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TOPIC: National Geospatial Policy, 2022

Issue in brief – Government introduces National Geospatial Policy to promote startups, advanced tech.

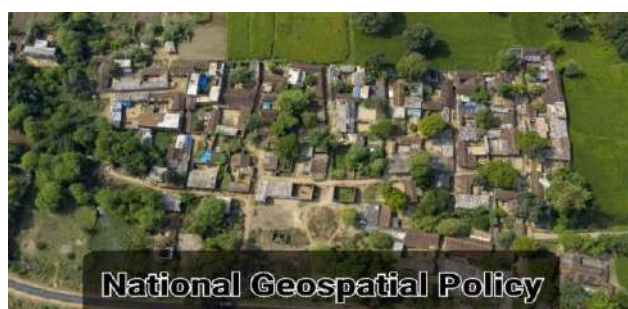
<https://www.livemint.com/technology/tech-news/govt-introduces-national-geospatial-policy-to-promote-startups-advanced-tech-11672376526352.html>

Where in Syllabus:

GS 2: Government policies and interventions for development in various sectors

❖ Why in News?

- After liberalising the use of geospatial data under the draft geospatial data policy last year, the Ministry of Science and Technology notified the National Geospatial Policy, 2022.
- The 13-year guideline aims to promote the country's geospatial data industry and develop a national framework to use such data for improving citizen services, and more.



❖ What is National Geospatial Policy, 2022:

The new Geospatial Policy will replace the National Map Policy, 2005. It aims to strengthen the location-centric industry to support the information economy.

Vision and Goals:

- ✓ To make India a *World Leader in Global Geospatial space*
- ✓ To develop geospatial infrastructures, skill and knowledge, standards and businesses.
- ✓ To enable easy availability of valuable Geospatial data
- ✓ To enable the involvement of private sector.



2025

- Put in place a legal framework that “supports liberalisation of the geospatial sector, and democratisation of data for enhanced commercialisation with value added services
- Improve availability and access of “**better location data**” for companies, including private organisations



2030

- Develop high resolution topographical survey and mapping, and a high-accuracy digital elevation model for the entire country
- Establish an Integrated Data and Information Framework, under which a **Geospatial Knowledge Infrastructure (GKI)**



2035

- **Mapping of sub-surface infrastructure** in major cities and towns across India, and development of high resolution, accurate bathymetric geospatial data (resources and economy of inland waters, and sea surface topography of shallow and deep seas) to support India's 'Blue Economy
- **National Digital Twin** of major cities and towns.



❖ Institutional Framework:

- **Geospatial data infrastructure:** The National Geospatial Policy details the establishment and promotion of “geospatial data infrastructure” through a “well-defined custodianship model and data supply chain.
- **Geospatial Data Promotion and Development Committee (GDPDC):** National-level apex body, which will offer details regarding the use of geospatial data in governance across specific ministries, and enable the development of private startups and companies to work on specific projects.
- **National Digital Twin:** An ecosystem of high resolution data to promote connected digital twins among private businesses “with secure and interoperable data sharing.
- **National Fundamental Sectoral Geospatial Data Themes:** Development of 14 National Fundamental Sectoral Geospatial Data Themes, which will be used to address various sectors that support the development of commercial geospatial applications in various sectors including *disaster management, mining, forestry and more.*

❖ Need for the policy:

- ✓ High resolution data is populated by international players like Google and Microsoft.
- ✓ Multiple agencies creating the same data i.e., improper use of financial resources by duplication of data.
- ✓ Lack of market orientation of geospatial data.
- ✓ Inefficient sectoral flow
- ✓ Inadequate intra and inter-organisational communication.
- ✓ Lack of awareness on geospatial data by the population.

❖ Significance:

- **Management of geospatial data:** Overarching framework for holistic development of the geospatial ecosystem will strengthen the national and sub-national arrangements for generation and management of geospatial information.
- **Enabling the private sector:** The private sector is expected to predominantly cater to geospatial/location data-related needs and requirements of citizens. It will also play a key role in the creation and maintenance of geospatial and mapping infrastructures.
- **Governance:** Geospatial applications that the government needs in its governance procedures, can be built under the new framework.
- **Advance use of technologies:** According to the demands of the clients, advance use of the technology can be made. For example, digital twins can create 3-dimensional mapping experience.
- **Localization of Data:** Locally available and locally relevant data will better serve the specific needs of the Indian population.
- **Ease of Doing Business:** New opportunities will enable global investments in the Indian ecosystem for domestic projects as well as export oriented services and products.
- **Better decision making:** National Digital Twin of India will be an ecosystem of smart, connected digital twins which will be enabled by secure and interoperable data sharing to facilitate better and informed decision making.
- **Startups:** Boosts entrepreneurship and innovation due to easy and cheap availability of local data.

➤ India's geospatial economy is likely to surpass 63,000 crores by the year 2025, growing at a rate of 12.8%, and employing more than 10 lakh people, the majority of whom are employed through geospatial startups.

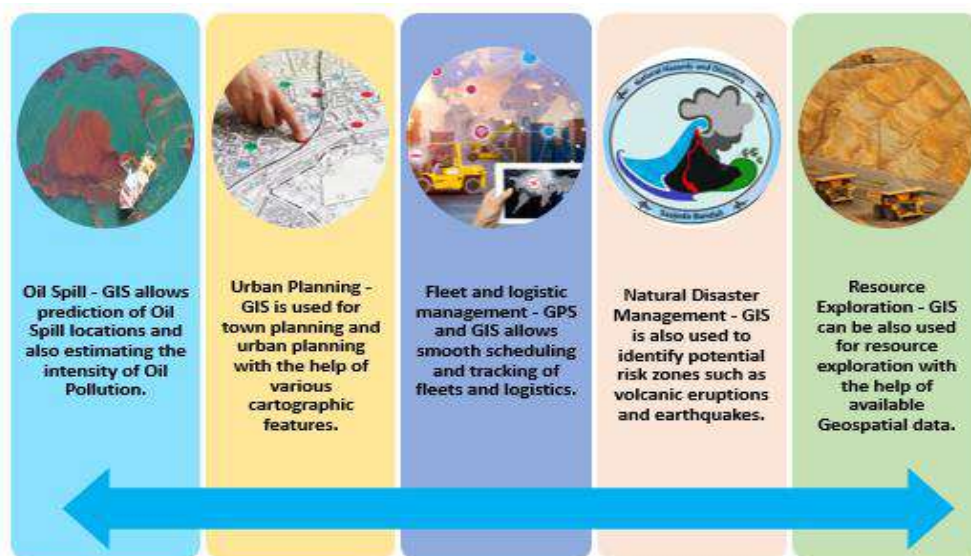
➤ Globally, the geospatial market is worth \$17 billion and the space economy is worth \$55 billion,



- **Easy availability of data:** The policy will encourage open standards, open data and platforms. The policy is structured to contribute towards the democratisation of data — Survey of India (SoI) topographic data and other geospatial data produced using public funds would be treated as common goods and made easily available

❖ What is Geospatial Data?

- **Geospatial data** are descriptions of events or occurrences with a location on or near the surface of the earth. This location can be static – relating to earthquakes, vegetation, etc., or dynamic – a person walking on the road, a package being tracked, etc.



- The location data obtained is usually combined with other characteristics attributes or recorded parameters to provide meaningful insights in the form of geospatial data.

❖ Major challenges:

- **Privacy and data surveillance:** Various agencies can collect easily available data and this will give rise to unknown surveillance of an individual violating the individual's right to privacy.
- **National security concerns:** Concerns like access control, securities and privacy policies, the development of secure and in particular interoperable GIS applications in the areas of Defence (Tri-Services).

❖ Way Forward:

- **Clear roadmap and Standard Operating Procedure (SOP):** Experts believe that a clear roadmap should be drawn and SOP should be developed in National Geospatial Policy 2022 for the National Securities Issues for the country where in it is the three services, Para military or Critical Infrastructure Sectors.
- **Need-to-know basis:** Security measures must be taken to provide users and applications only with data on a need-to-know basis.
- **Data Protection bill:** Passing of the bill will make the data collecting private companies accountable if they violate data privacy.
- **Risk assessment and formulation of contingency plan** for any violation.

Basic terms/related concepts and facts:

Digital Twin: A digital twin is a virtual representation of an object or system that spans its lifecycle, is updated from real-time data, and uses simulation, machine learning and reasoning to help decision-making.



Practice Questions

Prelims:

Q. Which among the following sectors require Geospatial technology?

1. Agriculture
2. Industry
3. Urban & rural infrastructure
4. Banking & Finance
5. Delivery services

Choose the correct option using the codes given below:

- a) 1, 2, 3 and 4
- b) 1, 2, 3 and 5
- c) 1, 2, 4 and 5
- d) 1, 2, 3, 4 and 5

Answer: d)

Mains: (Level-Moderate)

Q. National Geospatial Policy, 2022 supports liberalisation of the geospatial sector, and democratisation of data for enhanced commercialisation with value added services. Elucidate.

(10 marks, 150 words)

TOPIC: Demonetisation and Its Impact

Issue in brief – An analysis of demonetization gains and losses in the wake of recent judgement.

https://epaper.thehindu.com/ccidist-ws/th/th_delhi/issues/20322/OPS/GOOAN3TV8.1.png?cropFromPage=true

Where in Syllabus:

GS 2: Government policies and interventions for development in various sectors and issues arising out of their design and implementation

❖ Why in news?

- SC majority ruling finds no flaw in the government's decision to demonetise ₹500 and ₹1000 currency notes through a gazette notification.
- The sole woman judge, justice B.V.Nagarathna, on the Bench however disagreed with the majority, saying the demonetisation exercise, undertaken on the government's initiative and based on mere notification in the official gazette instead of plenary legislation in the Parliament, was plainly unlawful and vitiated.



❖ The questions that were considered by the SC on Demonetisation

- The Supreme Court had identified six issues in the challenge to the government's demonetisation decision.
 - Whether the power available under Sec 26 can be restricted to mean that it can be exercised only for "one" or "some" series of bank notes and not "all" series?
 - If the power under section 26 means "all series" of bank notes, whether this power would amount to conferring excessive delegation and as such, liable to be struck down?
 - Is there a possibility that the notification of demonetisation could be overturned on the ground of legal flaws in the decision-making process?
 - Does the government notification of demonetisation fail the Test of Proportionality?
 - Whether the period of exchange of notes (after demonetisation) can be said to be unreasonable?
 - Is the RBI authorised to accept the demonetised notes beyond the period specified in notifications issued under sub-section (1) of Section 4 of the 2017 Act?

‘NOT RELEVANT WHETHER OBJECTIVES ACHIEVED OR NOT’	
<p>MAJORITY VERDICT OF JUSTICES SA NAZEER, BR GAVAI, AS BOPANNA & V RAMASUBRAMANIAN</p> <p>➤ Majority verdict says demonetisation had a "reasonable nexus with its objectives" such as eradicating black money and terror funding and it is not relevant whether those objectives were achieved or not</p> <p>➤ Says government was in consultation with RBI for six months and it is empowered to take such a decision</p> <p>➤ No fresh window to exchange notes, 52 days' time given earlier not unreasonable</p> <p>“There has to be great restraint in matters of economic policy. Court cannot supplant the wisdom of executive with its wisdom...”</p>	<p>MINORITY VERDICT OF JUSTICE BV NAGARATHNA</p> <p>➤ Demonetisation move 'exercise of power' by Union government, contrary to law and vitiated under the RBI Act</p> <p>➤ Carried out in 24 hours, so central bank had no time to consider it</p> <p>➤ Parliament, which is "at the centre of our democracy, cannot be left aloof in a matter of such importance"</p> <p>➤ Around 98% of value of banned currency reported to have been exchanged, so measure may not have been as effective as it was hoped to be</p> <p>“This (use of phrases such as 'as desired' by the Centre in communication to RBI governor) demonstrates that there was no independent application of mind by the Bank</p>



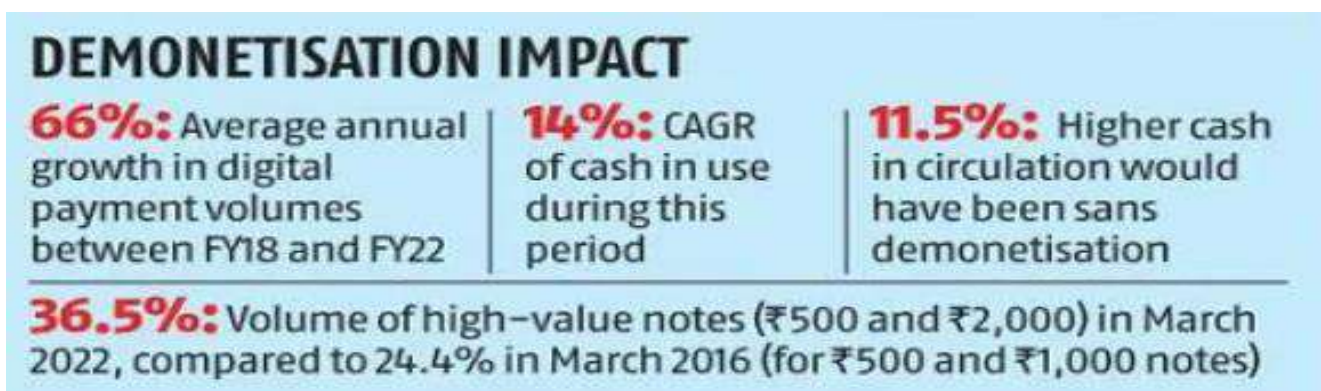
❖ What is demonetisation?

