com/khanstudygroupksg | Instagram.com/khanstudygroup | WhatsApp 9868005599

- The cities in South Asia, West Sub-Saharan Africa and East Asia reported exposures to PM_{2.5} higher than 35 µg/m³ (the least stringent WHO limit).
- India is home to 18 of the 20 cities with the most severe increase in PM_{2.5} pollution (more than 30 µg/m³) from 2010 to 2019.
- With respect to NO₂, the global average was 15.5 µg/m³ – higher than the WHO limit of 10 µg/m³. Out of the 103 most populous cities across all 21 regions, 81 reported higher NO₂ exposures than the global average.
- Exposure to pollutants can cause a range of illnesses, from respiratory and heart diseases to cancers and strokes.
- Fine particulate matter (PM_{2.5}) and nitrogen dioxide (NO₂) are two major air pollutants in cities and urban areas worldwide.

Impacts of Polluted Air



Measures By Government

- ✓ The National Clean Air Programme (NCAP) in the country has aimed to reduce 20-30% of PM_{2.5} 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. Under the plan, Specific actions to be taken for certain pollution concentration levels.
- ✓ 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 the 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.
- ✓ The Government of India is envisaging a revision of its ambient air quality standards and has strengthened vehicular and industrial emission standards in recent years.

- ✓ In 2020, based on the recommendations of the 15th Finance Commission, the Government of India has set aside about \$1.7 billion to fight air pollution over the next five years for the 42 Indian cities.

Way Forward

- There is a need to drive a shift to higher vehicle emissions standards and retire older vehicles.
- Government should prioritize small businesses that adopt cleaner production practices.
- Subsidize farmers who use organic fertilizers and manage manure sustainably.
- Continue supporting the accelerated adoption of renewable energy through incentives.
- Encourage the adoption of emission trading scheme that can help industries reduce air pollution at the least cost.
- Boost jobs and restore landscapes through community tree-planting programs run by local governments.
- The air pollution crisis will require innovative, collaborative solutions from public, private, and civil society stakeholders. Institutions, governments, philanthropists and academia have been fighting the battle for clean air for decades; it is time to tap into the power of a multistakeholder framework to handle this challenge.

PEPPER IT WITH
NCAP, SAFAR, NAQS, CPCB, NGT,
Air (Prevention and Control of
Pollution) Act, 1981

India's Updated Nationally Determined Contribution

News Excerpt

The Union Cabinet has approved India's updated Nationally Determined Contribution (NDC) to be communicated to the United Nations Framework Convention on Climate Change (UNFCCC).

GS CONNECT											
GS	1	2	3	4	5	6	7	8	9	10	11
I											
II											
III											
IV											
M											

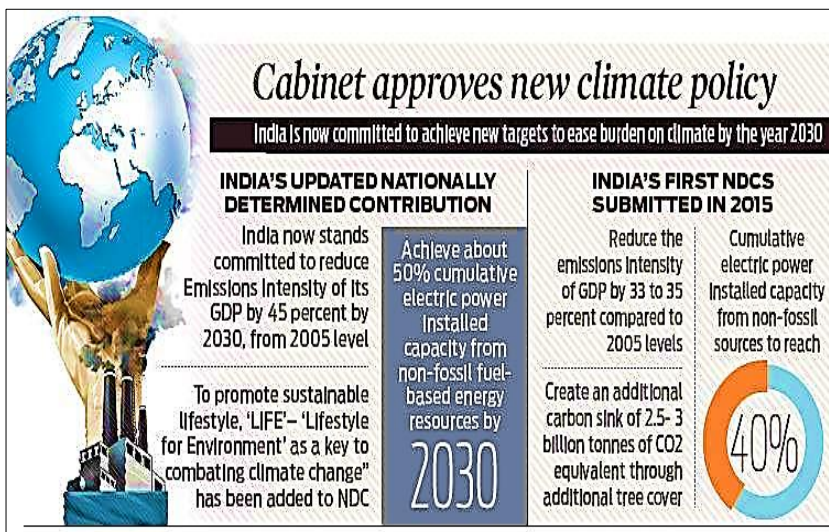
Pre-Connect

- At the global level, Countries adopted the climate agreement in the Conference of Parties 21 (COP21) in Paris, 2015.
- In this summit, countries publicly outlined post-2020 climate actions, they intended to take under the new international agreement, known as their Intended Nationally Determined Contributions (INDCs).
- The climate actions pledged in these INDCs largely determine whether the world achieves the long-term goals of the Paris Agreement:
 - To hold the increase in global average temperature to well below 2°C, to pursue efforts to limit the increase to 1.5°C, and to achieve net zero emissions in the second half of this century.
- INDCs pair national policy setting — in which countries determine their contributions in the context of their national priorities, circumstances and capabilities.
- The Paris Agreement's Article 4, requires each Party to prepare, communicate and maintain successive INDCs that it intends to achieve.

Intended Nationally Determined Contributions

- India at the COP26 to the UNFCCC stated to intensify its climate action by bestowing to the world five nectar elements (Panchamrit) of India's climate action.
- The INDCs create a constructive feedback loop between national and international decision-making on climate change.
- The 2015 NDC comprised goalshave quantitative targets upto 2030 namely-
 - Cumulative electric power installed capacity from non-fossil sources to reach 40%.
 - Reduce the emissions intensity of GDP by 33 to 35 percent compared to 2005 levels

- Creation of additional carbon sink of 2.5 to 3 billion tonnes of CO₂ equivalent through additional forest and tree cover.
- The updated NDC (INDC-2) will be implemented in 2021-2030, through schemes and programmes of relevant ministries and departments and with the spirit of cooperative federalism among states and union territories.
- India added progressive targets in the second INDC, to cope with the issue of climate change.
- Under INDC-2, India raises the target of non-fossil fuel-based energy capacity of the country to 500 GW by 2030.
- India will reduce the total projected carbon emission by one billion tonnes between now and the year 2030.
- As the final agenda, India would become carbon neutral and achieve net zero emissions by the year 2070.



Analytica

- ✓ Action pledged under INDC-2 will help India in low emissions growth pathways. It would protect the interests of the country and safeguard its future development needs based on the principles and provisions of the UNFCCC.
- ✓ The updated NDC also represents the framework for India's transition to cleaner energy for the period 2021-2030.
- ✓ It will lead to an overall increase in green jobs such as in renewable energy, clean energy industries- in automotive, manufacturing of low emissions products like Electric Vehicles and super-efficient appliances, and innovative technologies such as green hydrogen, etc.

PEPPER IT WITH

National Solar Mission, Climate Justice, ISA, IPCC, GEF, NAFCC, Green Climate Fund, Climate Investment Funds

Initiatives of the Government to meet with INDCs

- ✚ Initiatives of the Government including tax concessions and incentives such as the Production Linked Incentive scheme for the promotion of manufacturing and adoption of renewable energy, will provide an opportunity for enhancing India's manufacturing capabilities and enhancing exports while meeting with the pledges.
- ✚ The Net Zero target by 2030 by Indian Railways alone will lead to a reduction of emissions by 60 million tonnes annually. Similarly, India's massive LED bulb campaign is reducing emissions by 40 million tonnes annually.

Conclusion

India's climate actions are realized by utilising finance based on domestic resources by way of taxation and visionary policies by the government. However, Providing new and additional financial resources, and technology to decarbonize the energy sector and to address the global climate change challenge are among the commitments and responsibilities of the developed countries under UNFCCC and the Paris Agreement. Under the doctrine of climate justice, India must be given its due share of international financial resources and technological support by developed and industrialised countries.

India's Coastal Ecosystems

News Excerpt

The Comptroller and auditor general of India (CAG) presents a report in Parliament to assess steps taken by the Environment Ministry for the conservation of India's fragile coastal ecosystems.

Pre-Connect

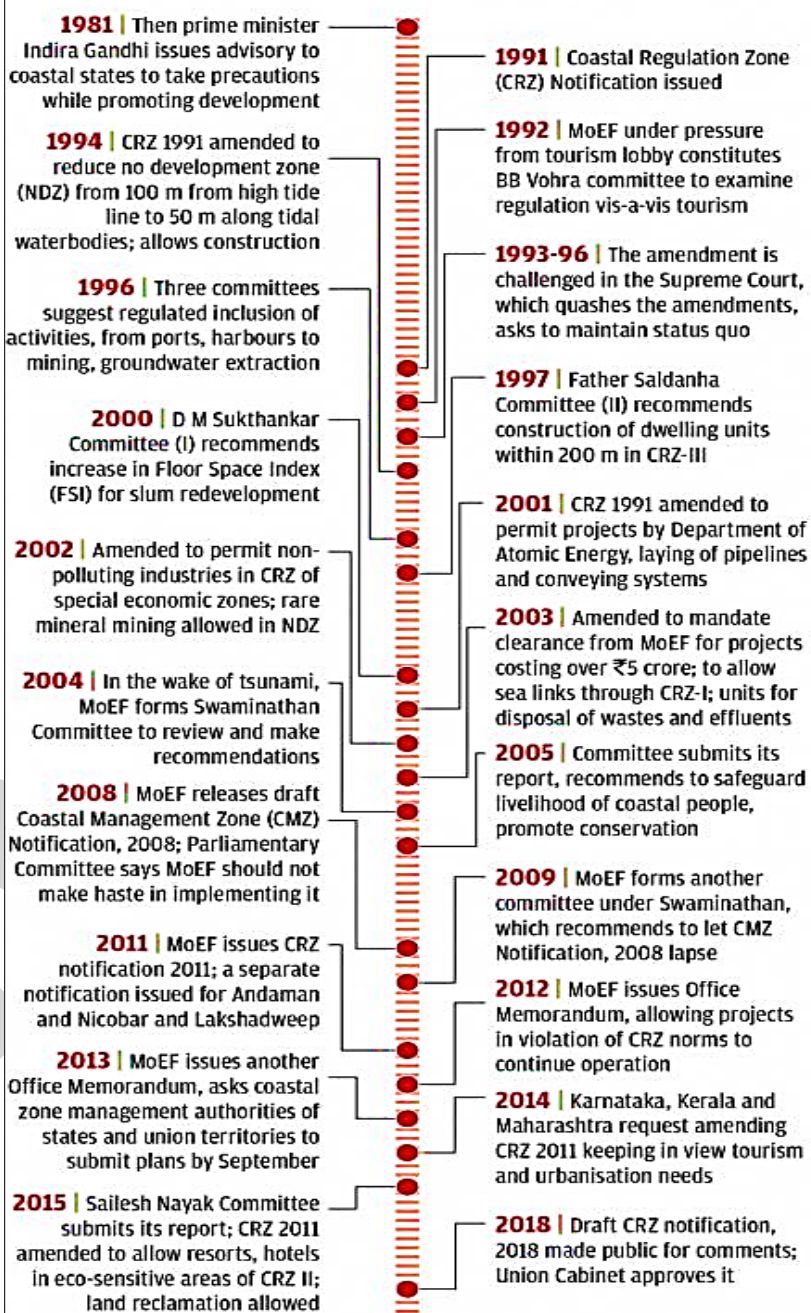
- Under the Environment Protection Act, 1986, the Government issued Coastal Regulation Zone (CRZ), to regulate activities along India's coasts, particularly regarding construction.
- The Coastal Regulation Zone Notification (CRZ) 2019, implemented by the Ministry, classifies the coastal area into different zones to manage infrastructure activities and regulate them.
- National Coastal Zone Management Authority (NCZMA) at the Centre is responsible for the implementation of the CRZ, State/Union Territory Coastal Zone Management Authorities (SCZMAs/UTCZMAs) in every coastal State and Union Territory and District Level Committees (DLCs) in every district that has a coastal stretch looks after CRZ.
- These bodies examine if CRZ clearances granted by the government are as per the procedure.

Points highlighted by CAG

- NCZMA is not a permanent body (ministry haven't notify it yet), therefore function and effectiveness of CRZ can be compromised.
- SCZMAs had recommended many projects without the submission of mandatory documents, there were instances of projects being approved despite inadequacies in the Environment Impact Assessment (EIA) reports.

GS CONNECT											
GS	1	2	3	4	5	6	7	8	9	10	11
I											
II											
III											
IV											
V											

Coastal regulation zone notification has been amended 34 times in 27 years, not to protect the coast but to open it up for development



- For instance-Tamil Nadu didn't have a strategy and institutional arrangement to protect and conserve the Gulf of Mannar Islands, In Goa, there was no system for monitoring coral reefs and no management plans to conserve turtle nesting sites and Lack of Sea patrolling in Gahirmatha Sanctuary, Odisha.

PEPPER IT WITH
Mangroves, Edge Effect,
Ecotone, Biodiversity act, WWF

About CRZs

Coastal areas are classified into four categories depending on the importance of the area-

Category I	<ul style="list-style-type: none"> ❖ Under this, areas that are ecologically sensitive and important, such as national parks marine parks, sanctuaries, reserve forests, wildlife habitats, mangroves, corals/coral reefs, etc. ❖ No new construction is permitted within 500 metres of the HTL in this area.
Category II	<ul style="list-style-type: none"> ❖ It deals with areas that have already been developed upto or close to the shore-line. ❖ No building is permitted on the seaward side of the existing road.
Category III	<ul style="list-style-type: none"> ❖ Areas that are relatively undisturbed and those that do not belong to either Category-I or II are classified as Category III. ❖ The areas upto 200 metres from the High Tide Line are earmarked as 'No Development Zone'. No construction is permitted within this zone except for repairs of existing authorised structures. Densely populated rural areas to be afforded greater opportunity for development.



Possible reasons

- ✓ Lack of funds, inadequate legal backing, non participation of academic persons and lack of participation on the community end are possible reasons for the inefficiency of authorities.
- ✓ Lack of coordination is another reason, especially in the case of political tug between two different parties.

Way Forward

- ✚ The institutional void pointed out by CAG must be fulfilled by gov. in letter and spirit.
- ✚ India's coastal community is already threatened due to climate change, unchecked development may further intensify the impacts.

Arctic Amplification

News Excerpt

Researchers published a study in the Communications Earth & Environment journal, concluding that the Arctic is heating four times faster than the rest of the planet.

GS CONNECT											
GS	1	2	3	4	5	6	7	8	9	10	11
I											
II											
III											
IV											
M											

Pre-Connect

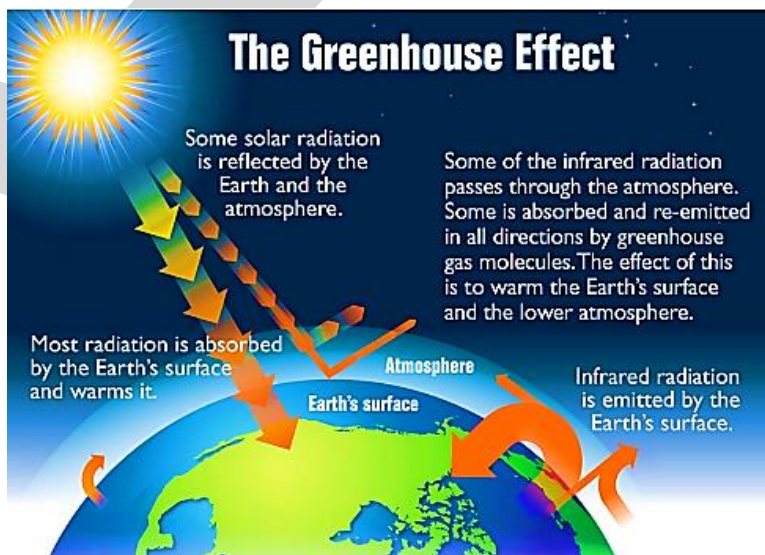
- In 2014, India deployed IndARC (India's first moored-underwater observatory) in the Kongsfjorden fjord, Svalbard, to monitor the impact of the changes in the Arctic Ocean on tropical processes such as the monsoons.
- According to the World Meteorological Organization's report, 'State of Global Climate in 2021', the sea level along the Indian coast is rising faster than the global average rate.

Key Points of Study

- According to the research, the Arctic water became warm four times faster than the rest of the planet.
- The Barents Sea located in the north of Russia and Norway is warming at seven times faster than the global average.
- A recent IPCC Report in 2019, mentioned that Arctic surface air temperature has increased by more than double the global average.
- The Arctic is warming more than twice as fast as the global average, a process known as Arctic amplification (AA).
- The primary cause of this phenomenon is ice-albedo feedback where, by melting, ice uncovers darker land or ocean beneath, which then absorbs more sunlight, causing more heating.

About Arctic Amplification (AA)

- The abnormal warming of the Northern Pole is mainly associated with anthropogenic emissions, following are the other factors-
 - Ice-albedo feedback:** This feedback arises from the simple fact that ice is more reflective (that is, has a higher albedo) than land or water surfaces. Global warming led to the melting of ice from land as well as from the sea surface, this led to the increase in absorption of sunlight by the earth's surface.
 - Earth got cooler, radiated this heat back into the atmosphere and GHG effect further caused the melting of ice and intensification in the Warming and Ice-albedo feedback.
 - As sea ice declines, it becomes younger and thinner, and therefore more vulnerable to further melting.
 - When the ice melts entirely, darker land or ocean surfaces can absorb more energy from the Sun, causing additional heating. Arctic amplification is driving ice sheet melt, sea level rise, more intense Arctic fire seasons, and permafrost melt.



- ✓ When the earth's atmosphere led to a larger difference in temperature, these changes are more pronounced at the northern latitudes and are known as the Arctic amplification.
- ✓ Warmness is also occurred due to any change in radiation balance trig by GHGs.
- ✓ GHGs led to changes in the atmosphere while increasing the average atmospheric temperature.

Causes

- The changing nature of ice-albedo, lapse rate, and water vapor are primary causes.
- With the melting of ice, the Arctic Ocean will be warmer, and GHG gases are also responsible for AA.

Implications

- ✚ **Jet Stream:** Arctic amplification affecting the mid-latitudes by weakening the jet stream. The jet stream is powered by the temperature difference between the Arctic and the mid-latitudes, and this difference is shrinking as the Arctic warms.
- ✚ **Polar Vortex:** Arctic amplification may affect mid-latitude weather by weakening the stratospheric polar vortex (a counterclockwise-swirling mass of air in the lower stratosphere).
 - Warm temperature anomalies in the Barents–Kara Sea region may drive changes in atmospheric circulation, that can disrupt the stratospheric polar vortex, ultimately affecting the tropospheric jet stream and leading to extreme cold outbreaks including western disturbance in the mid-latitudes.
- ✚ **Increased Sea level:** When ice melt, it would add extra water to the ocean, which results in an increased level of water, biodiversity will be diminished and climate-induced migration is likely to be observed.
- ✚ **Ocean Acidification:** The warming of the Arctic Ocean may cause the acidification of water and changes in the salinity levels.
- ✚ **Biodiversity:** The Arctic amplification is causing widespread starvation and death among the Arctic fauna.
- ✚ **Melting of Permafrost:** The permafrost in the Arctic is thawing (melting) and in turn releasing carbon and methane (GHGs), responsible for global warming.
- ✚ **New Diseases:** The melt will also release the long-dormant bacteria and viruses that were trapped in the permafrost and can potentially give rise to diseases. Ex- anthrax outbreak in Siberia in 2016.

Impacts on India

- > **Monsoon tendencies:** Changing the Arctic can influence the monsoon pattern in the Indian subcontinent. As the global climatic patterns are linked with each other. Impact on one cycle resulted in an effect on another circulation. Deficient rainfall may cause severe socio-economic and political issues.
- > **Extreme Weather Events:** Rapid change in weather circulation and wind movement coupled with the diminishing sea ice and warm temperatures may result in a powerful cyclone in the Indian Ocean. The instance of flash floods may increase in the northern plains.
- > **Submergence of India's coast:** Rising sea levels would attribute to the sinking of the western and eastern coastline of India. Migration, food, and security issues may loom in India.

Way Forward

- Reducing dependency on fossils, utilizing carbon capturing technologies to squeeze out carbon from the atmosphere.

PEPPER IT WITH
Paris Agreement, Threats to
Coral Ecosystem, BlueFlag Tag

- Fast mitigation at scale can still slow future Arctic warming, starting with immediate cuts to the short-lived climate pollutants—black carbon, methane, tropospheric ozone, and hydrofluorocarbons. Cutting emissions of these short-lived pollutants immediately can reduce the rate of Arctic warming by up to two-thirds.
- Pro-active monitoring and long-term efforts have to be carried out.
- There is a need to fund research to help the arctic environment.

Pyrene Remediation

News Excerpt

Researchers at the Council of Scientific & Industrial Research-Indian Institute of Petroleum (CSIR-IIP), Dehradun, have identified a fungus capable of removing carcinogenic polycyclic aromatic hydrocarbons (PAHs) from the environment.

About

- The PAHs are ubiquitous environmental pollutants originating from the combustion of petrogenic fossil fuels, and incomplete incineration of municipal wastes and biomass.
- The rapid pace of economic development and industrialisation has resulted in the release of several PAHs into the environment.
- Pyrene, possessing four benzene rings, belongs to the highly toxic class of PAHs, with carcinogenic and mutagenic properties.
- It gets lodged into the environmental matrices like soil, water and atmosphere, resulting in widespread environmental pollution, necessitating adequate remediation of contaminated environmental matrices.
- PAHs can also remain in the soil. The fungus identified by the researchers can cause microbial degradation, thereby improving the soil quality.
- This fungus acts to decrease the pollution level of the soil, the fungus 'T.maxima' may prove to be helpful in the remediation of especially pyrene.

GS CONNECT											
GS	1	2	3	4	5	6	7	8	9	10	11
I											
II											
III											
IV											
M											

Ethanol Plant

News Excerpt

On world biofuel day, the prime minister dedicated a 2nd generation (2G) ethanol plant to the nation which was Set up in Panipat.

Pre-Connect

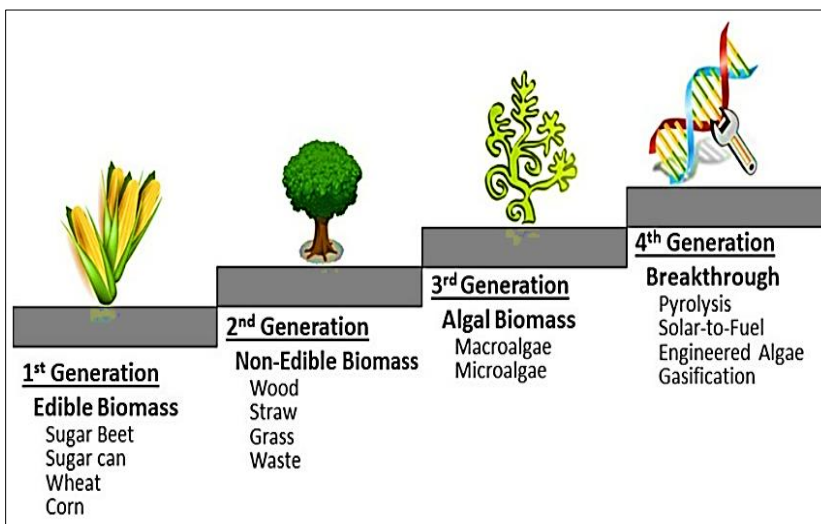
- Ethanol is an agro-based product, mainly produced from a by-product of the sugar industry, namely molasses.
- The government has been implementing Ethanol Blended Petrol (EBP) Programme, Under this programme Oil marketing companies (OMCs) sell petrol blended with 10% ethanol.
- Biofuels are generally classified into four categories.
- This year, Union Cabinet has approved Amendments to the National Policy on Biofuels - 2018 that seeks to increase farmers' income and to reduce India's oil-import dependence.
- The government seeking to double production and to have gasoline 20% blended with the spirit by 2025.

GS CONNECT											
GS	1	2	3	4	5	6	7	8	9	10	11
I											
II											
III											
IV											
M											

About the Ethanol plant

- This plant will begin its first test in the approaching winter when the stubble burning season starts.

- This plant is built by the Indian Oil Corporation at the cost of over Rs 900 crore, the plant, is based on indigenous technology and is located close to the Panipat refinery.
- It aims to utilise about 2 lakh tonnes of rice straw (crop-residue) annually to generate around 3 crore litres of ethanol annually.
- This project will have zero liquid discharge. By reducing the burning of rice straw (crop-residue), the project will reduce greenhouse gases.



Outcomes

- ✓ The plant would generate ethanol by using paddy straw as raw material. It will help in the management of paddy straw leading to lesser requirement of in-situ management.
- ✓ It will help to save billions of rupees by cutting crude imports, reducing carbon emissions and boosting farmers' incomes.
- ✓ Biofuel significantly reduces other pollutants like Carbon Monoxide, Sulphur Oxides, Nitrogen Oxides, Hydrocarbon and Particulate Matter when compared with fossil fuels
- ✓ The biofuel plant will be able to get rid of stubble without burning it. The instances of air pollution will be minimized to some extent.
- ✓ This project would provide direct employment to people involved in the plant operation and indirect employment would be generated in the supply chain for rice straw cutting, handling, storage etc.

Issues

- Economic models show that biofuel use can result in higher crop prices, though the range of estimates is wide. The use of food crops in producing ethanol may widen the gap of Hunger in India.
- Land use for biofuels may not cause a severe shortage of food; however, it will put pressure on the current increase of crops. A major concern people face is that the growing use of biofuels may also mean a growth in food prices.
- Biofuels Also may corrode or damage some of the metal and rubber fittings utilized in gasoline-based engines.

PEPPER IT WITH

Ethanol Blending Programme,
National Policy on Biofuels, PM Ji-
Van Yojana, E100

Conclusion

Ethanol blended petrol and diesel have enormous growth potential in India for use as fuels in the transport sector. Apart from lucrative promises of ethanol as an alternative fuel, It provides a cleaner and green environment and less dependency on the import of crude oil.

RAMSAR Sites

News Excerpt

Marking India's 75th Independence Day, With the inclusion of new Indian wetland sites, the total tally has increased from 64 to 75 now.

GS CONNECT										
GS	1	2	3	4	5	6	7	8	9	10
I										
II										
III										
IV										
M										

www.ksgindia.com

DELHI: VIJAY NAGAR 9717380832 & OLD RAJENDER NAGAR 9811293743 | JAIPUR: 8290800441 | PATNA: 7463950774 | RANCHI: 9939982007
BENGALURU: KORMANGALA 7619166663 & CHANDRA LAYOUT 7619136662 | BHOPAL: 7509975361 | INDORE: 7314977441 | IMPHAL: 9650245599
t.me/ksgindia | facebook.com/khanstudygroup | youtube.com/khanstudygroupks | Instagram.com/khanstudygroup | WhatsApp 9868005599

Pre-Connect

- Ramsar Convention on Wetlands of international importance is an international treaty for the conservation and sustainable use of wetlands.
- It was signed in 1971 and named after Ramsar city of Iran.
- Every three years, representatives of the contracting parties meet at the Conference of Contracting Parties (COP). Last COP was held at China as COP14 in 2021.

About New Sites

- India adds 11 more wetlands to the list of Ramsar sites to make total 75 Ramsar sites covering an area of 13,26,677 ha in the country in the 75th year of Independence.
- The 11 new sites include:
 - Four (4) sites in Tamil Nadu
 - Three (3) in Odisha,
 - Two (2) in Jammu & Kashmir and
 - One (1) each in Madhya Pradesh and Maharashtra.
- Designation of these sites would help in the conservation and management of wetlands and wise use of their resources.
- During 1982 to 2013, a total of 26 sites were added to the list of Ramsar sites, however, during 2014 to 2022, the country has added 49 new wetlands to the list of Ramsar sites.
- During this year (2022) a total of 28 sites have been declared as Ramsar sites. Based on the date of designation mentioned on the Ramsar Certificate, the number is 19 for this year (2022) and 14 for the previous year (2021).
- Tamil Nadu has a maximum no. of Ramsar sites (14 nos), followed by UP which has 10 nos. of Ramsar sites.

Functions of Wetlands

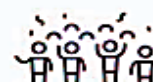
Wetlands are important societal assets and referred to as 'cradles of human civilization,' and 'kidneys of landscape.' Some of the major societal benefits (ecosystem services) and biodiversity values are as follows:



Serve as a principal source of fresh water such as drinking and water for irrigation.



Purify water by locking up pollutants, heavy metals in their sediments and vegetation.



Have deep connections with our culture and traditions, providing avenues for recreation and tourism



Act as a 'natural storage reservoirs' enabling excess water to spread out over a wide area and reducing its impact its depth and speed, thus acting as buffers for floods and droughts.



Provide a range of plants, animal and minerals for human use. Rice and fish are some of the key wetland products that sustain humanity.



Serve as habitats for over 1200 plant and 18000 animal species, including several of high conservation value locally, nationally and globally



Mangroves, coral reefs and sea grass beds help mitigate the impacts of tropical cyclones and tsunami, as well as stabilize shorelines



Mangroves and salt marshes acts as natural carbon sinks by storing atmospheric greenhouse gases and help in mitigating climate changes impacts



Provide stopovers for thousands of migratory bird species for resting, feeding and breeding during their journey of miles to avoid harsh winters of the temperate region.

Threats to wetlands

- Floodplain development often directly impacts wetlands by removing vegetation (increasing bank erosion), and filling or draining wetlands for building sites.
- Floodplain development sometimes indirectly impacts riparian wetlands through the installation of the artificial stream.
- Most river valleys have roads or railroads. These structures squeeze rivers and streams by narrowing the floodplain.
- The roads and railroads also affect drainage from uplands onto the floodplains, and many are built on top of areas that once were wetlands.
- Overgrazing harms wetlands through soil compaction, removal of vegetation, and stream bank destabilization. Wetlands offer some of the best forage for livestock as well as a water source and cover, so livestock tends to spend a disproportionately large time in wetlands.
- Wetlands often have fairly flat areas of rich organic soil that is highly productive agricultural land if drained. For this reason many wetlands have been drained and converted to agricultural lands.