- Demonetisation is an act of cancelling the legal tender status of a currency unit in circulation.
- On 8 November 2016, the Government of India announced the demonetisation of all ₹500 and ₹1,000 banknotes of the Mahatma Gandhi Series. It also announced the issuance of new ₹500 and ₹2,000 banknotes in exchange for the demonetised banknotes.
- **Objectives:**
 - ✓ To curb black money
 - ✓ To remove counterfeit notes from the market.
 - ✓ To formalise the informal Indian Economy.
 - ✓ To help reduce anti-social activities and their finances.

❖ How is money demonetised in India?

- **Section 26 of the RBI Act, 1934** gives power to the government to demonetise currency.
- **Section 26(1) of the RBI Act, 1934:** Every bank note shall be legal tender at any place in India in payment, or on account for the amount expressed therein, and shall be guaranteed by the Central Government.
- **Section 26(2) of the RBI Act, 1934:** On recommendation of the Central Board, the Central Government may, by notification in the Gazette of India, declare that, with effect from such date as may be specified in the notification, any series of bank notes of any denomination shall cease to be legal tender.
- **On receipt of the said recommendation made by the central board of the bank under Section 26(2) of the Act,** the central government may accept the said recommendation or may not do so.
- **If the central government accepts the recommendation,** it may issue a notification in the Gazette of India specifying the date with effect from which any specified series of bank notes of any specified denomination shall cease to be legal tender and shall cease to have the guarantee of the central government.
- **The provisions of the Act do not bar the central government from proposing or initiating demonetization:** It could do so under Entry 36 (Currency, coinage and legal tender; foreign exchange.) of List I of the Seventh Schedule of the Constitution of India.
 - However, it has to be done only by an ordinance being issued by the President of India followed by an Act of Parliament or by plenary legislation through the Parliament.

❖ Weighing gains and losses of Demonetisation



- The impact of demonetization in India was mixed, with both gains and losses.



<u>What are the Gains?</u>	<u>What are the losses?</u>
<ul style="list-style-type: none">• Increase in digital transactions: Demonetization led to a decline in cash transactions and an increase in digital transactions, which helped to promote financial inclusion and a shift towards a digital economy. <i>For example</i>, the volume of transactions on the Unified Payments Interface (UPI) platform, a digital payments system, grew from 22 million in October 2016 to 1.5 billion in December 2018.	<ul style="list-style-type: none">• Economic disruption: The demonetization caused significant disruption to the Indian economy, as many citizens were not able to access cash to purchase goods and services. Many businesses, particularly small businesses, were negatively impacted by the demonetization. The agricultural and informal sectors were hit the hardest. <i>According to data from the CSO, India's GDP growth rate declined from 7.9% in Q3 of 2016 to 6.1% in Q3 of 2017, after the demonetization.</i>
<ul style="list-style-type: none">• Increase in tax compliance: The demonetization led to an increase in tax compliance as more citizens were encouraged to enter the formal economy and more transactions were captured electronically. <i>For example</i>, the number of taxpayers who filed returns increased from 4.07 crore in 2015-16 to 5.83 crore (till 31st July, 2022 for AY 2022-23).	<ul style="list-style-type: none">• Job Losses: Due to the economic disruption caused by demonetization, many people lost their jobs and small businesses shut down. <i>According to a report by Centre for Monitoring Indian Economy (CMIE), 1.5 million jobs were lost in January 2017, right after the demonetization.</i>
<ul style="list-style-type: none">• Reduction in black money: According to data from the RBI, some amount of old currency notes was not returned to banks following demonetization, indicating that they were being held as black money.	<ul style="list-style-type: none">• Loss of productivity: Due to the cash crunch and economic disruption, there was a significant loss of productivity across various sectors of the economy.
<ul style="list-style-type: none">• Increase in the number of fake currency notes detected and seized: According to data from the RBI fake currency notes detected and seized increased in the fiscal year 2017-18.	<ul style="list-style-type: none">• Large amount unaccounted wealth is stored in the form of gold, land, foreign exchange etc., cash is a very small fraction of it. Demonetisation caused grievous injury to an honest Indian, whereas dishonest black money hoarder were less affected.
<ul style="list-style-type: none">• Formalisation of economy: The demonetisation led to digitization and the increase in no. of new taxpayers, which helped in the formalization of the economy.	<ul style="list-style-type: none">• Lack of preparedness: The demonetization was announced with little warning and the government and the Reserve Bank of India (RBI) were not fully prepared to handle the logistics of exchanging old notes for new ones, leading to long lines and delays.
<ul style="list-style-type: none">• Mumbai Police reported setback to Hawala operations. Hawala dealers in Kerala were also affected. JnK reported of the effect of demonitisation on hawala transactions of separatists.	<ul style="list-style-type: none">• Low consumer confidence: Sudden overnight ban on currency has dented the confidence of Indian consumers had severe ramification on economy. (<i>Liquidity crunch</i> → <i>low consumption</i> → <i>low production</i> → <i>low growth rate</i>)



❖ Way forward

- Most policy decisions carry risks of unintended consequences. It is important to deftly balance these risks with the potential benefits of such decisions.
- It is fundamental duty of the government to protect the rights and the livelihoods of the citizens.
- Rather than focusing only of cleaning up the black money circulating in the economy, the self-feeding cycle of corruption and black money need to be understood in a comprehensive manner.
- Contemporary technologies like Artificial Intelligence (AI), Big Data Analytics (BDA) etc. could come pretty handy in the whole process of any major decision like demonetization.
- Avoid oversimplification of policies, evaluate important dimensions of the strategy.

Practice Questions

Prelims:

Q. Consider the following statements:

1. Every bank note shall be legal tender at any place in India in payment and it shall be guaranteed by RBI.
2. Sec 26 of RBI Act, 1934 empowers the government to demonetise the currency on the recommendation of Central Board.

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

Answer: b)

Mains: (Level-Moderate)

Q. Briefly mention the objectives of demonetisation carried by the government. Do you agree that demonetisation has not been as effective as it was hoped to be?

[10 marks, 150 words]



TOPIC: Doctrine of Basic Structure

Issue in brief – Recently, the Vice President of India questioned the doctrine of Basic Structure, asking if the judiciary can put fetters on the amending power of the Parliament.

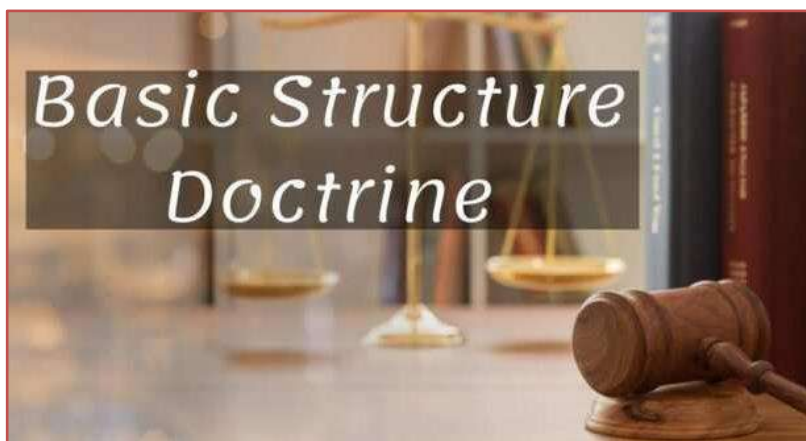
https://epaper.thehindu.com/ccidist-ws/th/th_delhi/issues/21408/OPS/G3DAOI9C0.1.png?cropFromPage=true

Where in Syllabus:

GS 2: Indian Constitution - Significant provisions and basic structure

❖ Why in news?

- Recently, the Vice President of India criticised the Supreme Court, for using the doctrine of basic structure to strike down the constitutional amendment that introduced the National Judicial Appointments Commission Act.
- His remarks questioning the basic structure doctrine propounded in the landmark Kesavananda Bharati case (1973) does not reflect the correct position of law.
- In his view, the basic structure doctrine has usurped parliamentary sovereignty and goes against the democratic imperative that the elected legislature should reign supreme



❖ Limitations on the Parliament's Legislation power

The parliamentary legislation is subject to two limitations under the Constitution of India

- **Judicial review:** Limitation is set out in Article 13, under which laws inconsistent with or in derogation of fundamental rights are void.
- **Doctrine of Basic Structure:** The Parliament under Article 368 can amend any part of the Constitution including the Fundamental Rights but without affecting the 'basic structure' of the Constitution.

❖ What is Doctrine of Basic Structure?

- The Doctrine of Basic Structure is a form of judicial review that is used to test the legality of any legislation by the courts.
- The doctrine was evolved by the Supreme Court in the 1973 landmark ruling in Kesavananda Bharati v State of Kerala. In a 7-6 verdict, a 13-judge Constitution Bench ruled that the 'basic structure' of the Constitution is inviolable, and could not be amended by Parliament.
- If a law is found to "damage or destroy" the "basic features of the Constitution", the Court declares it unconstitutional. The test is applied to constitutional amendments to ensure the amendment does not dilute the fundamentals of the Constitutional itself.



- **Elements of the Basic Structure:** The Supreme Court is yet to define or clarify as to what constitutes the 'basic structure' of the Constitution. From the various judgements, the following have emerged as 'basic features' of the Constitution or elements of the 'basic structure'

- | | | |
|---------------------------------|-----------------------------|---------------------------------------|
| ✓ Supremacy of the constitution | ✓ Federalism | ✓ Unity and sovereignty of India etc. |
| ✓ Rule of law | ✓ Secularism | |
| ✓ Separation of powers | ✓ Independence of judiciary | |
| ✓ Judicial Review | ✓ Free and fair elections | |

❖ Emergence of Basic Structure

- Since there is separation of powers in the government, it is implicit that judiciary will have the powers of judicial review to strike down any unconstitutional law. But Article 13 explicitly deals with the power of the judiciary to strike down laws violative of fundamental rights. However, it does not categorically mention that it is the duty of the judiciary to perform that function.
- **Article 13(2):** The State shall not make any law which takes away or abridges the rights conferred by this Part and any law made in contravention of this clause shall, to the extent of the contravention, be void.
- Article 13(2) states that the 'state shall not make any law', law is usually understood as ordinary/statutory law passed by legislature, but can the constitutional amendment laws passed by the legislature, too be considered law as mentioned in Art 13(2)?
- The question whether fundamental rights are amendable or not lies in the answer to the question whether constitutional amendment law qualifies as law under Art 13 (2) or basically how we define law under Article 13.

Shankari Prasad case, 1951

- The apex court held on to a narrow interpretation of the term law in article 13
- The word 'law' in Article 13 includes only ordinary laws and not the constitutional amendment acts
- Therefore, the Parliament can abridge or take away any of the Fundamental Rights by enacting a constitutional amendment act and such a law will not be void under Article 13 authority to amend the constitution and it is unfettered.

Golaknath case, 1967

- A 11 judge bench with a narrow margin of 6-5 reversed its earlier interpretation and moved towards the wider interpretation of the term "law".
- Fundamental Rights are given a 'transcendental and immutable' position and hence, the Parliament cannot abridge or take away any of these rights
- A constitutional amendment act is also a law within the meaning of Article 13 and hence, would be void for violating any of the Fundamental Rights.

Reaction from the executive and legislature

- In the 24th Constitution Amendment Act, 1971, both Articles 13 and 368 were amended by adding Article 13(4) and 368(3).
- Art 13(4) stated that nothing in Article 13 would apply to any amendment of the constitution done under Article 368. This was an attempt to narrow down the interpretation of the term law used in article 13.
- Art 368(3) stated that nothing in article 13 shall apply to provisions made under this article to double secure the narrow interpretation. This was challenged in the future in the Keshavananda Bharti vs.State of Kerala (1973).

Keshavananda Bharti Case (1973)

- The courts took a middle path between the narrow interpretation espoused from Shankari Prasad case and the wider interpretation in Golaknath case.
- The court observed that **all parts of the constitution are amendable** but **no change or amendment should have the effect of changing or altering the basic structure or core identity of the constitution.**



❖ Does doctrine of basic structure undermine parliamentary sovereignty?