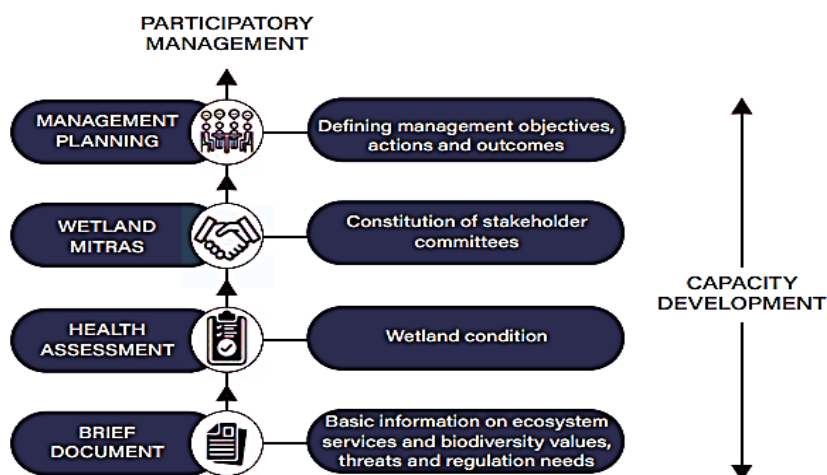
PEPPER IT WITH

Monterux Record, National Plan for conservation of Aquatic System, Wetlands (Conservation and Management) Rules, 2017

WETLANDS REJUVENATION – FOUR PRONGED APPROACH

Under the framework of 169 transformative ideas of the Government of India, a four four-pronged approach for the rejuvenation of wetlands has been developed, with an objective of: "initiating work on restoration and rejuvenation of at least 100 major wetlands across the country". Systematic restoration and rejuvenation of 130 wetlands have been initiated using the four-pronged approach, which includes:

- Developing baseline information in the form of 'Wetland Brief Documents'
- Rapid assessment of wetlands condition using a simple 'Wetland Health Card'
- Stakeholder platforms to enable collaborative and participatory management in the form of 'Wetlands Mitra' networks for each wetland.
- Management planning addressing wetlands' biodiversity and ecosystem services, values and threats.



SCIENCE AND TECHNOLOGY

Risk From Space Junk

News Excerpt

An uncontrolled space re-entry can cause serious damages, studies published by Nature Astronomy point towards the fact that there is 10% chance that they can even cause casualties.

Pre-Connect

What are Space Debris?

- These are space junk that orbits earth at very high speed.
- It consists of parts of space craft and launch vehicles debris and includes smaller fragments such as screws.
- These junks exist in various sizes, however even a miniscule debris can cause huge damages. For e.g., a 100g object could create an impact comparable to a 30-kg stone traveling at 100kmph.
- These are produced when:
 - There is a collision of satellites in such situation generally an inactive satellite collides with active satellites.
 - There is an explosion in space due to Anti-Satellite weapon testing.

Space Situational Awareness (SSA)

- ❖ It monitors and track all space objects whether man made or natural in a space weather.
- ❖ It helps in monitoring objects that can pose as a potential threat to satellites and launches. This allows for preventing disruptions to any crucial satellite-based communication.

KESSLER SYNDROME:

- Too much space junk can create a domino effect in which a chain reaction can occur wherein more and more objects will collide and create new space junk in the process until it renders Earth's orbit completely useless.

Outer Space Treaty, 1967

- The Outer Space Treaty provides the basic framework on international space law, including the following principles:
- Outer Space is for benefit of all mankind.
- It is free for exploration and use and is not subject to any claim of sovereignty.
- No state can place any form of weapon of mass destruction in orbit or on a celestial bodies.
- All celestial bodies shall be used for peaceful purposes.
- Astronauts are envoys of Mankind
- State held ultimate responsibility for its national space activities done by any sector.
- State are liable for damage caused by their space objects and should avoid harmful contamination of space and celestial bodies.
- Treaty act as a foundation of four other treaties which are
 - The "Rescue Agreement" 1968
 - The "Liability Convention" 1972
 - The "Registration Convention" 1976
 - The "Moon Agreement" 1984

Rescue Agreement
1968

- Based on Article 5 and 8 of the Outer Space Treaty
- States have to take all possible steps to rescue and assist astronauts in distress and promptly return them to the launching State
- Other State upon request should also provide assistance to launching States in recovering space objects that return to Earth outside the territory of the Launching State.

Liability Convention
1972

- Based on the Article 7 of the Outer Space Treaty.
- It mandates that State shall be liable to pay for compensation if its space objects causes:
 - Damage on earth surface
 - Damage an Aircraft
 - Damages due to its faults.
- It also provides for procedures for the settlement of claims for damages.

Registration Convention
1976

- Address the desire of the States for a mechanism that assist in the identification of space objects
- It addresses issues relating to States Parties responsibilities concerning their space object

Moon Agreement
1984

- It reaffirms Outer Space Treaty that the Moon and other celestial bodies, should be used exclusively for peaceful purposes.
- It mandates that the UN should be informed of the location and purpose of any station established on Moon
- Moon and its natural resources are the common heritage of mankind and hence its exploitation should be govern by an international law.

Treaties and Principles guiding Outer Space

Principles of Space Exploration

- The "Declaration of Legal Principles"- Governing the Activities of States in the Exploration and Uses of Outer Space
- The "Broadcasting Principles"- Governing the Use by States of Artificial Earth Satellites for International Direct Television Broadcasting
- The "Remote Sensing Principles"- Relating to Remote Sensing of the Earth from Outer Space
- The "Nuclear Power Sources Principles"- Relevant to the Use of Nuclear Power Sources in Outer Space
- The "Benefits Declaration"- International Cooperation in the Exploration and Use of Outer Space for the Benefit and in the Interest of All States, Taking into Particular Account the Needs of Developing Countries

Risk Posed by Space Junk

- ✓ In rocket science, a Space launching vehicle consist of various stages- Initial stage is called core stage which don't reach orbit and falls back to a precisely projected trajectory.
- ✓ However, if in case the core enters an orbit then de-orbit manoeuvring is required in which it is brough back to earth by steering it.
- ✓ During this steering most often, it crashes back as it goes out of control. This happens as variables involved make it difficult to precisely track the re-entry time and drop zone of rocket debris.
- ✓ Precision engineering in such situation is challenging as it is depended on:
 - Atmospheric drag
 - Variations in solar activity
 - Angle and Rotational variation
- ✓ A possible solution is to separate the launcher from the payload before leaving the atmosphere, this will help in giving the payload a final boost. However, China in recent times has avoided the use of second engine as a result it will cause more problems.

Network for Space Objects Tracking and Analysis (NETRA)

- ❖ It is an early warning system to detect debris and other hazards to Indian Satellites. Therefore, providing India with its own SSA (Space Situational Awareness)capabilities.
- ❖ It consists of connected radars, telescopes, data processing units and a control centre, which can track objects as small as 10 cm, up to a range of 3,400 km and equal to a space orbit of around 2,000 km.
- ❖ It will help in developing commercial potential for ISRO as it eases launch of multiple satellite, further for India its own SSA capabilities mean a clear protection for its national security against attack on crucial commercial satellite.

PEPPER IT WITH

Clearspace-1 North American
Aerospace Defence Command,
Collision Avoidance Manoeuvres
(CAM) Kessler syndrome

Alpha Fold**News Excerpt**

A watershed movement is achieved in structural biology, By using AlphaFold technique a London-based company DeepMind has made three-dimensional structure of more than 200 million proteins paving way for deeper integration between biology and artificial intelligence.

GS CONNECT											
GS	1	2	3	4	5	6	7	8	9	10	11
I											
II											
III											
IV											
M											

Concept of Deep Neural Network

- Machine learning can be understood as a process through which a machine learns from itself through learning algorithms
- Deep learning can be understood as an updated version of machine learning. It can handle much larger input than machine learning.
- Neural Network forms the basis of human life, its neural network in human whose combination produces an action. Artificial neural network is the attempt to generate capabilities present in humans in a computer.
- In a Neural network, there exist a black box between input and output, it also known as hidden network.

UniProt

The Universal Protein Resource (UniProt) is a comprehensive resource for protein sequence and annotation data. It is a collaboration between the European Bioinformatics Institute (EMBL-EBI), the SIB Swiss Institute of Bioinformatics and the Protein Information Resource (PIR)

- A baffling question is when normal computer has much more capability than a human mind then why there is need for a computer to work like a human mind? The answer lies in the fact that a human mind can store large amount of input and based on that identifies object. For instance, when a human face sees a face, it identifies it even if it has some change of facial changes however a machine cannot. Hence, an artificial Neural Network relearn from its past experience to produce human like decision.
- Integration of deep learning with neural network will produce deep neural network that can not only solve real world complex problem but also helps in developing smart solutions which find various applications such as:
 - Medical applications- It can help in early detection of growth of cancerous cells and provide targeted therapy.
 - Self-driving cars
 - Facial Identification
 - Critical Control System.

RoseTTaFold

It is developed by University of Washington and act as another AI based tool that predict protein structure.

PEPPER IT WITH

Artificial Intelligence, Applications of Deep Learning,

About AlphaFold

- It is an artificial intelligence-based protein structure prediction tool.
- It uses deep neural network technique in which protein sequences are fed as an input and three-dimensional output are produced.

How AlphaFold Works?

- ✓ Available protein structures are fed into protein data bank (PDB) which act as a training module.
- ✓ Now the system identifies those proteins which are not part of PDB using the said training, this helps in relearning and better prediction in future.
- ✓ Through these steps AlphaFold has now predicted the structures of the entire 214 million unique protein sequences deposited in the Universal Protein Resource (UniProt) database.

Impact:

- Till now protein identification techniques, whether cryogenic electron microscopy or x-ray crystallography are both time consuming and lack accuracy.
- Studying human diseases becomes easy when Protein structure is known.
- Accelerate drug and vaccine development.

Moving AlphaFold in India

- AlphaFold database must be utilised by Indian scientists in designing better vaccine and drugs, given, India status as world pharmacy will gain an edge in lucrative market.
- AlphaFold will also help in facilitate joint collaborations with the prevalent hardware muscle and data science talent in the private sector and specialists in academic institutions to pave the way for data science innovations.

Google Street View

News Excerpt

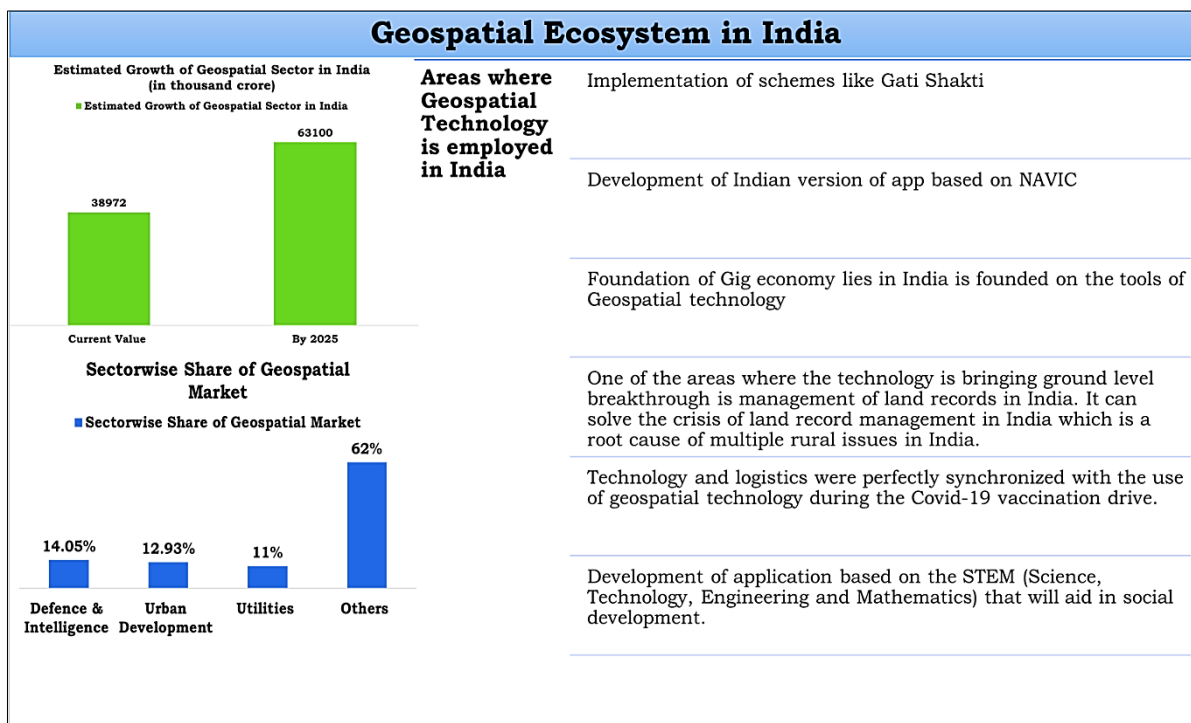
Following the guidelines of National Geospatial Policy, Google will be launching Street View in Ten Cities in India.

Understanding Geospatial Technology

- Geospatial Technology aids in geographic mapping and analysis. They collect, analyse, store, manage, distribute, integrate and present geographic information

GS CONNECT											
GS	1	2	3	4	5	6	7	8	9	10	11
I											
II											
III											
IV											
M											

- It comprises of Global Information System (GIS), Navigation system (Like GPS or NAVIC), Remote sensing, three-dimensional modelling based on survey
- Geospatial Technology provides better situational awareness that allows for accurate measurement that's aids in better management along with the point predictive and prescriptive analysis. All these help in planned interventions .



About National Geospatial Policy 2021

- It envisaged a liberalised geospatial section in India and will allow sharing of only those datasets which are generated by use of public fund.'
- It tries to create a balance between development through use of geospatial data and upholding security interests.
- It will usher a geospatial ecosystem which on one hand integrate India more deeply in global supply chains and at the same time generate geospatial knowledge and expertise.

Key Features of Policy

- ✓ Topographic data will be provided by The Survey of India and will be made readily accessible.
- ✓ Data sharing will be according to guidelines laid down under the National Data Sharing Accessibility Policy (2012).
- ✓ Data will be share in such a format that its interoperability allows for the ease of all users.
- ✓ Both training and certification would be provided to those interested in geospatial education.

Significance of Policy

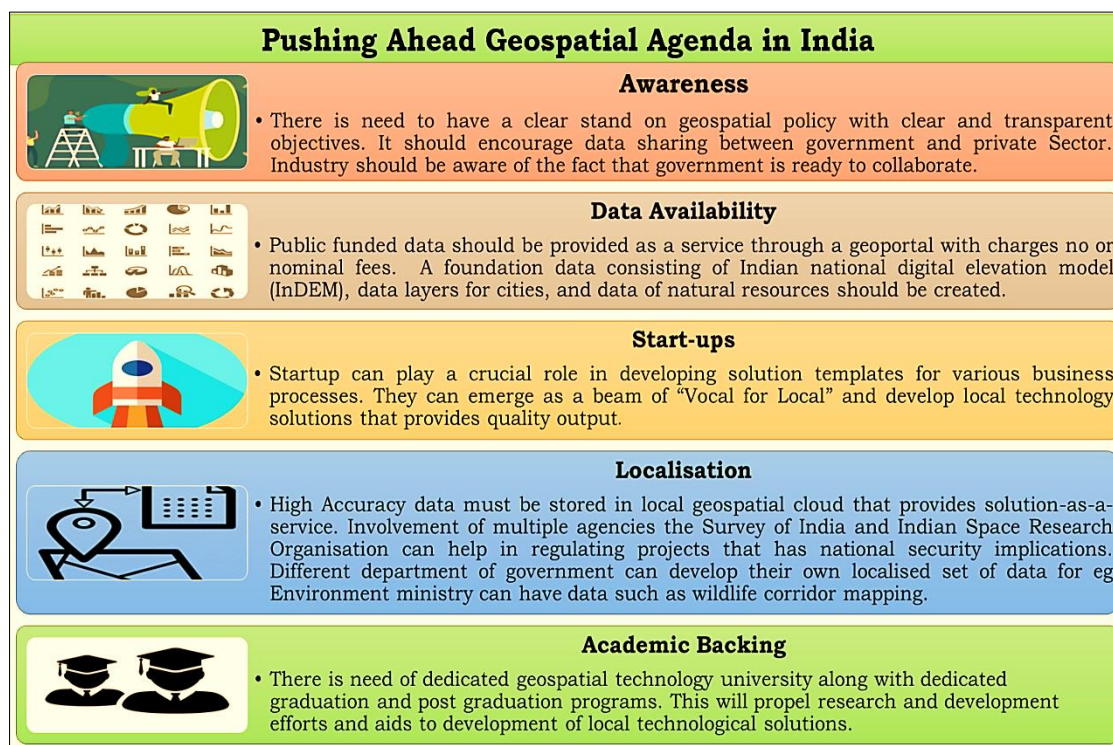
- It will end data duplication and will prevent wastage of resources.
- Standard format of data sharing will allow for global companies to compete and provide better services to users.
- A liberalised geospatial policy will help in generating about ₹1 lakh-crore by the year 2029 with 13% Compound Annual Growth Rate (CAGR).
- Employment opportunities will increase for youth with new skill set of geospatial technology education.

www.ksgindia.com

DELHI: VIJAY NAGAR 9717380832 & OLD RAJENDER NAGAR 9811293743 | JAIPUR: 8290800441 | PATNA: 7463950774 | RANCHI: 9939982007
BENGALURU: KORMANGALA 7619166663 & CHANDRA LAYOUT 7619136662 | BHOPAL: 7509975361 | INDORE: 7314977441 | IMPHAL: 9650245599
t.me/ksgindia | facebook.com/khanstudygroup | youtube.com/khanstudygroupksg | Instagram.com/khanstudygroup | WhatsApp 9868005599

About Google Street View (GSV)

- GSV provides actual immersive view of any street in a 360-degree format.
- GSV uses a special camera, generally mounted on vehicle whose only job is to ride along the town.
- Images are then patched together to create a 360-degree view that allow users swipe through to get a detailed view of the location.
- Given the security situation India faces, India opted out of Street view in areas like government properties, defence establishments and military areas.



Issues with Street View

- Privacy is the primary issue with the street view, people complained that google street view showed their faces among other things.
- Google used blurring method; however, such data always has a potential to be misused.
- Sensitive locations have threats from such views as google used not only cars but helicopters, hot air balloons and might even use drone in future to capture such data in that situation security of country get jeopardised.

PEPPER IT WITH
Gati Shakti Scheme,
NAVIC, Data Localisation

Conclusion

In the world where "what is seen is sold" India cannot miss-out the opportunity at the time security is the paramount priority of the government and hence middle path suggested under the National Geospatial Policy 2021 is the best way out. Also, Street View can be used as a tool to implement good governance, citizen can register their video complaints by sharing real time view of any area where requisite services are missing. This shows geospatial technology has all round advantages, which India shouldn't miss out.

Antimicrobial Resistance and Cholera

News Excerpt

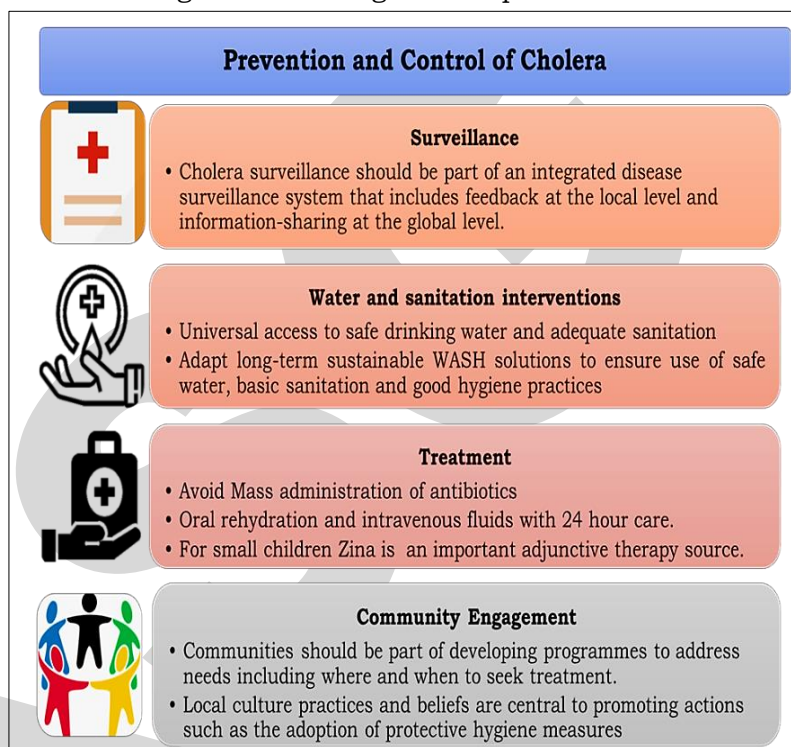
New research has pointed towards the decline of antimicrobial resistance in Cholera-causing bacteria.

OS CONNECT											
OS	1	2	3	4	5	6	7	8	9	10	11
I											
II											
III											
IV											
V											

Pre-Connect

Understanding Cholera

- It is an infection of the intestine caused by the bacteria called *Vibrio Cholerae*.
- It is infectious as well as life-threatening diseases recognised as public health hazard. It is also an indicator of inequity and lack of social development.
- It is caused by drinking water or eating food contaminated with the cholera bacterium and therefore can spread in areas which have inadequate treatment of sewage and drinking water.
- World Health Organisation (WHO) recommends three oral vaccines which require two doses for full protection. These are Dukoral, Sanchaol and Euvichol-Plus.
- Global Task Force on Cholera Control (GTFCC), a diverse network of more than 50 UN and international agencies, academic institutions, and NGOs that supports countries affected by the disease launched "Ending Cholera: a global roadmap to 2030" in 2017 to reduce cholera deaths by 90% by 2030.



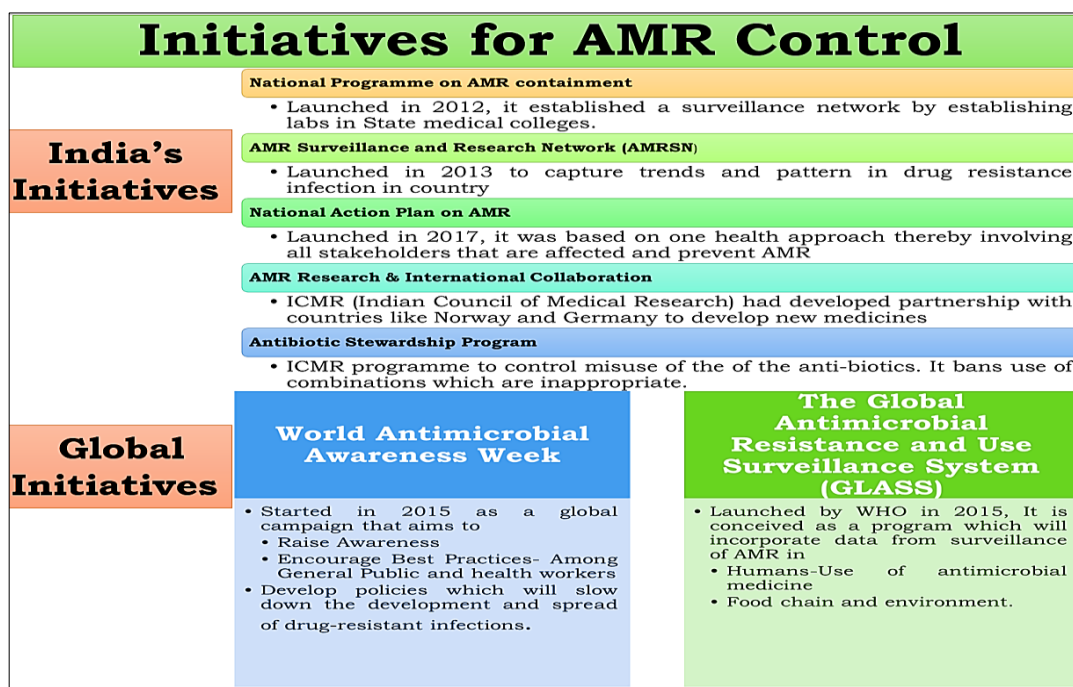
"WHO is proud to be part of this new joint initiative to stop deaths from cholera .

Understanding Anti-Microbial Resistance (AMR)

- AMR is a condition in which any microorganism acquires a resistance against antimicrobial drugs thereby rendering them useless in treatment of an infection.
- These types of microorganisms are also known as "superbugs".
- AMR is among the top ten threats recognised by WHO to global health.
- AMR develops due to rapid misuse of antimicrobials as medicine for both human and crops in Agriculture.
- Unsanitary practices in pharmaceutical manufacturing sites also causes the same.
- Convergence of several factors such as large population, rising incomes that facilitate purchase of antibiotics, high burden of infectious diseases and easy over-the-counter access to antibiotics causes AMR.
- A study reported by ICMR (Indian Council of Medical Research) from 10 hospitals showed that when Covid patients acquire drug-resistant infections in hospitals, the mortality is almost 50-60%

Key Findings of the Report

- ✓ Only two genomes of Cholera cause infections that leads to epidemics and pandemics these are O1 and O139.
- ✓ Research was focused on the genome O139 and traced the reason for its dying down after taking over from O1, it found out that there are two genomic evolution which included:
 - Its cholera toxin is changed
 - It lost its AMR
- ✓ The loss of AMR capability of O139 makes it less competitive advantage against the O1.



Recommendations

- Monitoring and surveillance of all serotypes and serogroups to identify which might become major outbreak.
- Vaccines and treatments should be regularly re-evaluated for developing efficiency to any newly evolving variants.

PEPPER IT WITH

Global Task Force on Cholera Control
International Federation of Red Cross and Red Crescent Societies (IFRC) Cholera Kits WASH
New Delhi Metallo-beta-lactamase-1 (NDM-1)

African Swine Fever (ASF)

News Excerpt

Pig farm in Kerala has detected the case of ASF due to which more than 15 pigs on the farm had died.

Pre-Connect

Classical Swine Fever

- It is a disease among pigs, also known as Hog Cholera. It causes widespread economic damage in the sector as it has 100% mortality rate.

GS CONNECT										
GS	1	2	3	4	5	6	7	8	9	10
I										
II										
III										
IV										
V										

- It is caused by the genus Pestivirus of the family Flaviviridae. It is the same family that cause bovine viral diarrhoea in cattle and border disease in sheep.
- Indian Council of Agricultural Research ICAR-Indian Veterinary Research Institute IVRI developed a vaccine using a Cell Culture CSF Vaccine (live attenuated) using the Lapinized Vaccine Virus from foreign strain that can induce protective immunity from day 14 of the Vaccination till 18 Months.

World Organisation for Animal Health

- ❖ It is an intergovernmental organisation responsible for improving animal health worldwide. India is one of the member countries.
- ❖ It develops rules that Member Countries can use to protect themselves from the introduction of diseases and pathogens. For example, Terrestrial Animal Health Code.
- ❖ It is recognised by the World Trade Organization as reference international sanitary rules.

About ASF

- It causes an acute form of haemorrhagic fever in domestic and wild pigs
- ASF was reported in Africa in 1920 but by 2007 it has spread to multiple countries across Africa, Asia and Europe, in both domestic and wild pigs.
- Though it has 95-100% mortality is not a threat to human beings and only spreads from animals to other animals.
- World Organisation for Animal Health lists ASF in its Terrestrial Animal Health Code

PEPPER IT WITH

Foot and Mouth Diseases,
Lumpy Skin disease

Langya Henipavirus

News Excerpt

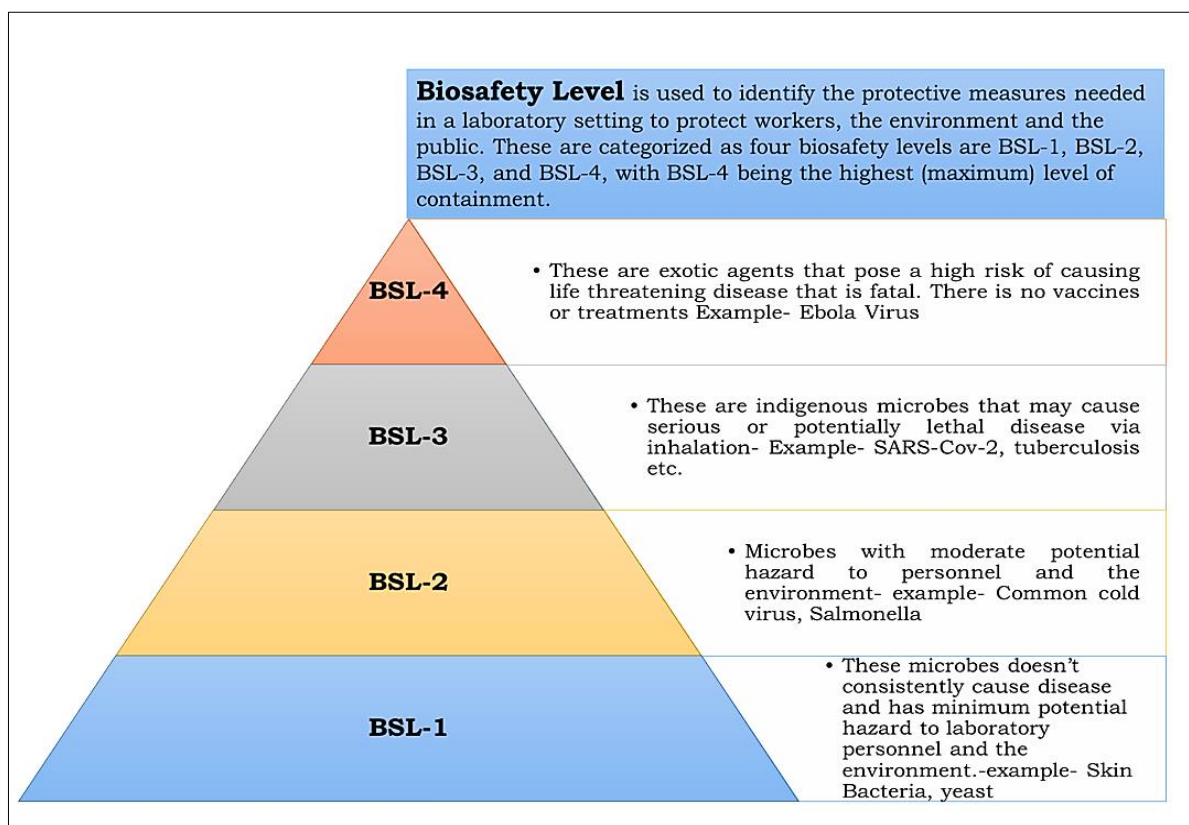
A new zoonotic disease caused by Langya Henipavirus has raised concern as it is considered as Biosafety Level 4 (BSL4) Pathogen.