<u>YES</u>	<u>NO</u>
<ul style="list-style-type: none"> • Restricts amending power: Important amendments like NJAC Act were wholly or partially struck down by the SC. 	<ul style="list-style-type: none"> • In a democracy based on constitutionalism, the concept of constitutionalism abhors absolutism, hence parliament's power to amend the constitution cannot be absolute and hence have to be subjected to some limitations.
<ul style="list-style-type: none"> • The Supreme Court has practically become the third and decisive legislative chamber of the parliament, apart from the LS and RS in framing laws. This is against the doctrine of separation of power. 	<ul style="list-style-type: none"> • The basic structure doctrine had helped save the Constitution from being undermined through the misuse of parliamentary majority. The main purpose of the doctrine is to ensure that some fundamental features of the Constitution are not legislated out of existence.
<ul style="list-style-type: none"> • According to the preamble, India is a democratic and sovereign State. The Basic Structure is <u>primacy of the will of the people</u>. Keeping the same view, some legal experts have also criticized Basic Structure Doctrine as 'anti-democratic and counter-majoritarian' and said, 'unelected judges' can not strike down amendments to the Constitution. 	<ul style="list-style-type: none"> • It has been invoked to strike down amendments only in a few cases, but many others have survived basic structure challenges.
<ul style="list-style-type: none"> • Ambiguous in nature: The power to decide the inclusion of subjects in the basic structure lies with the apex court bench and the judges on it. Which provisions of the constitution constitute basic structure is uncertain and may vary from judge to judge or bench, thus leading to an uncertain democracy 	<ul style="list-style-type: none"> • Basic structure has protected and promoted democracy or else India would have become a dictatorship or taken over by armed rebellions like Pakistan, Afghanistan etc.
	<ul style="list-style-type: none"> • Certain instances where basic structure has <u>enhanced</u> parliamentary sovereignty can be, Ordinance for SC/ST act to nullify SC order, placing Fundamental rights and DPSP on equal footing, Triple talaq ordinance to give effect to SC order on Triple talaq etc.

❖ Conclusion

- The notion of parliamentary sovereignty is connected with the British Parliament, whereas the principle of judicial supremacy is associated with the American Supreme Court
- The Indian Constitution makers chose a middle path and hence there is constitutional supremacy. The judiciary has the power of judicial review and the Parliament has the sovereign power of amending the Constitution with certain constraints.
- In the spirit of parliamentary system, these two pillars of democracy – legislature and judiciary, should work collaboratively to uphold the fundamental values of our constitution.



Practice Questions

Prelims:

Q. Consider the following statements:

1. The Constitution clearly lays down the basic structure which restricts the legislation power of the Parliament.
2. Supremacy of the Judiciary is the part of basic structure.

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

Answer: D)

Mains: (Level-Moderate)

Q. The basic structure doctrine has put fetters on the legislative power of the parliament.

Critically examine.

[10 marks, 150 words]



TOPIC: Issue with the Governor's role in Indian Federalism

Issue in brief: Recently the dispute between the Tamil Nadu Governor and the State government which culminated in the Governor omitting certain sections of his customary address highlights the role of governor in Indian federal setup.

<https://www.thehindu.com/news/national/tamil-nadu/explained-what-led-to-the-governor-cm-rift-in-tamil-nadu/article66378960.ece>

Where in Syllabus:

GS 2: Issues and challenges pertaining to the federal structure

❖ Why in News?

- Tussle between the elected government and the respective Governors is on the rise. These have been largely about *the selection of the party to form a government, deadline for proving majority, sitting on Bills, and passing negative remarks on the state administration.*
- In the past, too, there have been differences or disputes between State governments and the Governor, but the extent to which this has progressed in the present times is very worrying. Former judges of the country have also called this trend “dangerous for democracy” and Indian federal set up.
- Few examples:
 - While delivering the annual address to the state assembly, Tamil Nadu Governor left out some passages from the text prepared by the State government.
 - In December 2020, Kerala Governor turned down a request to summon a special sitting of the Assembly to debate the three central farm laws.
 - In West Bengal, Governor is alleged to often comment on law and order and political violence.



❖ Constitutional provisions related to Governor

- **Article 153** says that there shall be a Governor for each State. One person can be appointed as Governor for two or more States.
- **Article 154:** The executive power of the State shall be vested in the Governor and shall be exercised by him either directly or through officers subordinate to him in accordance with this Constitution.
- **Article 155:** A Governor is appointed by the President.
The Governor has a dual role:
 - Constitutional head of the state - bound by the advice of his Council of Ministers (CoM).
 - Functions as a vital link between the Union Government and the State Government.
- **Article 156:** The Governor shall hold office during the pleasure of the President

❖ Role of Governor in Indian federal setup

In a federal system, the Governor of a state plays the key role in running the constitutional machinery and act as the lynchpin between Centre and state:



- **Key responsibilities in the State Assembly:**

- Summoning and proroguing the state legislature: The Governor summons and prorogues the state legislative assembly as per the requirement.
 - Address the assembly: The Governor addresses the state legislative assembly at the beginning of the first session after each general election and the first session of each year.
 - Recommendation for dissolving assembly: Governor recommends the dissolution of the state legislative assembly to the President of India in certain circumstances, such as when the government loses a vote of confidence.
 - Assent to bills: Governor gives assent to bills passed by the state legislature, or to withhold assent or reserve the bill for the President's consideration.
 - Appointment of members of the Legislative Council: In states where the Legislative Council exists, the Governor appoints certain members of the council in accordance with the provisions of the constitution.
 - Assent to money bills: Governor gives assent to money bills passed by the state legislature, or to recommend amendments to such bills.
- **Appointing the Chief Minister of a State:** The Governor appoints the leader of the party or coalition that has a majority in the state legislative assembly as the Chief Minister.
 - **Emergency powers:** The Governor has the power to declare a state of emergency in the state, in case of a breakdown of law and order or a threat to the security of the state, on the advice of the Chief Minister or on his own.
 - **Administering oaths to the Chief Minister and other Ministers:** Governor administers oaths of office and secrecy to the Chief Minister and other Ministers.
 - **Appointment of Judges:** The Governor appoints judges to the High Court and other subordinate courts in the state in consultation with the Chief Justice of the High Court and the State Government.
 - **Appointment of officials:** The Governor appoints the Advocate General, Chairman and members of the State Public Service Commission, and other officials of the state.
 - **Representing the State:** The Governor represents the state at the Centre and participates in the meetings of the National Development Council and other forums.
 - **Custodian of the Constitution:** The Governor is the custodian of the Constitution in the State and is responsible for ensuring that the State government functions within the framework of the Constitution.

❖ Reasons responsible for friction between elected government and Governor

- **Appointment of Governor:** It is often observed that the politicians and former bureaucrats affiliated with the ruling party at the centre have been appointed as Governors. This has led to questions about the post's impartiality and non-partisanship. Also, the convention of consulting the Chief Minister before appointing the Governor is often ignored.
- **From Centre's Representative to Centre's Agent:** Critics refer to governors as the 'agents of the Centre' today. In 2001, the National Commission to Review the Working of the Constitution, held that the Governor owes his appointment and his continuation to the Union. Apprehensions exist that he will follow instructions given by the Union Council of Ministers.
- **Abuse of powers:** In case of hung assemblies, there is discretion for Governors as to which party or coalition of parties are in best position to form the government. This discretion is abused by Governors in partisan manner at the instruction of Centre. There are numerous instances where despite the parties apparently having lesser seats than the parties in opposition are invited to form government. For example, Governor invited BJP for forming government in Karnataka despite opposition coalition claiming majority.



- **Constitutional Loopholes:** In the Constitution, there is no limit set for how long a Governor can withhold assent to a Bill. As a result, friction between the governor and concerned state governments is likely to arise.
- **Removal of Governors:** Having no written grounds or procedures for removing governors, several times governors were removed arbitrarily.

❖ Reforms recommended by various commission & Judgement

- **On Appointment and Removal of Governor:**
 - The "**Punchhi commission**" recommended that there should be a provision for the impeachment of the governor by the state legislature.
 - The state chief minister should have a say in the governor's appointment.
 - **Venkatachaliah Commission (2002):** Governor's appointment should be entrusted to a committee comprising the prime minister, the home minister, the speaker of the Lok Sabha and the chief minister of the concerned state, if governor to be removed before completion of term, the central government should do so only after consultation with the Chief Minister.
- **On Dismissal of State Government under Article 356:**
 - **S.R. Bommai Judgment (1994):** The judgement put an end to the arbitrary dismissal of State governments by a hostile Central government.
 - The verdict ruled that the floor of the Assembly is the only forum that should test the majority of the government of the day, and not the subjective opinion of the Governor.
- **On the Use of Article 356:**
 - The **Punchhi commission** recommended that Articles 355 & 356 be amended.
 - The **Sarkaria Commission (1988)** recommended that Article 356 should be used in very rare cases when it becomes unavoidable to restore the breakdown of constitutional machinery in the State.
 - Similar recommendations have also been given by the Administrative Reforms Commission (1968), Rajamannar Committee (1971) and Justice Venkatachaliah Commission (2002).
- **On Discretionary Powers:**
 - The Supreme Court in the **Nabam Rabia judgment (2016)** ruled that the exercise of Governor's discretion Article 163 is limited and his choice of action should not be arbitrary.

❖ Way forward

- **Strengthening of Federalism:** In order to check misuse of the office of governor, there is a need to strengthen federal setup in India. In this regard, the Inter-State council and the role of Rajya Sabha as the chamber of federalism must be strengthened.
- **Code of Conduct for Governor:** The 'Code of Conduct' should lay down certain 'norms and principles' which should guide the exercise of the governor's 'discretion' and his powers which she is entitled to use and exercise on her judgment.
- **Governor's Discretion Should Be Only Her Discretion:** For the smooth functioning of government, it is equally essential that the governor must act judiciously, impartially and efficiently while exercising his discretion and personal judgment.

❖ Conclusion

Although the governor has legislative, emergency and financial powers, it's not meant to be used lightly and should be used only in exceptional circumstances as it can undermine the principles of federalism in India. Thus, there is a need to maintain checks and balances between the State government and the governor's office for smooth functioning of the state machinery and welfare of people at large.



Basic terms/related concepts and facts:

What is federalism?

Federalism is a system of government in which power is divided between a central authority and various constituent units of the country. A federation has two levels of government. Both these levels of governments enjoy their power independent of the other.

- One is the government for the entire country that is usually responsible for a few subjects of common national interest.
- Governments at the level of provinces or states that look after much of the day-to-day administering of their state.

Practice Questions

Prelims:

Q. Consider the following statements:

1. There is a bar to the selection of a Governor of State from amongst the members of legislature of State.
2. Governor of one State cannot be appointed as the Governor of another State.

Which of the above statement(s) is/are *incorrect*

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

Ans. c)

Mains: (Level-Moderate)

Q. "Governor should be discharging his/her duties in accordance with the spirit of Constitution and not just acting as the agent of the Centre". In the light of above statement discuss the role of Governor in Indian federalism.

[10 marks, 150 words]



TOPIC: Autonomy at Panchayat Level

Issue in brief – Sarpanch in Telangana's Jayashankar Bhupalpally district died by suicide due to indebtedness

<https://www.thehindu.com/opinion/lead/there-is-hardly-any-autonomy-at-the-panchayat-level/article66414499.ece>

Where in Syllabus:

GS 2: Devolution of powers and finances up to local levels and challenges there in

❖ Why in news?

Sarpanch in Telangana's Jayashankar Bhupalpally district **died by suicide due to indebtedness**. He had taken out a loan to undertake development works in the village and was unable to bear the burden after the State government's inordinate delay in releasing bill payments.



❖ Panchayati Raj Institutions in India

- The **Constitution (73rd Amendment) Act, 1992**, went into effect on April 24, 1993, and granted Panchayati Raj institutions *constitutional status*.
- Rajasthan was the first state in India to implement the Panchayati Raj system.
- Parliament passed the 73rd Constitutional Amendments in December 1992. As a result, Local self-government was introduced in rural and urban India.
 - The Act has two parts: **compulsory and voluntary**. The **compulsory provisions** must be added to state laws, which include the creation of the new Panchayati Raj systems. **Voluntary provisions**, on the other hand, maybe included at the *discretion* of the state government.
- **Importance of Panchayat System in India**
 - The PRIs are local self-governing bodies that ensure people's participation and involvement in the **formulation and implementation of rural development programs**.
 - The Amendment Act provides shape to **Article 40 of the Constitution**, (Directive principles of state policy), which directs the state to organise the village panchayats and provide them powers and authority so that they can function as self-government.
 - The PRIs **strengthen the foundation of democracy** at the grassroots level.
 - They serve as a catalyst for **the integration of tribal masses into rural development**.
 - PRIs have been used to **improve rural infrastructure, household income, and delivery systems for education, health, and safety mechanisms**.

❖ What are the Challenges to the PRI?

- **Problem of Autonomy at the Panchayati Level:** State governments, through the local bureaucracy, hold considerable discretionary authority and influence over panchayats.



- In India, the powers of local elected officials (such as sarpanches in Telangana) remain seriously circumscribed, thereby **diluting the spirit of the constitutional amendments** seeking to empower locally elected officials.
- **Issues of Funding: Broadly, panchayats have three main sources of funds** — their own sources of revenue (local taxes, revenue from common property resources, etc.), grants in aid from the Centre and State governments, and discretionary or scheme-based funds.
 - Their **own sources of revenue (both tax and non-tax)** constitute a tiny proportion of overall panchayat funds. Gram panchayats **remain fiscally dependent on grants** from the State and the Centre for everyday activities.
 - **Access to discretionary grants** for panchayats remains contingent on political and bureaucratic connections. When **higher levels of government allocate funds** to local governments, sarpanches need help accessing them.
 - **Delays in the disbursement of funds** by the local bureaucracy have led to pressure on sarpanches leading some to end their life. Sarpanchs are forced to use private funds for panchayat activities.
- **Double Authorisation for Spending:** Apart from sarpanchs, disbursement of payments requires bureaucratic concurrence.
 - The sarpanch and the panchayat secretary, who reports to the Block Development Officer (BDO), must **co-sign cheques** issued for payments from panchayat funds.
- **State Control and Political Supervision:** Gram Panchayat Acts in many States have empowered district-level bureaucrats, mostly **District Collectors**, to act against sarpanches for official misconduct.
 - **Unlike elected officials at other levels**, sarpanches have been dismissed while in office.
 - **For Example**, Section 37 of the Telangana Gram Panchayat Act allows District Collectors to suspend and dismiss incumbent sarpanches.
- **Less Discretionary power with Sarpanches:** The ability of sarpanches to **exercise administrative control** over local employees is limited.
 - Sarpanches need to be in the **good books** of politicians and local bureaucrats if they want access to discretionary resources, timely disbursement of funds and be able to successfully execute any project or program in their village.
- **Structural Challenges: The expertise available to the Panchayati Raj Institutions** is very limited, particularly in the field of planning, implementation, or monitoring of various developmental schemes.
- **Socio-Economic and Political Condition:** The elected members at all the levels of Panchayati Raj Institutions and the Office bearers are normally from the **rich and dominant sections** of the rural society.
 - They have **vested interests** in preserving the existing system and would not do anything that would strengthen the position of the downtrodden in their areas.
- **Absence of Statutory Provisions:**
 - Some States have not constituted the PRIs. **For Example**, in Nagaland, Meghalaya, and Mizoram Panchayati Raj Institutions are not established.
 - Similarly, in a number of states, elections to PRIs have not been held regularly.

❖ Steps taken by government to empower PRIs:

- **SVAMITVA Scheme:** *Survey of Villages and Mapping with Improvised Technology in Village Areas (SVAMITVA)* scheme was launched to enable economic progress of Rural India by providing “Record of Rights” to every rural household owner.
- **e-Gram Swaraj e-Financial Management System:** e-Gram Swaraj is a Simplified Work Based Accounting Application for Panchayati Raj.
- **Geo-Tagging of Assets:** The Ministry has developed “**mActionSoft**”, a mobile based solution to help in capturing photos with **Geo-Tags (i.e., GPS Coordinates)** for the works which have assets as an output.



- **Citizen Charter:** In order to focus on the commitment of the Panchayati Raj Institutions (PRIs) towards its Citizens in respects of Standard of Services, the Ministry has provided platform to upload Citizen Charter document with the slogan “**Meri Panchayat Mera Adhikaar – Jan Sevaayein Hamaare Dwaar**”.
- **Revamped Rashtriya Gram Swaraj Abhiyan (2022-23 to 2025-26):** The focus of the scheme of Revamped RGSA is on *re-imagining Panchayati Raj Institutions* as vibrant centers of local self-governance with special focus on *Localization of Sustainable Development Goals (LSDGs)* at grassroot level adopting thematic approach through concerted and collaborative efforts of Central Ministries and State Line departments and other Stakeholders with ‘**Whole of Government and Whole of Society**’ approach.
- **The 15th Finance Commission recommendations**
 - It has recommended grants of Rs 4,36,361 crore from the Union government to local governments for 2021-26.
 - This is an increase of 52 per cent over the grant recommended by 14TH Finance Commission.
- **Devolution Index, 2019**
 - Index is published by Ministry of Panchayati Raj.
 - It measures and assess to what extent the States have progressed in empowering PRIs.
- **People’s Plan Campaign (PPC)- Sabki Yojana Sabka Vikas** - It aims to draw up Gram Panchayat Development Plans (GDPs) in the country using Whole-of- Government and Whole-of-Society approach. GDP aims to strengthen the role of elected representatives of Panchayats.

❖ Way Forward

- **Recommendations of the 2nd Administrative Reform Commission (ARC)** can be implemented for better and effective functioning of the Panchayati Raj Institutions.
 - **Clear-cut demarcation of functions** of each tier of the government in the case of each subject matter law. In the case of new laws, it will be advisable to add a ‘**local government memorandum**’ to state their role.
 - **Fiscal autonomy** accompanied by fiscal accountability can provide a long-term solution.
 - **Capacity Building for Self Governance:** In rural areas, local self-governing institutions must attend to both the organization-building requirements as also the professional and skills upgradation of individuals associated with these bodies, whether elected or appointed.
 - **Access to debt capital markets:** Local bodies need to substantially improve their overall administrative and technical capacities to access debt, particularly **long-term bonds**.
 - **Training should be imparted to the Members of Panchayats** which require expertise and resources from various subject matter-specific training institutes.
 - **Setting reasonable tax and fee rates**, improving collection efficiencies, and expanding financing mechanisms to ensure the buoyancy of revenues over time.
 - Members of Parliament Local Area Development Schemes (**MPLADS**) fund can be utilized in an effective manner.
 - **The State Finance Commission (SFC):** States have to set up State Finance Commissions to synchronize with the Central Finance Commission. The **Action Taken Report** on the recommendations of the SFC must compulsorily be placed in the concerned State Legislature **within six months** of submission and followed with an annual statement on the devolution made and grants given to individual local bodies.
- **Decentralizing Decision-Making:**
 - Panchayats should be empowered to make decisions about the *allocation and use of funds*, rather than having decisions made for them by higher levels of government.
- **Increasing Transparency and Accountability:**
 - Transparency and Accountability issues can be addressed by *Conducting regular meetings, Publicising information, Implementing an e-governance system, Whistleblower protection* and through *Social Audit*.

All state governments need to re-examine the provisions of their respective Gram Panchayat laws and consider greater devolution of funds, functions, and functionaries to local governments.



Basic terms/related concepts and facts:

Evolution of PRIs in India Post Independence		
Committee	Recommendations	Outcome
Balwant Rai Mehta (1957)	Recommended 3-tier system: <ul style="list-style-type: none"> ➤ Gram panchayat at village level ➤ Panchayat Samiti at block Level and ➤ Zila Parishad at district Level. Planning and development should be entrusted to them	Panchayati institution set up in Rajasthan. Later, some other states also adopted the PRIs system.
Ashok Mehta Committee (1977)	Recommended 2-tier system: <ul style="list-style-type: none"> ➤ Zila Parishad at district level and ➤ Mandal Panchayat. • A minister for Panchayati raj should be appointed at the state • Constitutional recognition to these institutions 	Recommendations not accepted
GVK Rao committee (1985)	District should be the basic unit of planning	Recommendations not accepted
LM Singhvi committee (1986)	<ul style="list-style-type: none"> • Constitutional status be given to the PRIs • Nyaya panchayats should be established • Gram Sabha should act as the centre for democratic decentralization 	Amendment to the Constitution began <ul style="list-style-type: none"> ➤ 64th Amendment bill – but was not passed ➤ 73rd and 74th Amendment bill passed by Parliament in 1992.
Other Committees- Thungon Committee (1988), Gadgil Committee (1988)		

Practice Questions

Prelims (UPSC PRELIMS 2016):

Q. Consider the following statements:

1. The minimum age prescribed for any person to be a member of Panchayat is 25 years.
2. A Panchayat reconstituted after premature dissolution continues only for the remainder period.

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

Answer: b)

Mains (Level-Moderate):

Q. Autonomy at Panchayat level in India is essential to realise true democracy in India. Discuss.

[15 marks, 250 words]

DIY: <https://pib.gov.in/PressReleasePage.aspx?PRID=1885885>



TOPIC: Issues of Indian Migrant Workers

Issue in brief: India although being the largest migrant-sending and remittance-receiving country, has yet to develop a comprehensive migration policy.

https://epaper.thehindu.com/articleshare?articleurl=https%3A%2F%2Fepaper.thehindu.com%2Fccidist-ws%2Fth%2Fth_delhi%2Fissues%2F19743%2FOPS%2FGP9AMCP45.1%2BG45AMD34I.1.html

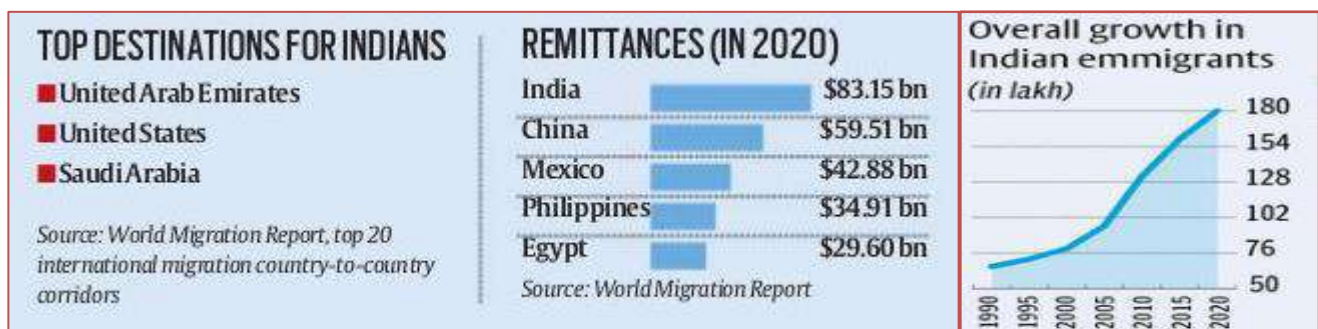
Where in Syllabus:

GS 2: Indian diaspora

❖ Why in news?

- Recently, International Migrants Day has been observed on December 18. This year's International Migrants Day must be seen in the backdrop of unprecedented migrant crisis.
- It is a matter of serious concern that despite being the largest migrant sending country, India has yet to have a tangible and comprehensive migration policy.

❖ Statistics related to migration



- According to the **International Organization of Migration's (IOM) World Migration Report 2022**:
 - ✓ There were **281 million international migrants** globally in 2020, with nearly two-thirds being Labour migrants.
 - ✓ In the **larger pool of migrants**, South Asia's share is **nearly 40%** and **South Asia-Gulf Migratory corridor** being the world's largest migrant corridor.
- According to a report by UN, nearly 18 million Indian were living outside India in 2020. Major distribution of Indian Diaspora: UAE – 3.5 million, USA – 2.7 million, Saudi Arabia – 2.5 million
- A document tabled in Parliament recently revealed that around 9 million Indian migrants are working in the GCC countries presently.
- India receives highest remittances in the world. As per the World Migration Report, in 2020, India received \$83 billion.

❖ Issues faced by Migrant Workers

The United Nations, through its non-binding resolution, “**Global Compact for Safe, Orderly Migration and Regular Migration**”, recognizes the challenges migrant labour faces across the world:

- Long-term problems:** Irregular payment, non-payment of wages, abuse at the workplace, etc. These have been prevailing more in Gulf Cooperation Council (GCC) countries.



- **Persistent issues:** Poor working conditions, negation of labour rights, absence of a proper grievance redress mechanisms, access to a transparent judicial system, health issues, remain unbanked, social exclusion, political exclusion etc.
- **During COVID-19:** The appalling underpayment of migrant workers was more widespread as businesses encountered financial pressures and vast numbers of workers were repatriated without payment of their wages. COVID-19 pandemic has also exposed the existing exploitative nature of the **Kafala system** (a sponsorship system that regulates the relationship between employers and migrant workers).

Recent Indian case:

- ✓ As per Kerala government data, some 1.7 million Keralites returned from abroad during the pandemic between June 2020 and June 2021 and 1.5 million had suffered job losses.
- ✓ According to Centre for Indian Migrant Studies (CIMS) data, a total of ₹62.58 crore has been denied to the 397 returnees during the COVID-19 pandemic, highlighting stark wage theft.