Novel Langya Virus

- Langya Virus is a part of genus Henipavirus which is transmitted from animals to humans.
- It has a single-stranded RNA genome with negative orientation. These are larger genomes longer than any other known phosphoprotein in the Henipavirus Paramyxovirinae family.
- Novel langya virus is a phylogenetically distinct Henipavirus, **Other viruses of the type Henipavirus discovered earlier are the Mojiang, Ghanian, Cedar, Nipah and Hendra.** Among them Nipah and Hendra are other known virus which earlier have caused fatal illnesses in humans.
- Langya's genome is closely related to the Mojiang Henipavirus which was discovered in southern China.
- **General Symptoms include:** Fever, Fatigue, Cough, Nausea, Headache, Loss of appetite etc.
- Impact of Virus:
 - Since Langya belongs to the same family as Nipah virus hence it has potential to become another pandemic.

GS CONNECT											
GS	1	2	3	4	5	6	7	8	9	10	11
I											
II											
III											
IV											
M											

- Its fatality is also a cause of concerns from public health perspectives.



Why Zoonotic Diseases are rising

Around 60 per cent of all human diseases and 75 per cent of all EIDs(Emerging Infectious Disease) among humans originate in animals. They have caused over 2.7 million deaths and over 2.5 billion cases of human illness every year. There are several reasons associated with it such as:

- **Human Interactions and Dependency:**
 - Rise of Zoonotic diseases can be linked with change in the interaction of Humans with Forest system.
 - Despite there are no hunter-gatherers left, more than 20 per cent of human nutrition comes through wild meat and fish.
 - Populations living in and around forests also depend to a great extent on the forests as a source of livelihood.
- **Change in Land use pattern:**
 - Research shows that changes in land use, including deforestation and forest fragmentation, urbanisation and intensification of agriculture, have contributed greatly to the rise in the incidence of infectious diseases.
 - Changes in forest cover and land use increase human contact with pathogens that were earlier contained within forests.
 - A rapid increase in population provides a ready pool of hosts for pathogens and enables adaptation.
- **Loss of Biodiversity:**
 - Biodiversity act as a buffer against the spread of pathogens however human activities have caused biodiversity degradation as result buffer against zoonotic diseases are lost.

- A loss of biodiversity due to a change in the habitat often results in a simplification of the environment through elimination of specialist species (buffers against pathogens) and overpopulation of generalist species.
- Habitat destruction can also force species to venture into urban locales in search of food.
- **Migration and Disease Diversification and evolution:**
 - Some of the Zoonotic Diseases have adapted to a human-sustained cycle and therefore stays more in human than in animals. A prime example is HIV (Human Immunodeficiency Virus) emerged from chimpanzees and gorillas in Central and Western Africa. Before adapting to human-to-human transmission.
 - The emergence of the disease in new regions where it was not found earlier points towards possible diversification of disease reservoirs.
 - Migratory impacts on proliferation and adaptation of pathogens can be much more severe. For example, Bird Flu as birds do not obey geographic borders, the virus has caused flu globally
- **Change in Human Ecology:**
 - Changes in human ecology are responsible for the speed of transmission and the global scope many diseases have recently acquired.
 - Construction of roads and dams in recently cleared forest areas and rapid urbanisation often bring people, especially migrant populations that are immunologically naïve, in close contact with pathogens. Prime example is spread of chikungunya

PEPPER IT WITH

Ebola Virus, SARS, SARS-COV-2, Pandemic guidelines of WTO

Conclusion

Diseases born in forests are no longer restricted to forests. As humans have altered forests to suit their needs, many organisms in forests have also adapted to humans. Human mobility provides these organisms gateways to uncharted territories. Therefore, need of the hour is the restoration of wildlife health. It will also require close monitoring of how the increasing ecological footprint of humans is affecting health and disease dynamics. All this can be only achieved through coordinated, multidisciplinary and multi-institutional efforts.

Electromagnetic Field (EMF) Emissions

News Excerpt

Recently, Minister of State of communications asserted that there is no impact on the environment due to electromagnetic field levels in India.

Electromagnetic Field Emissions

- Electromagnetic field is a combination of invisible electric and magnetic fields of force.
- While electric fields are generated due to difference of voltages, magnetic fields are created when electric current flows. Higher voltages translate into stronger electric field while strong current translates into stronger magnetic field. An electric field will exist even when there is no current flowing. If current does flow, the strength of the magnetic field will vary with power consumption but the electric field strength will be constant.
- Electromagnetic fields are ubiquitous in nature and produced by the building up of electric charges in the atmosphere associated with thunderstorms. There are numerous human-made sources of EMF includes fields generated by higher frequency radio waves are used to transmit information used in radio stations or mobile base stations.
- There are several issues associated with Electromagnetic emissions such as:
 - ✓ It is considered as carcinogenic in nature .
 - ✓ It is associated with several health problems such as leukaemia, miscarriages, chronic fatigue, weakened immune system, forgetfulness, depression, nausea and loss of libido.

GS CONNECT											
GS	1	2	3	4	5	6	7	8	9	10	11
I											
II											
III											
IV											
M											

Government Stand

- Government maintains that EMF emissions from mobile towers are non-ionizing radio frequencies and hence doesn't cause any adverse environmental impact.
- The present norms for Electromagnetic Field (EMF) emissions from mobile towers in **India are already ten times more stringent (even lower) than the safe limits** set by WHO in its Non-Ionizing Radiation Protection (ICNIRP) guidelines.
- Government of India had devised a well-structured process and mechanism for monitoring any violation of EMF limits by the Telecom Service Providers (TSPs). All TSPs had to submit a self-certificate before they began commercial operations.
- Department of Telecommunications (DoT) regularly carry out the EMF audit of TSPs Base Transceiver Station (BTS) on a random basis and imposes penalties on those who exceeds emission limits. Further, if TSPs continue to flout rules then they are liable to be shut down as per the prescribed procedure.

PEPPER IT WITH
Electromagnetic Spectrum,
Earth Magnetic Field ICNIRP

Maiden flight of the SSLV

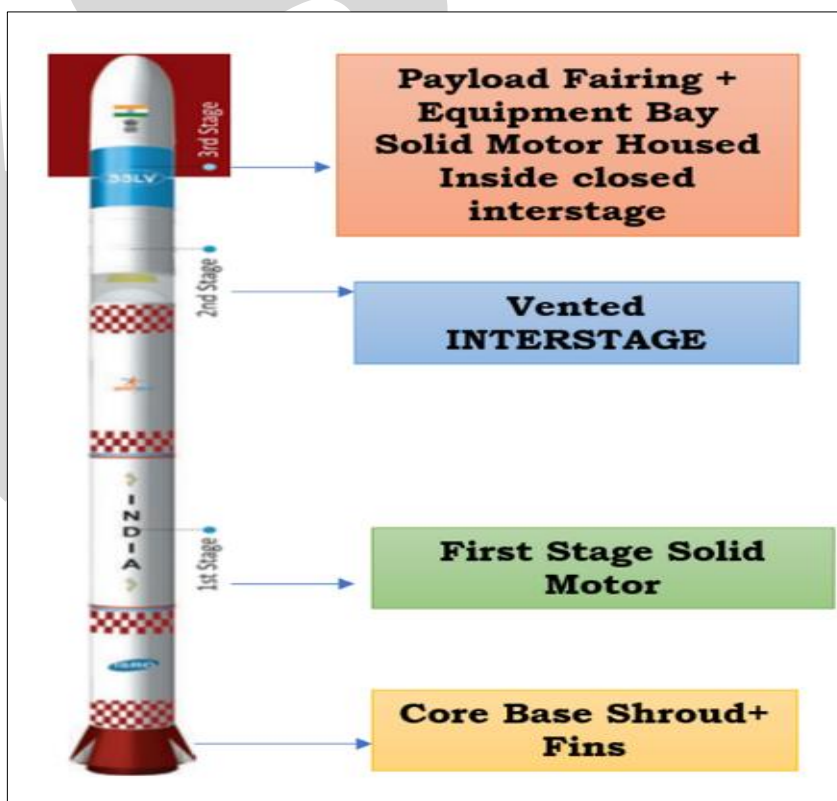
News Excerpt

Indian Space Research Organisation (ISRO) attempted to launch its **first flight of the Small Satellite Launch Vehicle (SSLV)**. Launch carried an Earth Observation Satellite EOS-02 and a student satellite called as AzaadiSAT. Though mission ended in a failure it nevertheless laid foundation of ISRO new path towards space commercialisation.

GS CONNECT											
GS	1	2	3	4	5	6	7	8	9	10	11
I											
II											
III											
IV											
M											

About SSLV

- It is a three-stage launch vehicle that carries three Solid Propulsion Stages and a liquid propulsion-based Velocity Trimming Module (VTM) as a terminal stage.
- These weigh around 110 tonnes and are capable of launching 500kg satellites into 500 km Low Earth Orbit (LEO) and 300 kg to Sun Synchronous Orbit (SSO).
- SSLV allows for low turn-around time with flexibility in accommodating multiple satellites. Its minimal launch infrastructure requirement makes it a low-cost alternative .



Significance of SSLV

- Advancement in Nanotechnology has allowed for development of small satellites which are capable of providing complex functions with smaller payloads. This allowed for diversification of space market with new players such as businesses, universities, laboratories etc.
- The need for space-based data calls for launch of small satellites that provides communication and surveillance data.
- Organizations are increasingly developing a constellation of satellites in space. Prime example is projects like SpaceX's Starlink and One Web.

Circular vs Elliptical Orbit

- ❖ Most satellite that orbits earth are placed in circular orbits especially when they are used for imaging earth as circular orbit provides it with a fixed distance, thereby keeping cameras focused.
- ❖ In elliptical orbit satellites are placed for temporary purposes and then pushed up to circular orbits at a greater height. In some cases, their acceleration is increased to the point where their trajectory becomes hyperbolic and spacecraft escapes the gravity of the Earth in order to move further into space

About SSLV DV-1 and EOS-02 Mission

- ✓ EOS-02 was part of microsat series satellite and was an earth observation satellite designed and realised by ISRO. It would have provided optical remote sensing in infra-red band with high spatial resolution.
- ✓ AzaadiSAT was students designed CubeSat meant for conducting femto-experiments. This would have measured the ionising radiation in its orbit which would be transponded back through ham radio frequency to enable amateur operators to access it. It was built by girl students from rural regions across country and assembled by student team of "Space Kidz India".

Way forward:

The development and manufacture of the SSLV are expected to create greater synergy between the space sector and private Indian industries – a key aim of the space ministry. Indian industry has a consortium for the production of PSLV and should come together to produce the SSLV as well once it is tested. Small satellite launches have so far depended on 'piggy-back' rides with big satellite launches on the Polar Satellite Launch Vehicle (PSLV) — ISRO's work-horse with more than 50 successful launches. As a result, small satellite launches have relied on ISRO finalising launch contracts for larger satellites.

National Mission on Interdisciplinary Cyber-Physical Systems (NM-ICPS)

News Excerpt

Ministry of Science & Technology has identified joint research projects under the NM-ICPS. These will be jointly implemented by TIHs (Technology Innovation Hubs) and research institutions from the USA. It will allow for collaborative research and development between the two countries in the area of CPS (Cyber-Physical Systems).

GS CONNECT											
GS	1	2	3	4	5	6	7	8	9	10	11
I											
II											
III											
IV											
M											

Pre-Connect

What does Cyber-Physical System mean?

- CPS is about integrating sensing, computation, control and networking into physical objects and infrastructure and then connecting them to the internet and to each other.
- This enhances capability, adaptability, scalability, safety, security and usability of a simple embedded system.
- Examples include- Self-driving cars, Smart sensors that detect changing conditions, NewTech Farming.

- CPS and its associated technologies, like Artificial Intelligence (AI), Internet of Things (IoT), Machine Learning (ML), Deep Learning (DP), Big Data Analytics, etc are transforming human life.
- They drive societal progress, generate employment, foster economic growth and to improve the overall quality of life and sustainability of the environment.

About NM-ICPS

- Approved by cabinet in 2018 for a period of 5 years, NM-ICPS envisages an innovation in new age technologies.
- It will bring coordination among Central Ministries, State Governments, Industry and Academia.
- It will address technology development, application development, human resource development & skill enhancement, entrepreneurship and start-up development in Cyber Physical System (CPS) and associated technologies.
- Under the mission, **15 Technology Innovation Hubs (TIH), 6 Application Innovation Hubs (AIH) and 4 Technology Translation Research Parks(TTRP)** would be created that will connect all stakeholders and develop a hub and spoke model by linking R&D with organisations.
- Focus areas will be
 - Technology Development,
 - HRD & Skill Development,
 - Innovation, Entrepreneurship & Start-ups Ecosystem Development, and
 - International Collaborations.

PEPPER IT WITH
National Cyber Security Policy,
National Policy on electronics

Significance of NM-ICPS

- ✓ CPS is a strategic resource as it provides innovate capabilities in dealing with several challenges with cutting edge solutions.
- ✓ Multiple sectors benefit from advancement in CPS such health, education, environment etc. and develop capabilities associated with emerging trends of Industry 4.0, Sustainable Development Goals (SDGs) and Smart cities.
- ✓ It changes whole paradigm of skill market and provide youth with the opportunity to develop new and advanced skill set. This trained manpower than can work both in country and provide services in foreign country, leading to resource generation in India.

SECURITY

Technical upgradation of Indian Armed forces

News Excerpt

The Indian Air Force (IAF) has drawn up a three-year timeline to phase out the remaining four MiG-21 fighter squadrons.