❖ Measures taken by Government

- **The Indian Community Welfare Fund (ICWF):** It was set up in 2009, is aimed at assisting Overseas Indian nationals in times of distress by providing emergency medical assistance, air passage to stranded Indians, legal assistance, boarding & lodging, assistance to Indian women facing marital issues and transfer of mortal remains to India.
- **Pravasi Bharatiya Bima Yojana (PBBY):** The Pravasi Bharatiya Bima Yojana (PBBY) is a mandatory insurance scheme for all Emigration Check Required (ECR) category workers going to ECR countries.
- **State Outreach Programme – VideshSampark:** The Ministry has launched State Outreach Programme under the banner “VideshSampark” in 2017, to seek cooperation in addressing issues pertaining to welfare and protection of NRIs living abroad and also to brief the State Governments about the Ministry’s initiatives pertaining to engagement and welfare of the overseas Indian community and curbing illegal migration
- **The Overseas Indian Affairs Division-II:** It deals with issues relating to engagement with Indian Diaspora. Among the major Programmes / Schemes handled by the Division are:
 - ✓ Pravasi Bharatiya Divas - Pravasi Bharatiya Divas (PBD) or NRI Day is a day celebrated in India to mark the contribution of the overseas Indian community to the development of India.
 - ✓ Know India Programme (KIP) - Since 2003-04 the Ministry has been organizing KIP with an aim to connect diaspora youth aged between 18-30 years with their motherland and to give them an exposure to India’s diverse forms of art, heritage, and culture.
 - ✓ Pravasi Teerth Darshan Yojana (PTDY) - Since 2018-19 the Ministry has been conducting PravasiTeerthDarshanYojana (PTDY) with an aim to provide the elder generation Persons of Indian Origin (PIOs) in the age group of 45-65 year an opportunity to reconnect with their roots.
 - ✓ Scholarship Programme for Diaspora Children (SPDC)
 - ✓ Non-resident Indians (NRI) marital disputes - The Ministry/Missions also provides assistance in many ways to distressed Indian women facing marital issues.
 - ✓ Promotion of Cultural Ties with Diaspora (PCTD) - provides grants to Indian Missions/Posts abroad to support their initiatives aimed at strengthening ties with the Overseas Indian Community; to preserve, maintain and showcase their Indian heritage and culture. The scheme aims to nourish and strengthen the cultural bonds between India and its Diaspora
- **Cooperation on Labour and Manpower related issues:** The Labour and Manpower Cooperation MoUs/Agreements are in place with the Gulf Cooperation Council (GCC) countries.
- **Bilateral agreements/MoU with countries:** Migration and Mobility Partnerships have been an important pillar of cooperation aimed at harnessing our demographic dividend and fostering mobility of our students, academicians, researchers, professionals, businesses etc. For e.g.,



- ✓ On 18 January 2021, a Memorandum of Cooperation (MoC) was signed with Japan to facilitate mobility of Indian skilled workers, under the scheme of the “Specialized Skilled Worker” (SSW) visa category of Japan.
- ✓ India and Portugal have signed a bilateral agreement on 13 September 2021 on the recruitment of Indian workers.
- ✓ India and the UK have signed Migration and Mobility Partnership Agreement on 4 May 2021 and have agreed on enhanced mobility provisions for young professionals.
- **Awareness Campaign and Media Plan:** Ministry is carrying out media awareness campaign on safe and legal migration by publicising ads in Hindi and 6 regional languages i.e., Bangla, Malayalam, Punjabi, Marathi, Tamil and Telugu in newspapers.
- **India’s Emigration Act, 1983:** It provides the regulatory framework for emigration of Indian workers for contractual overseas employment and seeks to safeguard their interests and ensure their welfare.
 - ✓ The act also mandated registration and certification of recruiting agents with the Protector General of Emigrants, Ministry of External Affairs (MEA), to avoid deception.
 - ✓ It also directed employers to recruit only through registered recruiters.

❖ Way forward

- **Focus on Women workers:** Attention needs to be focused on the women migrant workforce, in the most volatile countries such as Iraq, Syria, Libya, Yemen and Israel, and even remote Papua New Guinea.
- **Social Security:** Having a social security blanket is important to ensure migrants do not run out of funds during health crises, child-rearing, or child-education.
- **Finalisation of Draft National Policy on Migrant Workers:** The policy proposed by NITI Aayog promotes a rights-based approach to migrant workers and also recommends the creation of a migration resource center in high migration areas.
- **Emigration Bill 2021:** The COVID-19 pandemic has rerouted global migration patterns, restructured migratory corridors, and exposed the untold vulnerabilities and miseries of international migrant labour. In this context, the Government of India has to revisit its policies in the post-pandemic migratory scenario by engaging all stakeholders and by passing the Emigration Bill 2021.

India needs to develop migration-centric policies, strategies, and institutional mechanisms, helping India on the path of achieving Sustainable Development Goals.

Basic terms/related concepts and facts:

Emigration Bill, 2021: It seeks to create two authorities –

- Bureau of Emigration Policy and Planning (BEPP): It seeks to prepare policies on matters related to the welfare of emigrants and negotiating labour and social security agreements with destination countries.
- Bureau of Emigration Administration (BEA): It seeks to maintain a database of Indian emigrants, and implementing measures and programmes for the welfare of emigrants.
- A Central Emigration Management Authority will oversee welfare of Indian citizens living and working abroad and will have powers of a civil court.
- The Bill seeks to digitize records of Indian migrants and conduct pre-departure orientation to make the workers aware of their rights under the law.
- It also offers insurance covers, skill upgradation and training for those aspiring for overseas employment opportunities.
- It also proposes stronger mechanisms to regulate recruiters by maintaining and updating lists of blacklisted and fraudulent agencies, providing accreditation, and giving ratings to employers, etc.
- The bill also envisions penalties for agencies, individual recruiters as well as migrant workers who lack valid permits to travel to work and settle abroad and impose fines up to Rs. 50,000.



Practice Questions

Prelims:

Q. Kafala System, sometimes seen in news, is related to:

- a) A system that regulates the relationship between employers and migrant workers in many countries in West Asia.
- b) A system prevalent in Afghanistan to regulate women employment
- c) A system used in Central Asian countries to regulate mining of natural resources
- d) None of the above

Answer: a)

Mains: (Level-Moderate)

Q. Despite India being the largest migrant-sending and remittance-receiving country, the government has failed to provide a comprehensive migration policy that upholds the worker rights. Discuss.
[10 marks, 150 words]



TOPIC: India in emerging Asian Century

Issue in brief: The geopolitical and economic rise of Asia coincides with several regional and global developments which have the potential to undermine the stability and prosperity India had hoped an Asian century would bring.

https://epaper.thehindu.com/ccidist-ws/th/th_delhi/issues/20184/OPS/GCUAN0058.1.png?cropFromPage=true

Where in Syllabus:

GS 2: Bilateral, regional and global groupings and agreements involving India and/or affecting India's interests.

❖ Why in news?

- The important geopolitical developments across Asia such as the withdrawal of the U.S. from much of continental Asia and the aggressive rise of China and the Ukraine war appear to have ended the great power show in Asia, or at least for some time.
- The two major powers Russia and China are trying to undermine the global Balance of Power with several regional powers such as Iran, Turkey and Saudi Arabia in tow.
- Asia may be headed towards more global prominence and this century is certainly headed towards Asia-centric century.



❖ What is the “Asian Century”?

- The concept of Asian Century parallels the characterization of the 19th century as Britain's Imperial Century, and the 20th century as the American Century.
- The Asian Century refers to the dominant role that Asia is expected to play in the 21st century due to its burgeoning economy and demographic trends. The concept of the Asian Century gained credence following the rapid economic growth of China and India since the 1980s, which propelled both of them to the ranks of the world's largest economies.

❖ Potential of emerging Asia

- From the dawn of history, Asia had dominated the world trade and the global space due to its rich heritage, mature civilizations and its socio-cultural values.
- Home to more than half of the world's population, the region has climbed from low- to middle-income status within a single generation.
- By 2040, it is likely to generate more than 50% of world GDP, and could account for nearly 40% of global consumption.
- Asia's fraction of global goods trade rose from 25 percent in 2000–02 to 33 percent in 2015–17. In contrast, Europe's share waned from 26 to 22 percent, and North America from 25 to 18 percent from 2000 to 2017.



- With a swift rise, the Asian territory has an increasing global share of trade, capital, people, knowledge, transport, culture, and resources.

❖ Asian century and Multipolarity

- Asian century cannot be meaningful in a unipolar world. One alternative to a unipolar world is a multipolar world with Russia, China, Japan, India and other smaller powers asserting themselves on the global stage i.e., Asia taking the center stage.
- The other alternative is a China-dominated Asia. However, it is clear that a China-dominated Asia won't serve India's geopolitical interests. A multipolar world with new and shifting alliances; and competing coalitions for dominance will take away the relative 'stability' of the current world order.
- **India's interest:** For India, multipolarity is premised on the rule of law or peaceful coexistence. India values respect for the sovereignty and territorial integrity of all countries, resolution of international disputes through peaceful negotiations, and free and open access for all to the global commons.

❖ India's opportunities in emerging Asian century

India offers three major ingredients to the broader Asian economy: **services**, which account for 53% of India's GDP; a **young labour force** (younger than China's median age by around ten years); and **new markets** for the rest of the region. India could expect to target **four opportunities** to help drive its next chapter of growth:

- **First:** As more advanced Asian countries like China move up the economic development ladder, phasing out manufacturing in favor of a shift to R&D and more knowledge intensive manufacturing, there is room for India to seize the baton and become a larger sourcing base for global supply chains.
- **Second:** There are opportunities for India to benefit from the flows of capital and investments powering development as Asia integrates more closely. 'Advanced Asia' (Japan, South Korea, Singapore) and China have been huge contributors to the development of 'Emerging Asia' (small highly interconnected economies like Indonesia, Malaysia, Philippines, Thailand, Vietnam, etc.).
- **Third:** When it comes to innovation, East Asia has emerged as a leading hub, rivalling the leading innovation hubs globally. East Asia has already gained pole position in driving innovation relating to key disruption themes such as electric mobility, 5G telecom, and renewable energy with an opportunity for Indian firms to be a part of this Asia-wide innovation arc.
- **Fourth:** A rapidly growing Asia is catapulting its major cities into leading consumption centers, that offers a ripe market opportunity for Indian businesses ranging from IT services, tourism services, generic pharmaceuticals, automotive components, agrochemicals, and so forth. Just with China alone, India runs an over \$50 billion of trade deficit, that could be narrowed down by targeting these export opportunities.

❖ New Delhi's dilemma

- **Peaceful and Consensual Transformation:** The Indian establishment has a deeply status quoist view of the world order. It believes in a more democratic, orderly and rules-based world order. But it recognizes that major systemic changes could create chaos. Therefore, India likes peaceful and consensual transformation of the system. It is not happening today.
- **Bipolarity:** New Delhi's biggest fear would be an Asian century without stable multipolarity. Even if it emerges, a multipolar world is most likely to be soon replaced by a bipolar world dominated by the U.S. and China. It would be a bad deal. In such a scenario, India will often be targeted by China.
- **Accommodation between US and China:** If a bipolar world leads to great power accommodation between the U.S. and China, India's situation could be worse off. It means the U.S. accepting China's sphere of influence. This could make India a casualty at the altar of great power politics.



- **Post- Indian South Asia:** The Asian century dominated by China may lead to post-Indian South Asia that is under the Chinese sphere of influence, though not entirely inimical to Indian interests.

❖ The Challenges in the path of realizing the Asian century

Challenges to the 'Asian Century' come more from within Asia than from outside:

- **China's aggressive expansion:** China should realize that most parts of Asia are showing promise for growth, and they are all interconnected. Thus, the 'Asian Century' is not China's century alone. Its essence lies in multipolar Asia. Therefore, China's conduct towards its neighbours should be more inspiring and accommodating of their rise.
- **Border disputes:** Cambodia-Thailand dispute, India-Pakistan conflict, India-China dispute, China-Japan tensions, North and South Korea clash tend to deviate Asia's adventure.
- **Demography:** While demography is largely responsible for Asia's economic predominance; many of Asia's largest economies are aging rapidly, due to falling fertility rates and longer life expectancies. With Japan's population already declining, South Korea and China are set to follow.
- **Climate change:** Climate change could affect every human being on the planet. With over half the world's population, Asia has more at stake than any other region. This has far-reaching implications for the way Asia needs to move forward.
- **Governance and institutions:** The deterioration in the quality and credibility of political and economic institutions (illustrated by rising corruption) is likely to become a binding constraint to growth in Asia.

❖ Way forward

- **Revisionist perspective:** India might speak like a revisionist power. It should be prepared to deal with the harsh headwinds of the geopolitical contests of an Asian century.
- **Non- alignment:** India belongs to the tradition of non-alignment strategy. It can follow the same to avoid entanglement related to the balance of power in the international system, thus enhancing their own strategic autonomy while also seeking benefits from all sides of the great power equation.
- **Maintain interest-oriented balancing:** India should realize its rising global power by prioritizing its own interests and growth by maintaining peaceful mutual relationships.
- **Regional balancing:** This is a strategy India could pursue to align with other Asian countries in order to balance against China. Such partners could include Australia, Japan, the Philippines, Singapore, and Vietnam.

❖ Conclusion

The Asian century is well and truly underway. Navigating the emergent Asian century is not going to be easy for India, but being mindful of its many moods is a good start. India could look to many of the opportunities arising out of the region's rapid integration and shifting networks and flows to help drive its next chapter of growth.



Basic terms/related concepts and facts:

- **Balance of Power:** Balance of Power is a state of stability between competing forces. In international relations, it refers to equilibrium among nations or alliances to prevent any one entity from becoming too strong and thus gaining the ability to embrace its will upon the rest.
 - Balance of Power in world politics has originated with the emergence of the Westphalian world order. Since the structure of international politics is anarchical, self-help is the only means to ensure survival. In its original sense Balance of Power is based on the concept of multipolarity. It can be achieved by internal and external balancing of self-help.
 - In international relations, there is no permanent friend or enemy except national interest.
- **Multilateralism:** This refers to a set of governing arrangements of fundamental rules, principles, and institutions among nations. The United Nations (UN) is an example of a multilateral international institution which aims at making a sustainable and inclusive multilateral global order.