GS CONNECT											
GS	1	2	3	4	5	6	7	8	9	10	11
I											
II											
III											
IV											
M											

Pre-Connect

- The Indian Air Force is looking towards reviving these fighter squadrons back into service with the indigenous Light Combat Aircraft (LCA) Tejas.
- MiG-21s were the mainstay of the IAF for a long time. However, the aircraft has had a very poor safety record of late. The aircraft is the backbone of the force in some ways, it is also accident-prone.
- To help the IAF replace its ageing fighter fleet, the Defence ministry has sealed a deal with the Hindustan Aeronautics Ltd (HAL) for the procurement of 83 **Tejas fighter aircraft** to meet Indian Air Force requirements.
- The IAF is also in the process of procuring 114 **Multi-Role Fighter Aircraft (MRFA)**.
- India is also working on an ambitious \$5 billion project to develop a fifth-generation medium-weight deep penetration fighter jet to significantly bolster its air power capability.

Analytica

Possible Reasons for the incompetence

- Firstly, there is an **increasing age and obsolescence** in some of our core equipment, it is imperative to examine specific areas such as all-weather surveillance and targeting, drone and counter-drone technologies, night fighting capabilities and communication technologies to include battlefield management systems.
- Secondly, it is believed that the **absence of any more fighter jets** in the Indian Air Force for a long time is also one of the reasons for the accidents.
- For a long time, with the inclusion of no new fighter jets in the Air Force, the entire weight is on the MiG-21. In the last few decades, the image of MiG-21 fighter jets has received a lot of shock due to its accidents and the casualties of pilots. This is the reason why it is being called "**Flying Coffin**", i.e. **a coffin floating in the air**.
- Thirdly, as far as **imports are concerned** there is no doubt that induction of new equipment is often caught up in **procedural delays**. For example, the induction of the Rafale has also been witness to many such delays.
- There is no doubt that warfare in future needs the **latest technology and technical oriented** personnel to manage the complex systems be it missiles, tanks, guns, aircraft and ships. With the prevailing changes, there is also no doubt that obsolescence in technologies are taking place faster.

Military upgradation in multiple domains

Indigenisation is giving continuous boost to the Atmanirbhar Bharat Abhiyaan

- ✓ India has indigenously developed complimentary rocket and missile technologies, through the Integrated Missile Development Program initiated in the 80's.
- ✓ India is continuously growing in its power to indigenously design, develop and manufacture advanced cutting edge technologies and systems in the Defence Sector. About 500 Indian companies including MSMEs in the design and manufacturing sectors are working with HAL in this procurement. The programme would act as a catalyst for transforming the Indian aerospace manufacturing ecosystem into a vibrant Atmanirbhar-self-sustaining ecosystem.
- ✓ Indian Army has recently received the first lot of indigenously-developed equipment and systems. These include **Future Infantry Soldier as a System (F-INSAS)**, new generation **anti-personnel mine 'Nipun'**, rugged and automatic communication system with enhanced capabilities, upgraded sights system for tanks and advanced thermal imagers.

- ✓ The F-INSAS system includes an AK-203 assault rifle, which is a gas-operated, magazine-fed and fire assault rifle.
- ✓ Primarily, Anti- Personnel mine (NIPUN) works as the first line of defence against infiltrators and enemy infantry.
- ✓ The recent **ASAT** capability demonstration, the maritime domain awareness initiative of the Indian Navy and testing of **Agni 5**, with its tremendous reach, are some examples of India's strategic military science and technology prowess working in harmony.
- ✓ India has the 'end to end' knowhow and capability to design, develop and produce/build most conventional systems.
- ✓ The Indian Navy leads the way with the capability to design and build warships.
- ✓ India has already built **stealth frigates** (INS Kolkata series) and are in the process of building submarines (normal and nuclear) and aircraft carriers indigenously.
- ✓ The Artillery modernisation program has been a success which includes, design and development/refurbishment of guns, missiles, rockets and ammunition.
- ✓ **Solar Photovoltaic Energy Project at Siachen base camp:** A solar photo-voltaic plant has been installed there to improve the overall energy requirements and also obviate dependence on fossil fuels.
- ✓ India has now started producing fighter aircraft (Tejas) and helicopters (Dhruv) indigenously. Military bridging equipment is almost completely indigenised.
- ✓ The **Brahmos Missile system** with a 3 Mach capability is a step short from being hypersonic.
- ✓ IIT Madras has recently developed the **indigenous Shakti processor** which will revolutionise and securitise all military grade computing systems and networks.
- ✓ However there are many more technologies to master to attain strategic autonomy.

Light Combat Aircraft Mk-1A variant(Tejas)

- It is an indigenously designed, developed and manufactured state-of-the-art modern 4+ generation fighter aircraft.
- This aircraft is equipped with critical operational capabilities of Active Electronically Scanned Array (AESA) Radar, Beyond Visual Range (BVR) Missile, Electronic Warfare (EW) Suite and Air to Air Refuelling (AAR) would be a potent platform to meet the operational requirements of Indian Air Force, IAF.
- It is the first "Buy (Indian-Indigenously Designed, Developed and Manufactured)" category procurement of combat aircrafts with an indigenous content of 50% which will progressively reach 60% by the end of the programme.

Broader Perspective-

Technology as an absolute game changer

- Military science and technology is not a unitary subject. Any weapon system is an **amalgamation of multiple sciences** and technologies.
- **Artificial Intelligence and Cyber technologies** will augment the existing traditional combat platforms rather than rendering them obsolete.
- With technological superiority, brick and mortar military structures and capacities, will perhaps matter less; **technological capacities** in enabling domains like AI (artificial intelligence) and cyber will decisively tip the military balance.
- There is no denying the importance of emerging technologies such as cyber and AI and the more established technological domains such as space and electronic warfare but they also help track, identify, and destroy targets during combat by enhancing the coordination and application of sensor to shooter capabilities.
- Space, cyber, electronic warfare capabilities, and AI are vital to Network Centric Operations (NCO).
- For instance, a modern missile, aircraft or spacecraft has high end technologies related to materials, electronics, sensors, structures, design, propulsion, control, guidance, navigation, communication, warheads and more.

- Significantly, Indian Armed Forces are experienced and well versed with the battlefield demands on military technology. India has to develop its **own indigenous military-industrial complex**, capable of serving various needs including cutting-edge platforms. That's the only way to have a truly independent defence and strategic policy.

Way Forward

"There are hard yards in the road".

- The battlefield in Indian context consists of the Himalayan high altitudes and the Indian Ocean Region dotted by the Lakshadweep, Andaman and Nicobar Islands.
- Overall, the Indian military geography is a technology dampener but places its own peculiar demands.
- India must start mission mode dual use programs on AI, Cyber, Quantum technology, advanced materials, Advanced computing, Semiconductor technology and Hypersonic technology for deployable systems.
- Reduction of arms import, export orientation and self-sufficiency has just started taking root under the Atmanirbharta program.
- Capacity building and investing in technology is an incrementally slow process in democratic India.
- In this effort, our premier technical institutions, scientific establishments and private industry should be roped in to develop technology required for the forces.
- Last but not the least, a five trillion-dollar economy will need more security/ protection than now. That will need a greater degree of funding and commitment.
- In a nutshell, the Indian Army and the other service branches of the Indian military are unlikely to hurriedly dispense with traditional combat platforms and, thus, understanding the strengths and limitations as well as the applicability of space, cyber, electronic, and AI technologies is vital.

PEPPER IT WITH
India's Defence Expenditure, Multi-Role Fighter Aircraft (MRFA).

Left Wing Extremism

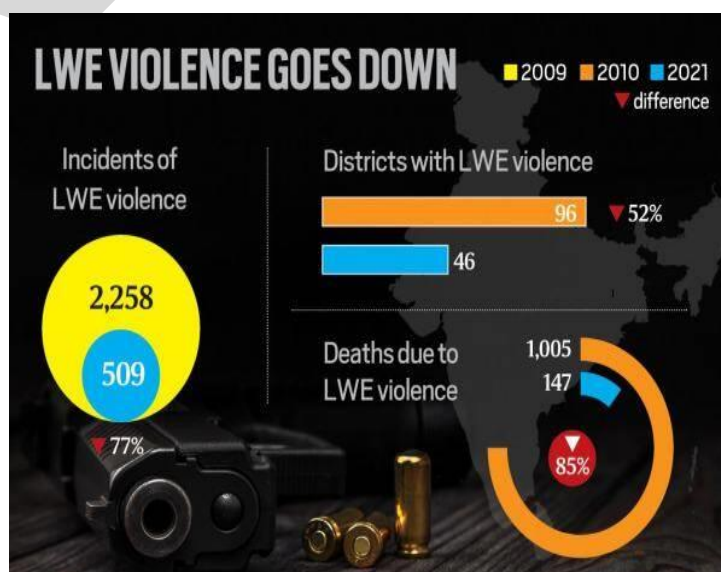
News Excerpt

A data provided by the Ministry of Home Affairs (MHA) says "Left wing extremism violence down in country from 2009 to 2021".

Data figures

- According to the data provided by the Ministry of Home Affairs (MHA) in Lok Sabha during Question Hour, Left Wing Extremism (LWE) violence has decreased from 2,258 in 2009 to 509 in 2021.
- While incidents of Naxal violence in the country have dropped by 77 per cent between 2009 and 2021, deaths of security force personnel due to Maoist violence have more than doubled in Chhattisgarh in the past three years.
- Similarly, the resultant deaths (civilians + security forces) have reduced by 85 per cent from all-time high of 1,005 in 2010 to 147 in 2021.

GS CONNECT											
GS	1	2	3	4	5	6	7	8	9	10	11
I											
II											
III											
IV											
M											



- According to the data, 22 security force personnel were killed in Naxal violence in Chhattisgarh in 2019, 36 in 2020 and 45 in 2021.
- In 2021, Chhattisgarh accounted for 90 per cent (45 out of 50) of all security personnel deaths in the country.
- Jharkhand is the only state that recorded security personnel deaths (5) besides Chhattisgarh in 2021. In 2019, when 52 security force personnel deaths were recorded in the country, Chhattisgarh accounted for just 42 per cent (22) of those with Maharashtra accounting for 16 deaths and Jharkhand for 12 deaths.

Causes or Reasons for Left Wing Extremism in India

- The causes are many starting from the origins of the Forest Conservation Act.
- We had Forest Conservation Act, which created problems because even the minor forest produce was the property of the government. With the recent Forest Act, it has been said that it is the property of the tribals. Tribal land rights are another issue.
- Afterwards wild life sanctuaries which came in and all these wild life sanctuaries whether it is a tiger reserve or lion reserve and so on and so forth.
- **The first priority became the animal rather than the people who stayed in the forest.**
- There are so many issues which are interlinked in this entire thing and these are all issues which have to be tackled from land acquisition to power plants which have come up in many of these areas.
- The Power Plants supply power to urban areas but the villages surrounding the power plants are without power and therefore they did not get any benefit out of a power plant where they lost their land. The same goes with the mining.
- The tribals have been denied their constitutional rights and justice has been denied to them. The Non-Government Organisations (NGOs) operating in these regions have their own vested interests consequently providing the space for Maoists to spread their agenda.
- The next issue is unequitable distribution of land. The Maoists promise that they would equitably distribute land and this lures the people to participate in their movement.
- The government has been mistaking industrialisation for development. 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 the extremists.

Indian Maoists and left wing extremism (LWE) affected states

- ✓ The largest and the most violent Maoist (Naxalite) formation in India is the Communist Party of India (Maoist). It is an amalgamation of many splinter groups, which culminated in the merger of two largest Maoist groups in 2004 and all its front organizations formations have been included in the list of banned terrorist organizations under the Unlawful Activities (Prevention) Act, 1967.
- ✓ Today, the menace of Left-wing extremism is the single internal security threat that affects the largest number of States in India.
- ✓ 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.
- ✓ The border areas of Naxalite-affected States have become more vulnerable in the recent past.

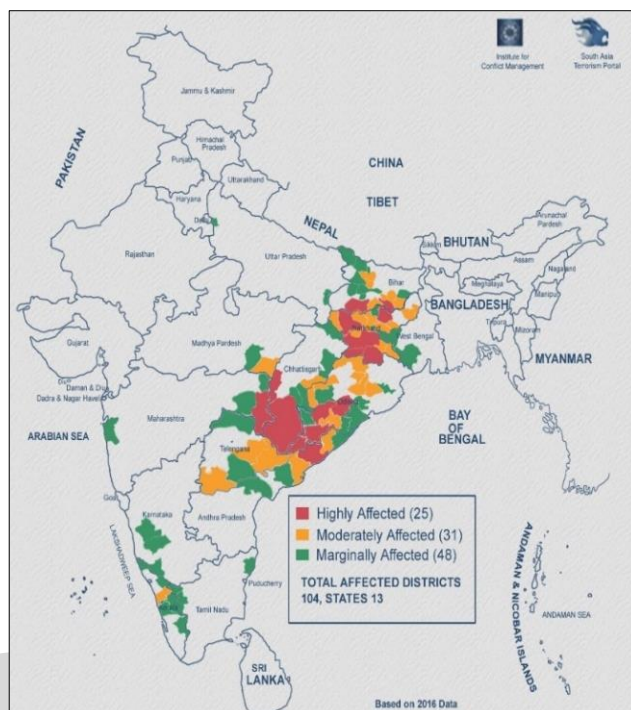
What is Maoism?

- It is a form of communism developed by Mao Tse Tung.
- It is a doctrine to capture State power through a combination of armed insurgency, mass mobilization and strategic alliances.
- The Maoists also use propaganda and disinformation against State institutions as other components of their insurgency doctrine.

- ✓ Taking advantage of the lack of a proper coordination among law-enforcement agencies of two States, Naxalite groups commit crime in one State and find safe havens in the neighbouring ones.

Effects of LWE on civilians particularly Adivasis

- A purely security-driven approach fraught with human rights' violations has only added to the alienation among the poor in these areas.
- Frequent skirmishes and attacks have not only affected the security forces but also left many tribal civilians caught in the crossfire.
- In March 2019, a Committee headed by retired Justice A K Patnaik was formed to review all cases registered under the Indian Penal Code (IPC), National Security Act (NSA), Unlawful Activities (Prevention) Act (UAPA) and other central Acts, besides offences under state Acts.
- The idea was to look for Adivasis in those cases where they were falsely detained as they are prone to detention in cases related to left-wing extremism.
- Available information suggests that around 600 cases against Adivasis have been withdrawn, following the suggestions of the committee. But such a move is yet to have a larger impact on people stuck in cases concerning Naxalism.



Main problem for the Government in combating Maoist insurgency

Geographical and intellectual seclusion

- ✚ The Maoist insurgency has been recognized as a serious internal security challenge. It is also seen as a major impediment to the nation building process.
- ✚ The Maoists wish to keep the population in their **strongholds cut-off from the mainstream milieu**.
- ✚ The schools are attacked because education promotes a spirit of enquiry among the local population and also equips children with skills for alternative sources of livelihood.
- ✚ These developments are looked upon by the Maoists as potential threats to their very existence and their **outdated ideology**.
- ✚ Maoists also destroy infrastructure like roads and telecom network to keep populations isolated from mainstream India.
- ✚ Now, the core areas are being gradually addressed. This is a challenging process, but will ultimately yield the desired results in the long-term and reduce the influence and impact of Maoist insurgency to insignificant levels.
- ✚ They wish to keep the population in their areas of influence marginalized to perpetuate their outdated and failed ideology.

Policy of Government of India to combat LWE

- > The Government of India followed a holistic long-term policy in the areas of security, development, ensuring rights and entitlements of local communities, improving governance and perception management to combat LWE.
- > Most of the security related measures, apart from deployment of CAPFs, are aimed at assisting capacity building by the State forces.

- > On the development front, **an Integrated Action Plan (now called Additional Central Assistance to LWE affected districts)** covering 88 affected districts aims at providing public infrastructure and services.
- > Further, an **ambitious Road Development Plan** has been envisaged for LWE areas.
- > Special emphasis is being laid on the **implementation of Forest Rights Act and ensuring entitlement of local communities over Minor Forest Produce.**
- > Distribution of ROFR pattas among tribals was a game changer. Tribals are simpletons and giving them pattas generates a sense of ownership.

Important Government initiatives for LWE affected states

- o 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.
- o **Security Related Expenditure (SRE) Scheme:** This Scheme is being implemented as a sub-scheme of the Umbrella Scheme 'Modernization of Police Forces'.
- o Under this, the central Govt. reimburses to the State Governments of 10 LWE affected States Security Related Expenditure of 70 districts relating to training and operational needs of security forces, ex-gratia payment to the family of civilians/security forces killed/injured in LWE violence, compensation to Left Wing Extremist cadres who surrendered in accordance with the surrender and rehabilitation policy of the concerned State Government, community policing, Security related infrastructure for village defence committees and publicity materials.
- o **Special Central Assistance (SCA) for most LWE affected districts:** The main objective of the Scheme is to fill the critical gaps in Public infrastructure and Services, which are of emergent nature.
- o **Special Infrastructure Scheme (SIS):** Under the scheme funds are provided to States for strengthening the Infrastructure related to Security.
- o **Scheme of Fortified Police stations:** The Ministry had sanctioned construction of 400 Fortified Police Stations in 10 LWE affected States. All these 400 PSs have been completed.
- o **Assistance to Central Agencies for LWE management Scheme:** Under the Scheme, assistance is provided to Central Agencies (CAPFs/IAF etc) for strengthening of infrastructure and hiring charges for Helicopters.
- o **Aspirational District:** The Ministry of Home Affairs has been tasked with the monitoring of Aspirational districts programme in 35 LWE affected districts.
- o **Media Plan:** The Maoists have been misguiding and luring the innocent tribals/ local population in LWE affected areas by their So-called poor-friendly revolution through petty incentives or by following their coercive strategy. Therefore, the Government is implementing this Scheme in LWE affected areas. Under the scheme activities like Tribal Youth Exchange programmes organised by NYKS, radio jingles, documentaries, pamphlets etc.

Way Forward

- o The affected state governments must focus on expansive welfare and infrastructure building even as security forces try to weaken the Maoists.
- o A purely security-driven approach fraught with human rights' violations has only added to the alienation among the poor in these areas.
- o The Maoists must be compelled to give up their armed struggle and this can only happen if the tribal people and civil society activists promoting peace are also empowered.
- o The Indian government should not be satisfied with the mere weakening of the Maoist insurgency and reduce commitments made for the developmental needs of some districts of concern in States such as Jharkhand.

PEPPER IT WITH:
Communism, Mao Zedong, Tribes in India and the Forest Rights Act.

- The Union government and the States must continue to learn from successes such as the expansion of welfare and rights paradigms in limiting the movement and failures that have led to the continuing spiral of violence in select districts.

Laser-guided ATGMs

News Excerpt

Indigenously developed Laser-Guided Anti-Tank Guided Missiles (ATGM) were successfully test-fired by Defence Research and Development Organisation (DRDO) and Indian Army.

GS CONNECT											
GS	1	2	3	4	5	6	7	8	9	10	11
I											
II											
III											
IV											
M											

Pre-Connect

- Indigenously developed Laser-Guided Anti-Tank Guided Missiles (ATGM) were successfully test-fired from Main Battle Tank (MBT) Arjun by Defence Research and Development Organisation (DRDO) and Indian Army at KK Ranges with support of Armoured Corps Centre & School (ACC&S) Ahmednagar in Maharashtra.
- The all-indigenous Laser Guided ATGM employs a tandem High Explosive Anti-Tank (HEAT) warhead to defeat Explosive Reactive Armour (ERA) protected armoured vehicles.
- The ATGM has been developed with multi-platform launch capability.
- The missile locks and tracks the targets with the help of laser designation to ensure precision hit accuracy.
- ATGMs are primarily designed to hit and destroy heavily armoured military vehicles.
- The missiles can be transported by a single soldier, to larger tripod-mounted weapons, which require a squad or team to transport and fire, to vehicle and aircraft mounted missile systems.
- This type of guided missiles rely on an electro-optical imager (IIR) seeker, a laser or a W-band radar seeker in the nose of the missile.
- These are 'fire-and-forget' missiles where the operator can retreat right after firing as there is no more guidance required.

ART AND CULTURE

Buddhism during Chola Era

News Excerpt

Chola-era Buddha idol that was reportedly stolen from Arpakkam near Kancheepuram is now stuck in the U.S., without any claim having been made by the Indian authorities. It was stolen from a temple in Arpakkam on the outskirts of Kancheepuram about 20 years ago.

GS CONNECT											
GS	1	2	3	4	5	6	7	8	9	10	11
I											
II											
III											
IV											
M											

Historical background

- Arpakkam, a small village on the outskirts of Kancheepuram, is a virtual treasure trove of heritage.
- This village has a Jain temple, a Shiva temple and an Adikesava Perumal temple - all over 1,000 years old.
- This village has a Buddhist vestige as well.
- Three granite idols of Buddha were located in the confines of the Perumal temple. While one of them was inside the temple, a large Chola-era seated Buddha and a headless seated Buddha lined the outer walls.
- Around 20 years ago, the idol of the seated Buddha was stolen. But the theft went unreported.

Importance and Relevance

- Cholas are remembered as one of the longest ruling dynasties in the southern regions of India.
- Temples and literature of that time still serve as testimony to the ecstatic period of history.
- That time witnesses the onset of a new culture and art flourishes like never before.
- The medieval period was the era of absolute power and development for Cholas.
- Rajaram Chola and Rajendra Chola further expanded the kingdom into the Tamil region.
- Later Kulothunga Chola took over Kalinga to establish a strong rule.
- The magnificence lasted until the arrival of the Pandyas in the early 13th century.

Buddhist tendencies of the times

- ✓ Cholas not only supported Shiva and Vishnu i.e. Hinduism but also supported Buddhist and Jain temples and communities which were strong in Southern India during that time.
- ✓ Cholas also built temples for these communities in which Buddhist and Jain deities were made of Bronze.
- ✓ Important Buddhist shrines in ancient South India were Amaravati, Nagarjunakonda, Bhattiprolu, Ghantasala and Jaggyyapetta in Andhra; Vanavasi in Karnataka; Vanji or Vanchi in Kerala; and Kanchi and Nagapattinam in Tamil Nadu.
- ✓ The immortal forms of art and sculpture created by the southern artists were seen and admired in the Government Museum, Madras, and at Amaravati and Nagarjunakonda in Andhra Pradesh.
- ✓ Significance of all Brahmi epigraphs in South India was associated with the Buddhists.
- ✓ Buddhism had left a deep mark on the life and culture of Southern India, and that was distinctly discernible.

Mandala art Buddhism

News Excerpt

A mandala the size of one and a half football pitches has been created by artist James Brunt at the Halewood Park Triangle in UK. It has used the materials such as leaves and rocks.

GS CONNECT											
GS	1	2	3	4	5	6	7	8	9	10	11
I											
II											
III											
IV											
V											

Background

- Mandala literally means “circle” or “centre” in Sanskrit and it is a symbolic picture of the universe.
- Mandala patterns are centuries old motif that was used to depict the cosmos.
- It has been adapted by artists around the world, each of whom has added their own interpretation and painted it as their own.

Relevance of Mandala art Buddhism

- Mandala is defined by a geometric configuration that usually incorporates the circular shape in some form.
- It can also be created in the shape of a square, a mandala pattern is essentially interconnected.
- It is believed to be rooted in Buddhism, appearing in the first century BC in India. Over the next couple centuries, Buddhist missionaries travelling along the silk road took it to other regions.
- By the sixth century, mandalas have been recorded in China, Korea, Japan, Indonesia and Tibet. In Hinduism, the mandala imagery first appeared in Rig Veda (1500 – 500 BCE).

Importance of Mandala art Buddhism

- ✓ It was a belief that by entering the mandala and moving towards its center, one is guided through the cosmic process of transforming the universe from one of suffering to that of joy.
- ✓ A Traditional Buddhist mandala, a circular painting drawn with coloured sand, aided in meditation, with the main objective of aiding its creator to discover their true self.
- ✓ There are various elements incorporated within the mandala, each of which has its own meaning.
- ✓ The eight spokes of the wheel (the dharmachakra) represent the eightfold path of Buddhism (practices that lead to liberation from rebirth), the lotus flower depicts balance, and the sun represents the universe.
- ✓ Facing up, triangles represent action and energy, and facing down, they represent creativity and knowledge.

Connection with Modern Indian Art

- Deep-rooted in ancient philosophy, the mandala has attained varied forms in the hands of modern and contemporary Indian artists.
- It continues to appear in thangka paintings, it has a central place in the practice of mainstream artists associated with the tantric and neo-tantric spiritual movements.
- Choosing to transition from the more figurative depictions of the previous generations of Indian artists, in the 1960s Sohan Qadri and Prafulla Mohanty gained widespread recognition for their works.
- It was imbibed with tantric symbolism, such as mandalas that are also used in the rituals of tantric initiation.
- Geometric compositions also dominated works of artists such as Biren De, GR Santosh, Shobha Broota, and SH Raza.
- They were the individuals who visualised the Bindu as the center of his universe and the source of energy and life.

Martand Sun temple

About

- This Kashmiri Hindu temple is one of the most elegant structures ever built in India.
- Temple was built during 725 – 756 AD under the dynasty of Karkota by king Lalitaditya.
- The eighth-century temple was said to have been destroyed during the rule of Sikandar Shah Miri between 1389 and 1413.
- It is contentious that the foundation of this temple was laid during the period of 370 to 500 AD by Ranaditya, one of the legendary King.
- In Sanskrit, Martand is another name for the Sun God within Hinduism.
- Structure was constructed of limestone and the entire complex had been built on the top of a plateau near Anantnag in Kashmir.

GS CONNECT											
GS	1	2	3	4	5	6	7	8	9	10	11
I											
II											
III											
IV											
M											

The architecture of Martand Sun temple

- Temple is situated on a large landscaped area, spread over the area of 220 feet in length and around 142 feet wide.
- The architecture of the Martand Sun temple is comprised of the Gandharan, Gupta, Roman, Chinese, Syrian – Byzantine and Greek designs.
- This mesmerizing complex area expands over around 32,000 square feet and has its entrance towards the western side of the complex area.
- Entrance was adorned by elaborate and intricate carvings of the Hindu Deities.
- Main shrine had smaller antechamber which was decorated with the beautiful intricate carvings of Lord Vishnu, goddess Ganga and Yamuna and the ultimate Sun God, Surya.
- In order to magnetize the aura of the place, Martand Sun temple was surrounded by some 84 small shrines as well during that time.
- Ruins over the site mark weathered Sanskrit inscriptions and eroded sculpture and carvings depicting traditional dance postures and musical events.
- Because of its majestic architecture and diversified structural designs, it is a center of attraction in Kashmir region.

MISCELLANEOUS

Kargil Vijay Diwas

- On July 26, 1999, the Indian Army announced the successful culmination of "Operation Vijay", declaring victory after a nearly three-month-long battle on the **icy heights of Kargil in Ladakh**.
- 'Operation Vijay' was fought by India against Pakistan in the Kargil sector of Jammu and Kashmir, now Ladakh.
- On this day in 1999, the armed forces successfully took command of the high outposts along the Line of Control.

GS CONNECT											
GS	1	2	3	4	5	6	7	8	9	10	11
I											
II											
III											
IV											
M											

Challenges faced by the Indian Army during the war

Geographical constraints:

- ✓ Not only was the terrain of Kargil war zone inhospitable but even the soldiers who were suddenly deployed in the area from plains did not get time for acclimatization.
- ✓ The infiltrators positioned themselves in key locations that gave them a strategic advantage during the start of the conflict.
- ✓ Because the Pakistani soldiers and terrorists had positioned themselves at higher altitudes, it gave them an advantage in combat, as they could fire down at advancing Indian troops.

Challenges faced by Indian Air Force in operation Safed Sagar

- Pakistan shot down two Indian fighter jets while another fighter jet crashed during the operation.
- The conditions were tough with regard to the operational limitations on rough terrains at a height of 18,000 ft. These fighters had to fly at heights above 30,000 feet since the missiles possessed by intruders could not reach beyond 28,000 feet.
- IAF mission strikes disrupted and cut off the supply lines of enemy to an extent that even the wounded could not be evacuated.

Migratory monarch butterflies

- Monarchs are the most recognisable species of butterfly, are important pollinators and provide various ecosystem services such as maintaining the global food web.

Reasons for population reduction:

- ✓ Habitat destruction and climate change are mainly responsible for pushing the insect towards extinction.
- ✓ One of main drivers in the decline of the migratory monarch's population is the use of herbicides in the U.S., resulting in a loss of milkweeds, essential for monarchs reproduction

Present status:

- Their population in the continent has declined 23-72 per cent over the last decade.
- The population of the eastern monarchs that migrate from **eastern United States and Canada** — the bigger group — also shrunk 84 per cent from 1996-2014.
- Known for its bright orange colors and its incredible annual migration, the migratory monarch butterfly is now classified as **"Endangered"** by the International Union for Conservation of Nature (IUCN).

Hatti community

- The Hatti community is largely concentrated in the Trans-Giri area of the Sirmaur district. With time, members of the community have also settled in adjacent regions.
- The community, which has over three lakh people, is named after their age-old professional practice of selling their homegrown crops at small markets called 'Haat' in nearby cities.

Geographical Identity

- The Hatti homeland straddles the **Himachal-Uttarakhand border** in the basin of the Giri and Tons rivers, **both tributaries of the Yamuna**.
- **The Tons** marks the border between the two states, and the Hattis living in the Trans-Giri area in today's **Himachal Pradesh and JaunsarBawar in Uttarakhand** were once part of the royal estate of Sirmaur.
- The Hattis have been demanding ST status since 1967, when tribal status was accorded to people living in JaunsarBawar in Uttarakhand, which shares a border with Sirmaur district. Over the years, various '**mahakhumbilis**' passed resolutions pressing the demand.