Practice Questions

Prelims:

Q. In which of the following group/forum, India and China, both are members?

- a) BIMSTEC
- b) East Asia Summit
- c) RCEP
- d) Indian Ocean Rim Association

Ans. b)

Mains: (Level-Advance)

Q. India has consistently campaigned for a multipolar world where key Asian powers have a place at the high table of international politics, yet India faces the dilemma in engaging with emerging Asian century. Analyze

[10 marks, 150 words]

TOPIC: Voice of Global South summit

Issue in brief: India hosted the ‘Voice of Global South Summit’ 2023 under the theme ‘Unity of Voice, Unity of Purpose’ with the aim to bring together countries of the Global South to share their perspectives and priorities on a common platform.

<https://pib.gov.in/PressReleasePage.aspx?PRID=1891153>

Where in Syllabus:

GS 2: Bilateral, regional and global groupings and agreements involving India and/or affecting India's interests.

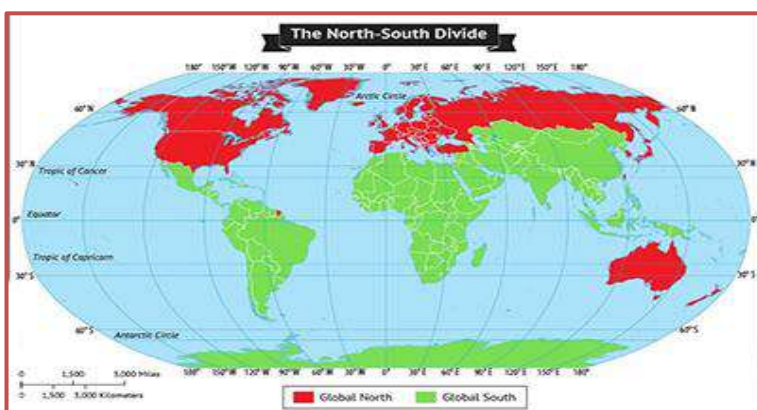
❖ Why in news?

- Recently, India hosted a special virtual Summit – “Voice of Global South Summit” under the theme “Unity of Voice, Unity of Purpose”.
- Around 125 developing and least-developed countries (47 from Africa, seven from Europe and 29 from Latin America and Caribbean region) participated in the summit with the objective to pay attention to the issues pertaining to the Global South.
- The idea behind the summit is that India will work to ensure that inputs generated from partner countries in the Voice of Global South Summit will be pushed forward at the G20 summit which will be hosted by India later this year.



❖ What is “Global South”

- The term “Global South” was first coined by a social activist Carl Oglesby in 1969.
- The Global South is a term often used to identify the regions of Latin America, Asia, Africa, and Oceania. It is one of a family of terms, including “Third World” and “Periphery”, that denote regions outside Europe and North America, mostly low-income and often politically or culturally marginalized countries on one side of the so-called divide, the other side being the countries of the Global North (often equated with developed countries).
- As such, the term does not inherently refer to a geographical south; for example, most of the Global South is geographically within the Northern Hemisphere.
- Countries of the Global South have been described as newly industrialized or in the process of industrializing, and are frequently current or former subjects of colonialism.





❖ North- South divide

- The North-South Divide, as it is known, was first conceptualized in the 1980s through the Brandt Line which was developed as a way of showing how the world was geographically split into relatively richer and poorer nations.
- According to this model, richer countries are almost all located in the Northern Hemisphere, except for Australia and New Zealand, while poorer countries are mostly located in tropical regions and the Southern Hemisphere.
- Global North refers loosely to countries like the US, Canada, Europe, Russia, Australia and New Zealand.

❖ Significance of the summit

- **Common platform:** One thing that came across clearly from the summit was the need for articulating the voice of the Global South in international institutions and for reforming them for a balanced representation for the developing world.
- **Podium for India:** India, with its enormous population and economic capabilities, is working to unite the nations of the Global South into a powerful front so that an action-oriented approach can be adopted for the countries of the global south.
- **Geopolitical scenario:** The geopolitical developments across the world by Covid-19 epidemic, increasing Chinese expectations, the Russia-Ukraine conflict, the Taliban takeover of Afghanistan, and various other events underline the need for a new international order that is more inclusive, representational, and fundamentally more stable. The Global South Summit aims to give voice to that endeavor.
- **Untapped potential:** There is enormous untapped potential in the growing economies of the Global South. The countries will witness significant progress if they cooperate in areas like technical exchanges, ideas exchanges, exchanging best practices in manufacturing, and other areas.
- **G20 agenda:** Summit is in line with India's G20 agenda, which is inclusive, ambitious, action-oriented, and decisive.
 - India is committed to utilize the G20 presidency to give resonance to the voice of the global south and to highlight the common concerns of energy security, energy justice, sustainable energy transition so that all developing countries can gain reliable and clean energy.

❖ Factors that place India as the 'voice of Global South'

India is well-positioned to become the "Voice of the Global South" due to a combination of factors:

- **Power house of the Global South:** Over the course of its 75-year journey, India has successfully positioned itself as a 21st-century powerhouse. The country's global stature has continuously expanded and has played a crucial role in mitigating global crisis situations.
- **Trust factor:** Countries in Asia, Africa, and Latin America trust India to speak up for them as India supports the idea of introducing changes, not just in the United Nations but in other international institutions as well.
- **Capable leader:** India has a lot to offer to the world, particularly to the developing nations of the world. The world witnessed India's crucial role in evacuating residents from Afghanistan and Ukraine during the times of hostilities. In addition, India's *Vaccine Maitri*, which gave medications and vaccinations to over 100 countries during the pandemic when most countries followed **Vaccine nationalism** received praises all over the world.
 - Another example of India's assistance to other nations is its hospital system, which treats thousands of foreign patients and has proved to be one of the most efficient and effective healthcare systems worldwide.
- **Technological advancements:** The nation has become a powerful global leader due to technological advancements, economic potential, and improvements in social indicators. Notably, India's digital public



assets like UPI, RuPay, and India stack, which are supporting such a large portion of the Indian population, can be a powerful instrument for the digital transformation of other developing and emerging countries.

- The first nation to implement the Bharat Interface for Money – Unified Payments Interface (BHIM-UPI) was Bhutan, which is a direct neighbor of India. Various other nations, like Bahrain and Saudi Arabia, also permit the use of the RuPay card system.
- **Respects Sovereignty:** In its development partnerships, India's approach has always been consultative, outcome oriented, demand driven, people-centric and respectful of the sovereignty of partner countries.

❖ Key outcomes of the summit

- India gave the mantra of 4 R - '**Respond, Recognize, Respect and Reform**':
 - **Respond** to the priorities of the Global South by framing an inclusive and balanced international agenda.
 - **Recognize** that the principle of 'Common but Differentiated Responsibilities' applies to all global challenges.
 - **Respect** sovereignty of all nations, rule of law and peaceful resolution of differences and disputes; and,
 - **Reform** international institutions, including the United Nations, to make them more relevant.
- **Aarogya Maitri:** PM Modi announced the "Aarogya Maitri" project whereby the country will provide essential medical supplies to any developing country affected by natural disasters or humanitarian crises.
- **Global South Center of Excellence:** India also announced that it would establish the Global South Center of Excellence for research on development strategies that could be scaled up and applied globally.
 - For instance, India's digital public goods in fields such as electronic payments, healthcare, education and e-governance can be used by other developing countries.
- **Global South Young Diplomats Forum:** PM Modi proposed a "Global South Young Diplomats Forum" to connect young officers of foreign ministries for "synergizing our diplomatic voice", and announced that India will institute the "Global South Scholarships" to allow students from developing states to pursue higher education in the country.
- **Global South Science and Technology Initiative:** India is also establishing a Global South Science and Technology Initiative to share its expertise in fields like nuclear energy and space technology.
- **Human-centric globalization:** PM Modi stressed that India wants a globalization that does not lead to unequal distribution of vaccines or over-concentrated global supply chains. India wants a globalization that brings prosperity and well-being to humanity as a whole. In short, we want a 'human-centric globalization'.

❖ Challenges for Global South

- **Russia- Ukraine war:** This ongoing war severely affected the least developed countries (LDCs) aggravating the concerns related to food, energy and finance, thereby, threatening the development prospects of LDCs.
- **China's interference:** China is increasingly making inroads in the Global South through the Belt and Road Initiative (BRI) for developing infrastructure. China's policy of string of pearls is going to impact the development of the Global South.
- **US hegemony:** The world is now considered to be multipolar by many but still, it is the US alone who dominates international affairs. Even today, US is still dominating the Ukrainian War.
- **Inadequate access to resources:** Global North-South divergences have been historically characterized by major gaps in the access to resources required for crucial developmental outcomes. Industrialization has been always skewed in the favor of global North.
- **Issue of Green Energy Fund:** Despite Global North countries higher contribution towards global emissions, they are neglecting to pay for funding green energy, for which the ultimate sufferers are the least emitters i.e., the developing and least- developed countries.



❖ Way forward

- **G20 presidency:** India's year-long presidency of the Group of 20 (G20) is also an opportunity for uniting the global south for India by providing a platform for India and other countries from the global south to come together and discuss common issues and challenges, as well as opportunities for cooperation and collaboration.
- **Active engagement:** Championing the Global South today would demand more active Indian engagement with the messy regional politics within the developing world.
- **Need for policy vision for different regions and groups:** India must also accept the fact that the Global South is not a coherent group and does not have a single shared agenda. There is much differentiation within the South today in terms of wealth and power, needs and capabilities. This demands a tailored Indian policy for different regions and groups of the developing world.
- **Bridge between North and South:** India should play its role in bridging the gap between the North and the South by focusing on practical outcomes rather than returning to old ideological battles. If India can translate this ambition into effective policy, there will be no contradiction between the simultaneous pursuit of universal and particular goals.

Basic terms/related concepts and facts:

G20:

- The Group of Twenty (G20) is the premier forum for international economic cooperation. It plays an important role in shaping and strengthening global architecture and governance on all major international economic issues.
- India holds the Presidency of the G20 from 1 December 2022 to 30 November 2023.
- The G20 was founded in 1999 after the Asian financial crisis as a forum for the Finance Ministers and Central Bank Governors to discuss global economic and financial issues.

Practice Questions

Prelims:

Q. Consider the following statements about G20:

1. The G20 was founded in 2009 after Global Economic Crisis of 2007 as a forum for the Finance Ministers and Central Bank Governors.
2. G20 is the premier forum for international economic cooperation.
3. G20 agenda includes issues of macroeconomic policies only.

Which of the above statement(s) is/are **incorrect**?

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

Ans. d)

Mains: (Level-Advance)

Q. For India to be heard as the 'Voice of the Global South' it must reflect on the aspirations of the other nations and amplify them, as a true leader of the developing world. Comment.

[10 marks, 150 words]

TOPIC: India-Maldives Relations

Issue in brief: Recently External Affairs minister S Jaishankar visited Maldives and held talks with the top leadership of the island country to strengthen ties and also signed pacts on development projects.

<https://indianexpress.com/article/india/india-maldives-have-responsibility-for-regional-peace-security-jaishankar-in-male-8390501/>

Where in Syllabus:

GS 2: India and its neighbourhood relations

❖ Why in News?

- Recently, External Affairs minister S Jaishankar visited the island country and signed pacts on development projects.
- Maldives is India's key maritime neighbour in the Indian Ocean Region and occupy a special place in the Prime Minister's vision of 'SAGAR' (Security and Growth for All in the Region) and 'Neighbourhood First'.



❖ Important happenings during External Affairs Minister's visit

- Inaugurated an *international airport* developed by India (\$ 136.6-million) at Hanimadhoo in Haa Dhaalu atoll.
 - This is *India's second largest infrastructure project* after the (\$500 million) Greater Male Connectivity project, which aims to connect the Maldives capital to three neighbouring highlands.
 - Both are prestige projects for Delhi that compete in scale with the Chinese-built Male-Hulumale-Hulhule bridge and the Hulumale airport.
- Inaugurated an *India-funded community centre* In the Foakaidhoo island in the nearby Shaviyani atoll.
- India also handed over *two sea ambulances* to the Maldives Defence Ministry.
- In the Manadhoo island of Noonu atoll, the two sides signed three MoUs, including –
 - A proposed collaboration between Cochin University and the Maldives National University, and
 - A \$100 million grant for "high impact community development" projects.
- The focus of the discussion was on development cooperation, capacity building and people-to-people ties.

❖ Why Maldives is important for India?

Maldives is an important Indian neighbour. India's Prime Minister Narendra Modi called the Maldives "a valued partner in the Indian Ocean neighbourhood" due to the importance Maldives holds for India:

- **Security:** The Maldives are crucial for maintaining the *region's political stability and security*, as well as for safeguarding Indian commerce and investment. India and Maldives clearly have a responsibility to ensure stability and security in the Indian Ocean.
- **Economic:** Despite its small size, a number of developed and developing nations are now courting the Maldives.



- The Indian Ocean is a major route for the transfer of energy and trade around the world. The Strait of Malacca and the Gulf of Aden, two chokepoints in the western Indian Ocean are located on either side of the Maldives, which is situated physically like a “toll gate” between them.
- **Strategic location:** The location of the Maldives, at the intersection of commercial sea-lanes running through the Indian Ocean, makes it strategically important for India, particularly in the light of China’s growing aggression in the region.
- **Curbing China’s ambition:** It is key that Male treats India as the “first among equals” when it comes to China. When Solih came to power, he categorically said India First policy is my foreign policy.



❖ Relation between India and Maldives

- **Economic:** Tourism is the mainstay of Maldivian economy. The country is now a major tourist destination for some Indians and a job destination for others.
 - In August 2021, Afcons, an Indian company, signed a contract for the largest-ever infrastructure project in Maldives which is the **Greater Male Connectivity Project (GMCP)**.
 - India is Maldives 2nd largest trading partner – rising up from its 4th position in 2018.
 - Bilateral commerce between India and the Maldives exceeded \$300 million for the first time in 2021, totaling an amazing \$ 323.29 million.
 - India and Maldives signed the \$800 million Line of Credit Agreement in March 2019 for assisting the Maldives to achieve sustainable social and economic development.
- **Political:** India was among the first to recognize Maldives after its independence in 1965 and to establish diplomatic relations with the country.
 - Maldives had consistently supported India in multilateral fora, such as the United Nations, the Commonwealth, the NAM and the SAARC. Maldives and India are members of the South Asian Association for Regional Cooperation (SAARC).
- **Security partnership:** Defence cooperation extends to the areas of Joint Exercises - “Ekuverin”, “Dosti”, “Ekatha” and “Operation Shield” (begun in 2021).
 - India provides the largest number of training opportunities for Maldivian National Defence Force (MNDF), meeting around 70% of their Defence training requirements.
 - Indian Army’s ‘Operation Cactus’ foiled a coup in Maldives that was attempted by a pro-Eelam group in 1988.
 - India maintains a naval presence in Maldives, at the request of the Maldives, since 2009.
- **Development Assistance:** India’s development assistance to Maldives covers a wide range of areas, such as health, education, transport, skill and capacity building, waste management, and management of natural disasters.
 - India provided a budgetary support of Rs. 100 million to Maldives after the Tsunami struck in 2004 and in May 2007, India again provided assistance of Rs. 100 million following tidal surges.
 - India’s support to Greater Male Connectivity project includes a \$400 million LoC & \$100 million grant, renewal of essential commodities trade agreement, and, financial assistance of USD 250 million.



- At present, India-assisted projects in the region include water and sewerage projects on 34 islands, reclamation projects for the Addl island, a port on Gulhifalhu, airport redevelopment at Hanimaadhoo, and a hospital and a cricket stadium in Hulhumale.
- **Diaspora and culture:** Indians are the second largest expatriate community in the Maldives with approximate strength of around 22,000. Indian expatriate community consists of workers as well as professionals like doctors, teachers, accountants, managers, engineers, nurses and technicians etc., spread over several islands.
 - Both the countries share long cultural links and continuous efforts are underway to further strengthen these linkages. Three historical mosques (Friday Mosque and Dharumavantha Rasgefaanu Mosque Male', Fenfushi Mosque – South Ari Atoll) were successfully restored by Indian experts.

❖ Challenges in India-Maldives relations

- **Radicalization:** Over the past ten years or more, more Maldivians have become attracted to terrorist organizations like the Islamic State (IS), Pakistan-based madrassas, and jihadist groups.
 - Islamist radicalism is on the rise in the island nation for a number of reasons, chief among them being political instability and socioeconomic uncertainty.
 - The radicalization of the Maldives has also been influenced by events in Pakistan, Afghanistan, and West Asia. This raises the risk that terrorist organizations with a base in Pakistan could use distant Maldivian islands as a jumping-off point for strikes against India and Indian interests.
- **Political instability:** India's major concern has been the impact of political instability in the neighbourhood on its security and development.
 - The February 2015 arrest of Maldives' opposition leader Mohamed Nasheed on terrorism charges and the consequent political crisis have posed a real diplomatic test for India's neighbourhood policy.
- **China angle:** China's strategic footprint in India's neighbourhood has increased. Maldives has emerged as an important 'pearl' in China's 'String of Pearls' construct in South Asia.
 - Beijing has evinced a keen interest in developing infrastructure in the Ihavandhoo, Marao and Maarandhoo Islands.
 - During Chinese President Xi Jinping's visit in 2014, the Maldives agreed to become a partner in China's Maritime Silk Route.

❖ Way forward

- India must play a key role within *Indo-Pacific security space* to ensure regional security in South Asia and surrounding maritime boundaries.
 - The Indo-Pacific security space has been developed as a response to the growth of extra-regional powers (particularly China's) in India's maritime sphere of influence.
- The mobilizing of ordinary citizens through the 'India Out' campaign is a cause for concern for India. So, India has to work on *perception management* in the Maldives and the Indian High Commission can do it.
- The potential for both countries to work together on adaptive and mitigating measures against the adverse maritime-impacts of climate change is enormous.
- This potential must be realised through *imaginative foreign-policy* and *maritime-security initiatives*. While the recent 'India-First Policy' of the Maldives and India's 'Neighbourhood First Policy' are intuitively complementary, the challenge lies in implementing these policies with cultural, geo-economics, and geostrategic sensitivity.



❖ Conclusion

With the change in times, the needs are also changing. The Maldives needs India's support in several areas such as socio-economic development, climate change and countering anti-societal elements. At the same time, India needs the support of the Maldives to realize its 'Neighbourhood First policy' and secure its maritime boundary. India should focus on doing 'irreversible' assistance and remain a committed development partner for a stable, prosperous and peaceful Maldives.

Basic terms/related concepts and facts:

South Asian Association for Regional Cooperation (SAARC): It was established with the signing of the SAARC Charter in Dhaka on 8 December 1985.

- The idea of regional cooperation in South Asia was first raised in November 1980. After consultations, the foreign secretaries of the seven founding countries—Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, and Sri Lanka—met for the first time in Colombo in April 1981.
- Afghanistan became the newest member of SAARC at the 13th annual summit in 2005.
- Headquarters and Secretariat of the Association are at Kathmandu, Nepal.

Practice Questions

Prelims:

Q. Which of the following statements is/are **not correct** in respect of the SAARC?

1. Its headquarters is located in Dhaka.
2. The first SAARC summit was held in Kathmandu.
3. China and USA are the only country with an observer status in SAARC.

Choose the correct option from the codes given below:

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

Ans. d)

Mains: (Level-Moderate)

Q. "Although India continues to be an important partner of the Maldives, India must not grow complacent over its position and must remain attentive to the developments in the Maldives".
Examine. **[10 marks, 150 words]**



TOPIC: Forest Rights Act, 2006

Issue in brief – Over a decade after the landmark Forest Right Act, 2006, was enacted, a relatively small number of claimants have been able to access the rights it promised

https://epaper.thehindu.com/articleshare?articleurl=https%3A%2F%2Fepaper.thehindu.com%2Fccidist-ws%2Fth%2Fth_delhi%2Fissues%2F19563%2FOPS%2FGF3AM5U25.1%2BGGKAM69ED.1.html

Where in Syllabus:

GS 2: Welfare of vulnerable section

❖ Why in News?

- Majority of the stakeholders (STs and Other traditional forest dwellers) located near UNESCO declared Heritage Sites are not aware of the process that leads to the declaration of such sites.
- Environmental conservation efforts like declaration of protected areas severely affect the livelihood of the forest dwellers.



❖ Issues faced by stakeholders i.e., STs and Other traditional forest dwellers:

- **Permissible land ceiling under Forest Rights Act (FRA) not allowed:** Majority of the forest dwellers claimed that their land measuring not more than one acre which is nowhere close to the ceiling of four hectares permitted under the Forest Rights Act (FRA). The rejection rate of the other traditional forest dwellers was two times more than the STs.

Reasons cited:

For STs:

- Fresh encroachments
- The claimants not living on the lands claimed
- Claimed lands being on 'paisari bhoomis' (wasteland and forest lands which have not been notified as protected forests or reserved forests) or revenue lands
- Multiple applications made in a single family

For Other Traditional Forest Dwellers (OTFD):

- Failure to produce evidence of dependency and dwelling on forest land for 75 years.
- **Severe restrictions**
 - On their entry into the forest: They had started experiencing severe restrictions on their entry into the forest because their village fall into eco-sensitive zones.
 - Development activities like road repair have been stopped.
 - Farming is not allowed in a normal way; the use of fertilizers is banned.
 - Small knives are not allowed to be carried into the forest.



- The people are prohibited from cutting trees falling on their houses to undertake repair work or move the earth.
- The increasing animal insurgency is causing damage to the crops of the farming forest dwellers.
- **Unfair rejection of claims:** Those who don't have recognition over their lands are not given compensation for the loss.
- Monkeys and snakes released from urban settings into the forests enter their houses.
- People reported that grazing lands have been taken over by the government to compensate for the forest land lost to projects.
- **Deprived of the basic facilities:** Most forest dwellers said they were still deprived of basic facilities and other government benefits extended under various schemes and programs as they don't possess the 'Records of Rights, Tenancy and Crops' that is required along with the title of the land.
- **Issue of relocation:** Forest dwellers often find it difficult to relocate due to their attachment to the land and fearing extinction of their culture and religious roots.

❖ What is Forest Rights Act (FRA), 2006?

Scheduled Tribes And Other Traditional Forest Dwellers (Recognition Of Forest Rights) Act, 2006

The Forest Rights Act (FRA), 2006 recognizes the rights of the forest dwelling tribal communities and other traditional forest dwellers to forest resources, on which these communities were dependent for a variety of needs, including livelihood, habitation and other socio-cultural needs.

Objective:

- To undo the historical injustice occurred to the forest dwelling communities
- To ensure land tenure, livelihood and food security of the forest dwelling Scheduled Tribes and other traditional forest dwellers
- To strengthen the conservation regime of the forests by including the responsibilities and authority on Forest Rights holders for sustainable use, conservation of biodiversity and maintenance of ecological balance.

❖ What are the rights ensured for the dwellers under FRA, 2006?

Rights for the dwellers

What the Forest Rights Act, 2006, entails

- Tenurial security over the forestland under occupation prior to December 13, 2005
- Recognition of community right over forest and forest products
- Protection and conservation of community forest resources
- Conversion of all forest villages and habitation located inside the forestland into revenue villages
- In situ rehabilitation of displaced persons evicted without compensation prior to December 13, 2005
- Recognition of ancestral domain (habitat) right to



Residents of Gunduribadi village in Odisha's Nayagarh district get ready for mapping their land boundaries for the Forest Rights Act implementation. ■ SPECIAL ARRANGEMENT

Particularly Vulnerable Tribal Groups

- Seasonal access to nomadic, pastoral and semi-nomadic communities over forestland

- Conversion of all leases granted by erstwhile governments, zamindars and king into permanent land records



❖ Eligibility under FRA:

To qualify as OTFD and be eligible for recognition of rights under FRA, two conditions need to be fulfilled:

1. Primarily resided in forest or forests land for three generations (75 years) prior to 13-12-2005
2. Depend on the forest or forests land for bonafide livelihood needs.

❖ Implementation:

The FRA recognises individual rights of tribals over forest areas, if they can prove occupation before December 13, 2005. **Gram Sabha is the implementing agency** as per the act.

❖ Major challenges w.r.t. FRA:

The implementation of the landmark legislation has been far from satisfactory:

- **Poor Quality of Recognised Claims:** In the claim recognition process, surveys to update forest land records either were not undertaken or completed, and forest maps were not used to establish recognised boundaries on the ground.
- **Misinterpretation and Violation of FRA Provisions:** The administration involved arbitrarily reject forest rights claims without any communication to the claimants
- **Lack of capacity of Gram Sabhas:** Gram Sabha committees are dictated by the government officials. They lack technical knowhow and suffer from educational incapacity.
- **Lack of Coordination Among Line Departments:** Lack of coordination among revenue, forest and tribal departments. Reluctance to share land records and maps
- **Lack of awareness:** Provisions are still not known by target communities. Officials responsible for informing the Gram Sabha members are themselves found to be “thoroughly ignorant” about the Act
- **Lack of Institutional Support in the Post-Claim Recognition Process:** Various welfare and developmental schemes of the rural department were not extended everywhere to the tribal people who received documents of land possession under FRA. It means they have been penalised for being the beneficiaries of FRA.
- **Lack of Political Will:** Political parties across the spectrum have shown little interest in supporting and strengthening enforcement of the FRA – any enthusiasm is limited to brief periods preceding an election. Recognition of forest rights claims in the Left-ruled state of Kerala is also not high
- **Conflicting Forest Laws:** Acts like Indian Forest Act, 1927, CAMPA, Wildlife (Protection Act), 1972 have conflicting provisions with respect to FRA. **For example**, CAMPA Act seeks to establish Compensatory Afforestation Fund Management and Planning Authority, whereas Gram Sabha is the implementing agency as the FRA.