Quit India movement

- On August 9, 1942, the biggest mass movement of the Indian freedom struggle was launched.
- This was the decisive final phase of the struggle for independence.
- People were on their own — out on the street, driven by the Mahatma's call of "DO or DIE" that implied that we shall either free India or die trying; we shall not live to see the perpetuation of our slavery.
- It was a truly people-led movement which was eventually crushed violently by the British.
- One thing was crystal clear that nothing short of their final departure was acceptable to India's masses.
- The Congress was initially reluctant to launch a movement that could hamper Britain's efforts to defeat the fascist forces. But it eventually decided on mass civil disobedience.
- The Quit India movement was violently suppressed by the British — people were shot and lathi charged, villages were burnt, and backbreaking fines were imposed.
- Five months up to December 1942, an estimated 60,000 people had been thrown into jail.
- However, though the movement was quelled, it changed the character of the Indian freedom struggle, with the masses rising up to demand with a passion and intensity like never before: that the British masters would have to Quit India.

Concept Clearing Assignment

1. Corporal Punishment is not only a physical torture but also a worst form of mental harassment a child could face. In the context of the statement highlight the consequences of Corporal Punishment and suggest some measures to create a learning environment and enabling environment for India.
2. Iran nuclear deal is a gateway for proactive role of India in Central Asia. Comment. Also discuss the major impediment in the fulfillment of Iran Nuclear Deal.
3. Impact of climate change has multidimensional. Discuss with special reference to recent UN global policy framework to protect children displaced due to climate change.
4. What do you understand by the term Zoonotic diseases? Highlights the factors that exacerbates incidence of Zoonotic diseases in recent times.
5. Digital divide is one of the biggest roadblocks in order to realise the full potential of Digital India. Critically examine. Discuss the role of e-services in various sectors of government and people's life during Covid pandemic.
6. Despite so much technological advancement, Left Wing Extremism is one of the biggest threats to country from within. Critically examine. Discuss how inclusiveness can play a role in their national integration and measures for their developments.
7. Gandhiji clarion call of "DO or DIE" was nothing sort of final departure of Britishers from India. Discuss. Why this is the most Anti -Britisher movement of freedom struggle.
8. India and Nepal are natural allies that shares a historical connection and bond. In the context of statement enumerate the challenges in the India-Nepal relations. Also suggest a way out.
9. India is known as global pharmacy of generic medicine. Examine its strength and shortcomings. What measures can be taken to overcome it and its contribution making it a self-reliant India?
10. Outer Space has become the new frontier in globalized world. Critically examine the challenges posed by space junk. What are the steps taken at international level and by India to control them?
11. What is Natural resource accounting? Do you agree that it will set new paradigm in resource management?
12. Enumerate the merits of ICT enabled Services delivery system in India. Also discuss associated limitation of it.
13. Temples and literature of chola period serve as testimony to the ecstatic period of history. Elaborate.
14. Antimicrobials resistance is a major health problem that can jeopardize the health infrastructure. Discuss. What are the efforts being made to tackle it?
15. The new Criminal Procedure Identification Act-2022 though provided teeth to law enforcement agencies it also raised several eyebrows. Comment.

PT Oriented Questions

1. The term IndARC with reference to environment, refers to which of the following:
 - (a) Underwater observatory of India for the study of arctic region.
 - (b) India's submersible vehicle for collecting Poly metallic nodules.
 - (c) India's radar system for observing far away galaxies.
 - (d) None of the above
2. With reference to the Poly cyclic aromatic hydrocarbons (PAHs) recently seen in news, consider the following statements:
 1. These are environmental pollutants originating from the combustion of petrogenic fossil fuels.
 2. PAHs are found only in atmosphere.
 3. Pyrene possessing four benzene rings, belongs to this highly toxic class of PAHs.
 Which of the statements given above is/are incorrect?
 - (a) 1 only
 - (b) 2 only
 - (c) 2 and 3 only
 - (d) 1 and 3 only
3. With reference to the Ethanol, Consider the following statements:
 1. Ethanol can be generated by using paddy straw as raw material.
 2. Production of ethanol can resolve the issue of stubble burning.
 Which of the statements given above is/are correct?
 - (a) 1 only
 - (b) 2 only
 - (c) Both 1 and 2
 - (d) Neither 1 nor 2
4. With reference to the State of global air report 2022, consider the following statements:
 1. New Delhi and Kolkata are the most polluted cities in the world.
 2. Maximum of Cities which saw most severe increase in PM2.5 pollution is the last decades are Indian cities.
3. The main source of air pollution according to the report is forest fire in urban areas of India.
 Which of the statements given above is/are correct?
 - (a) 1 and 2 only
 - (b) 2 and 3 only
 - (c) 1 and 3 only
 - (d) 1, 2 and 3
5. Consider the following pairs:

	Intellectual property	Feature
1. Copyright		Grants the protection of written or published works
2. Patents		Protect an invention, new business product or the process
3. Trademarks		Protects the design such as a color, pattern etc

 How many pairs given above is/ are correct?
 - (a) Only one pair
 - (b) Only two pairs
 - (c) All three pairs
 - (d) None of the pairs correct
6. With reference to state of malnutrition in the country, consider the following statements:
 1. According to NFHS-5, nutrition indicators for children under 5 have improved over NFHS-4.
 2. Bihar has the highest number of underweight children.
 3. Meghalaya has the lowest number of stunted children.
 Which of the statements given above is/are correct?
 - (a) 1 and 2 only
 - (b) 1 only
 - (c) 2 and 3 only
 - (d) 1, 2 and 3

7. Consider the following statement with reference to PM e-Vidya:
1. It is one of the components of the Atma Nirbhar Bharat Abhiyan.
 2. It offer multi-mode access to education.
 3. It has drastically reduced the digital divide in the education in India.
- Which of the statements given above is/are correct?
- (a) 1 and 3 only
 - (b) 2 and 3 only
 - (c) 1 and 2 only
 - (d) 1, 2 and 3
8. With reference to Agricultural census in India, consider the following statements:
1. It is conducted every 5 years.
 2. It is the main source of information land use pattern in the country.
 3. The tenth edition of the census was conducted with the reference year 2010-11.
- Which of the statements given above is/are correct?
- (a) 1 and 3 only
 - (b) 1 and 2 only
 - (c) 2 and 3 only
 - (d) 1, 2 and 3
9. Consider the following statement with reference to National e-Governance Service Delivery Assessment (NeSDA) framework:
1. It is the initiative of Ministry of Electronics and Information Technology (MeitY) to measure the depth and effectiveness of existing e-Governance service delivery mechanisms.
 2. It is based on the Online Service Index (OSI) of UNDESA eGovernment Survey.
- Which of the statements given above is/are correct?
- (a) 1 only
 - (b) 2 only
 - (c) Both 1 and 2
 - (d) Neither 1 nor 2
10. With reference to SMILE-75 Scheme, consider the following statements:
1. It was launched to address the problem of destitution and beggary.
 2. It is a central Sponsored Scheme.
 3. Under the scheme, the provision of Garima Greh has been developed housing facility.
- Which of the statements given above is/are correct?
- (a) 1 and 3 only
 - (b) 1 and 2 only
 - (c) 2 and 3 only
 - (d) 1, 2 and 3
11. With reference to Laser-Guided Anti-Tank Guided Missiles (ATGM), consider the following statements:
1. It is indigenously developed anti tank guided missile designed to hit and destroy heavily armored military vehicles.
 2. The missiles can be transported by a single soldier, to larger tripod-mounted weapons.
 3. The missile locks and tracks the targets with the help of laser designation to ensure precision hit accuracy.
- Which of the statements given above is/are correct?
- (a) 3 only
 - (b) 1 and 2 only
 - (c) 2 and 3 only
 - (d) 1, 2 and 3
12. With reference to Martand Sun temple, which of the following statements are correct?
1. It is a Buddhist temple built during 725 – 756 AD.
 2. It was built under the dynasty of Karkota by king Lalitaditya.
 3. The entire complex of the temple had been built on the top of a plateau near Anantnag in Kashmir.
- Select the correct answer using the code given below:
- (a) 1 and 2 only
 - (b) 1 and 3 only
 - (c) 2 and 3 only
 - (d) 1, 2 and 3
13. With reference to Monarch Butterflies, consider the following statements:
1. These butterflies are known for their bright orange colors and incredible annual migration.

2. Their population in the continent has increased over the last decade.
3. They are classified as "Vulnerable" by the International Union for Conservation of Nature (IUCN).

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 1 and 2 only
- (c) 2 and 3 only
- (d) 1, 2 and 3

14. Consider the following statements regarding "Hatti Community":

1. It is largely concentrated in the Trans-Himalayan region through Ladakh and Himachal Pradesh.
2. The community is named after the professional practice of selling their homegrown crops at small markets called 'Haats'.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

15. Consider the following statements with reference to National Commission for Protection of Child Rights (NCPCR):

1. It is a constitutional body established for the protection of child rights in India.
2. It recommends measures for effective implementation of rights provided under Protection of Children Rights Act 2005.
3. It enquires into any matters relating to child's right to free and compulsory education under Right to education Act 2009.

Which of the statements given above are correct?

- (a) 1 and 2 only
- (b) 1 and 3 only
- (c) 2 and 3 only
- (d) 1, 2 and 3

16. In the context of Prevention of Money Laundering Act, 2002, which of the following statements is/are correct?

1. It was enacted to prevent and control money laundering.

2. Nodal Agency for the implementation of the act is Enforcement Directorate (ED).
3. The act has no provision for confiscation and seizure of properties derived from laundered proceeds.

Select the correct answer using the code given below:

- (a) 1 only
- (b) 1 and 3 only
- (c) 2 and 3 only
- (d) 1 and 2 only

17. With respect to the procedure for creating a new district in the country, consider the following statements:

1. A new district can be created either by an executive order or by passing a law in the state assembly.
2. Center has no role to play in case states want to change the name of a district.
3. The exercise of district creation does not impact the delimitation of that area.

Which of the statements given above are correct?

- (a) 1 and 2 only
- (b) 1 and 3 only
- (c) 2 and 3 only
- (d) 1, 2 and 3

18. Which of the following statements is/are correct in the context of Fundamental Duties?

1. They help the Courts in determining the constitutionality of the law.
2. Fundamental duties are enforced by legal sanctions as well as social sanctions.
3. Compliance with fundamental duties helps in fulfillment of certain fundamental rights.

Select the correct answer using the code given below:

- (a) 3 only
- (b) 1 and 2 only
- (c) 2 and 3 only
- (d) 1, 2 and 3

19. Which of the Following pairs is/are correctly matched?

Name of Exercise	Countries
1. Vajra Prahar	India-UK
2. Malabar	India-US
3. Surya Kiran	India-Nepal

Select the correct answer using the code given below:

- (a) Only One Pair
(b) Only Two Pairs
(c) All Three Pairs
(d) None of the Pairs
20. Which among the following Islands forms the part of First Chain Island?
1. Kuril Islands
2. Senkaku Islands
3. Newfoundland Islands
4. Amelia Islands
5. Ryukyu Islands
Select the correct answer using the code given below:
(a) 1, 3 and 4 only
(b) 2, 4, and 5 only
(c) 1 and 5 only
(d) 1, 2, 3 and 5 only
21. Which among the following countries forms the part of newly formed Mineral Security Partnership (MSP)
1. India
2. USA
3. Canada
4. Sweden
5. Finland
6. Australia
7. South Korea
Select the correct answer using the code given below:
(a) 2, 4, 5,6, and 7 only
(b) 1, 3, 5, and 6 only
(c) 2, 4, 6 and 7 only
(d) 1, 3, 4, 5 and 6 only
22. Which among the following identification data collection is allowed under the Criminal Procedure Identification Act 2022?
1. Iris and Retina Scan
2. Hand Writing
3. Plam Print
4. Behavioral Attitude
Select the correct answer using the code given below:
(a) 1 and 4 only
(b) 2, 3, and 4 only
(c) 1,3 and 5 only
(d) All of the above
23. Which among the following act as the source of deducing parliamentary privileges in India
1. Judicial Decrees
2. Consitutional Provisions
3. Parliament Conventions
4. Laws made by Parliaments
Select the correct answer using the code given below:
(a) 1 and 4 only
(b) 2, 3, and 4 only
(c) 1,3 and 5 only
(d) All of the above
24. With reference to Atal Bhujal Yojana, consider the following statements:
1. It is a centrally sponsored scheme of Ministry of Jal Shakti.
2. It is the only scheme of groundwater conservation in which no external assistance was taken by India.
Select the incorrect answer using the code given below:
(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2
25. With refrence to World Organisation of Animal Health consider the following statements:
1. It provides guidelines for protection of animals from diseases and pathogens to member countries.
2. It is recognized by World Health Organisation as reference International sanitary rules.
3. India is yet to become a member of World Organisation of Animal Health.
Select the correct answer using the code given below:
(a) 1 only
(b) 2 and 3 only
(c) 1 and 2 only
(d) All of the Above
26. If a particular plant species is placed under Schedule VI of The Wildlife Protection Act, 1972, what is the implication? (UPSC 2020)
(a) A licence is required to cultivate that plant.
(b) Such a plant cannot be cultivated under any circumstances.
(c) It is a Genetically Modified crop plant.
(d) Such a plant is invasive and harmful to the ecosystem.

27. Consider the following phenomena: (UPSC 2018)
1. Light is affected by gravity.
 2. The Universe is constantly expanding.
 3. Matter warps its surrounding space-time.
- Which of the above is/are the prediction/predictions of Albert Einstein's General Theory of Relativity, often discussed in media ?
- (a) 1 and 2 only
 - (b) 3 only
 - (c) 1 and 3 only
 - (d) 1, 2 and 3
28. With reference to the provisions contained in part IV of the constitution of India, which of the following statements is/are correct? (UPSC 2020)
1. They shall be enforceable by courts.
 2. They shall not be enforceable by any court.
 3. The principles laid down in this part are to influence the making of laws by the state.
- Select the correct answer using the code given below
- (a) 1 only
 - (b) 2 only
 - (c) 1 and 3 only
 - (d) 2 and 3 only
29. What was the purpose of the Inter-Creditor Agreement signed by Indian banks and financial institutions recently? (UPSC 2019)
- (a) To lessen the Government of India's perennial burden of fiscal deficit and current account deficit
 - (b) To aim at faster resolution of stressed assets of Rs 50 crore or more which are under consortium lending.
 - (c) To act as independent regulator in case of applications for loans of Rs 50 crore or more
 - (d) To support the infrastructure projects of Central and State Governments
30. Which one of the following protected areas is well-known for the conservation of a sub-species of the Indian swamp deer (Barasinga) that thrives well in hard ground and is exclusively gaminivorous ? (UPSC 2020)
- (a) Kanha National Park
 - (b) Manas National Park
 - (c) Mudumalai Wildlife Sanctuary
 - (d) Tal Chhapar Wildlife Sanctuary

ANSWERS

- | | | |
|-------|-------|-------|
| 1. a | 11. d | 21. a |
| 2. b | 12. c | 22. d |
| 3. c | 13. a | 23. d |
| 4. a | 14. b | 24. c |
| 5. b | 15. c | 25. d |
| 6. a | 16. d | 26. a |
| 7. c | 17. b | 27. d |
| 8. b | 18. d | 28. d |
| 9. b | 19. b | 29. b |
| 10. a | 20. c | 30. a |