❖ Way Forward

- The government must bring more clarity to the Act to avoid conflicts between the government agencies conserving biodiversity and the people living in the forest for over decades and centuries.
- The conservation of biodiversity requires special attention: forest dwellers willing to live in the forest must be allowed to stay. Many of them comply with the norms of the eco-sensitive zone.
- Those wanting to experience the fruits of development must be relocated according to their choice of a new place and a suitable package.
- Areas declared as ‘protected’ should be arrived at after consultations with the local population.
- Ensuring regular meetings to district and sub district level committees to consider and approve claims in time bound process
- The Forest Department should respect the Gram Sabha’s authority for managing and protecting forests, and support the committees set up by the Gram Sabhas.



- The Centre and state governments should allocate separate financial resources to fund full-time positions without diverting funds meant for other purposes, notably from the Tribal Sub Plan.
- Leveraging modern technology to map and monitor the implementation of FRA. The quality of data pertaining to the implementation of the Act.
- NGO representatives believe that livelihood of the locals will improve if the horticulture practices are promoted. *A popular recommendation is medical and eco-tourism on the lines of Kerala model.*
- Induct people who are sensitive to the cause of tribal people at all levels of decision making. *Odisha's Forest Right Cells can be implemented by other states as well.*
- Align legislations and policies governing forest land with the FRA.

Practice Questions

Prelims:

Q. Consider the following statements:

1. The definition of "Critical Wildlife Habitat" is incorporated in the Forest Rights Act, 2006.
2. For the first time in India, Baigas have been given Habitat Rights.
3. Union Ministry of Environment, Forest and Climate Change officially decides and declares Habitat Rights for Primitive and Vulnerable Tribal Groups in any part of India.

Which of the above statements is/are correct:

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

Answer: a)

Mains: (Level-Moderate)

Q. How far has FRA, 2006 been able to serve its objective of biodiversity conservation while ensuring the rights of forest dwellers. Examine. **(15 marks, 250 words)**



TOPIC: International Year of Millets 2023

Issue in brief –United Nations General Assembly declared **2023 as the International Year of Millets**

<https://indianexpress.com/article/explained/explained-economics/international-year-of-millets-india-farmers-united-states-pm-modi-8355579/>

Where in Syllabus:

GS 3: Major crops-cropping patterns in various parts of the country

❖ Why in news?

- Recently, the United Nations General Assembly declared **2023 as the International Year of Millets**, a proposal sponsored by the Government of India to promote these “nutri-cereals.”
- Objectives:**
 - Awareness of the contribution of millet to *Food Security and nutrition*.
 - Inspire stakeholders to improve sustainable production and quality of millets.
 - Focus on enhanced investment in research and development and extension services to achieve the other two aims.



❖ What are Millets?

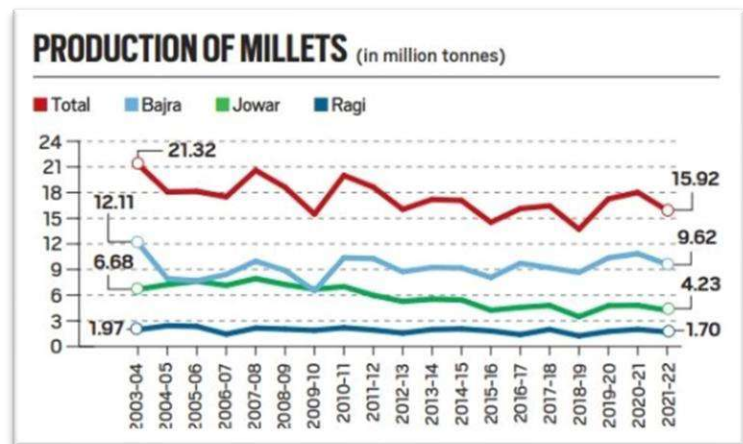
- Millets are a highly varied group of **small-seeded grasses**, widely grown around the world as **cereal crops** or **grains for fodder** and human food.
- Millets include **three major** (Sorghum (Jowar), Pearl (Bajra), Finger (Ragi)) and **six minor crops** (Barnyard (Sanwa), Proso (Chenna/Barri), Foxtail (Kakum), Kodo, Brown Top and Little (Kutki/Shavan)).
- In India, millets are primarily a **kharif crop**, requiring **less water and agricultural inputs** than other crops
- Climate Requirements:**
 - Temperature between 20°C and 30°C;
 - Annual rainfall range of ~30-50 cm;
 - Soil conditions: highly adaptable to a variety of soil conditions, from extremely poor to very fertile, and can handle a degree of alkalinity; Alluvial, loamy, and sandy soils with good drainage are the ideal soils for millet cultivation.
- Status of Millets production**
Globally
 - **India is the largest producer of millet in the world.** It Accounts for 20 % of global production and 80% of Asia's production.



- India, Nigeria and China are the largest producers of millets in the world, accounting for more than 55% of the global production.

Domestically

- Major producers of millets include Rajasthan, Andhra Pradesh, Telangana, Karnataka, Tamil Nadu, Maharashtra, Gujarat and Haryana.



❖ What are the benefits of Millet Production?

• Social Benefits

- Millets have the potential to help achieve the sustainable development goals (SDGs), mainly SDG 2 (Zero Hunger), SDG 3 (Good Health and Well-being), SDG 12 (Sustainable Consumption and Production), and SDG 13 (Climate Action);
- Millets can be helpful in reducing gender nutrition gaps and inequalities;
- Increase in human capital as a result of an increase in the availability of nutritious food

• Food Security – Millets are Nutri-Cereals:

- Millets are less expensive and nutritionally superior to wheat & rice owing to their high protein, fibre, vitamins and minerals like iron content.
- Millets are also rich in calcium and magnesium. For example, Ragi is known to have the highest calcium content among all the food grains.
- Millets can provide nutritional security and act as a shield against nutritional deficiency [Hidden Hunger problem], especially among children and women. Its high iron content can fight high prevalence of anaemia in India women of reproductive age and infants.

• Fit and Healthy India

- Millets can help **tackle lifestyle problems and health challenges** such as obesity and diabetes as they are gluten-free and have a low glycemic index (a relative ranking of carbohydrate in foods according to how they affect blood glucose levels).

• Environmentally Sustainable Crop

- Millets are **Photo-insensitive** (do not require a specific photoperiod for flowering) & **resilient to climate change**. Millets can grow on poor soils with little or no external inputs.
- They can be grown in dry land areas using farmyard manures, thus **reducing the dependence on chemical fertilisers**.
- Millets are **less water consuming and are capable of growing under drought conditions**
- Millets have **low carbon and water footprint** (rice plants need at least 3 times more water to grow in comparison to millets)

• Economic Benefits:

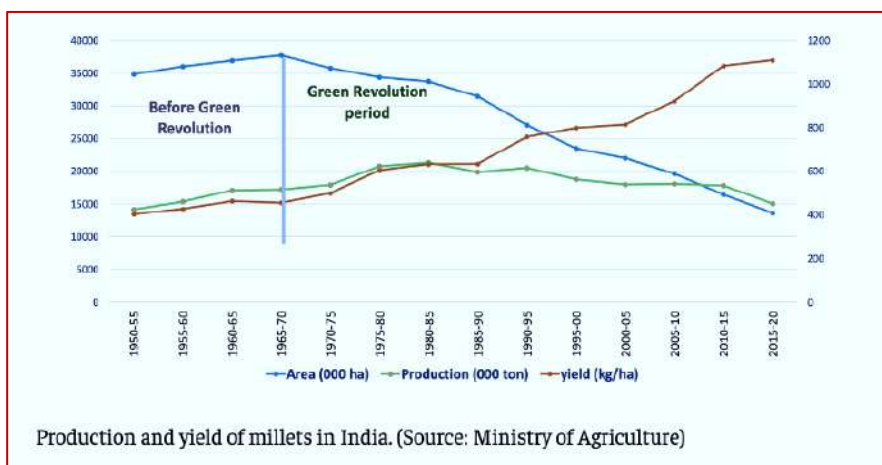
- Millets offer farmers a **stable source of income** as they are drought-resistant and less susceptible to failure due to weather-related events;
- Millet production requires a low initial capital investment



❖ Challenges in Millet Production

- **Low production and Low per-hectare yields:**

- The Green Revolution led availability of HYV seeds for wheat and rice but not millets have altered the cropping pattern to wheat-rice cultivation.
- The area under Millet cultivation reduced from 37 million hectares in pre-Green Revolution period to ~14 million hectares today.



- Further, Low per-hectare yields — the national average is roughly 1 tonne for jowar, 1.5 tonnes for bajra and 1.7 tonnes for ragi, as against 3.5 tonnes for wheat and 4 tonnes for paddy area disincentive. With access to assured irrigation, farmers tend to switch to rice, wheat, sugarcane, or cotton

- **Low Demand:**

- According to NSSO household consumption expenditure survey less than 10% of rural and urban households reported consumption of millets. It is not the first choice of either consumers or farmers;
- the lack of public awareness about nutritional benefits of millets.
- Rolling rotis is easier with wheat than millet flour. This is because the gluten proteins, for all their drawbacks, make the wheat dough more cohesive and elastic. The resultant breads come out light and fluffy, which isn't the case with bajra or jowar
- For the rural poor, rice and wheat were aspirational foods. An expanded PDS has provided them access to these fine grains, which is distinguished from coarse grains.
- Low shelf life- Processed Millets (like millet flour) have poor shelf life due to its **intrinsic enzyme activity** (lipase activity, lipid oxidation etc.) that causes rapid development of rancidity and bitterness. Millet products are also **prone to moisture** and water activity.

- In the **absence of proper market linkages** for agricultural produce, millet consumption is restricted to rural haats, bazaars, tourist spots and festivals

- Less participation of private players in the market of millets

- **Processing of millets** : Processing of millets face several hurdles owing to variation in size of various millet types and low shelf life of the processed millets. The grains vary in terms of shape, nature of grain surface, hardness, husk-grain bonding etc.

❖ Government Efforts to Promote Millets Production

- The Union Agriculture Ministry, in April 2018, declared millets as “**Nutri-Cereals**”, considering their “**high nutritive value**” and also “**anti-diabetic properties**”.

- 2018 was observed as **the ‘National Year of Millets’**

- The United Nations General Assembly declared **2023 as the International Year of Millets**

- To boost production of Millets:

- The Government of India, through the revamped National Food Security Mission Operational Guidelines (NFSM), has laid **specific focus on 212 millet districts** in 14 states to



provide **incentives to farmers** for quality seed production/distribution, field-level demonstrations, trainings, primary processing clusters and research support. The launch of 67 value-added technologies at the '**Centres of Excellence**' has been supplemented with the release of 77 high-yielding and 10 bio-fortified varieties.

➤ **Initiative for Nutritional Security through Intensive Millet Promotion (INSIMP):**

- Government announced an allocation of **Rs. 300 crores in 2011-12** under **Rashtriya Krishi Vikas Yojana** for promotion of millets as **Nutri-cereals**.
- The scheme aimed to **demonstrate the improved production and post-harvest technologies** in an integrated manner with visible impact to catalyze increased production of millets in the country.

➤ **Increase in Minimum Support Price:**

- The government has hiked the Minimum Support Price of Millets to incentivise the farmers.
- Further, the government has included millets in the public distribution system

➤ Investment done through **Agricultural Infrastructure Fund (AIF)** across States to support millet entrepreneurs, **primary processing machines** for dehulling millets (removal of husk) and the formation of **millet farmer collectives**.

➤ The 'One District One Product' (ODOP) initiative has identified **27 millet focus districts**.

➤ The promotion of 10,000 FPOs' programme (US\$ 924 million) aims at the **millet producers' effective market participation** as member shareholders in these entities.

➤ The **Odisha Government's 5-year 'Millet Mission'** is supplementing the input as well as marketing needs of indigenous small and marginal farmers like the Dongria Kondhs across the state to grow millets.

• To create awareness about benefits of Millets

- **Smart food campaign:** Smart Food with the tagline 'good for you, good for the planet and good for the smallholder farmer' is an initiative that will initially focus on popularising millets.
- Fast-emerging organic food brands are further **helping mainstream millet consumption**

❖ Way Forward

- **Branding to Popularise:** Companies like MTR that make ragi rava idli and ragi dosa breakfast mixes are a good start. Increase **Government Procurement and Distribution via MDM schemes, Anganwadi, PDS**
- **Production, Processing and Storage:** Encourage Millet cultivation as it is climate resilience, short cropping period, and capacity to thrive in poor soils, mountainous terrains. First step should be to invest in R&D to produce HYV seeds for millets and then incentives farmers to produce millets and further encourage private players to participate in marketing of millets.
- **Marketing:** For sourcing quality millets as well as their steady marketing by entrepreneurs, there is a need for linking small and marginal millet farmers to online marketing platforms, such as the Electronic Agricultural National Market (e-NAM).
- International Fund for Agricultural Development (IFAD) has helped to revitalise kodo and kutki farming in Madhya Pradesh's Dindori. There is need to replicate the Dindori model beyond one district and across other millets.



Practice Questions

Prelims (UPSC CSE Prelims 2016):

Q. With reference to 'Initiative for Nutritional Security through Intensive Millets Promotion', which of the following statements is/are correct?

1. This initiative aims to demonstrate the improved production and post-harvest technologies, and to demonstrate value addition techniques, in an integrated manner, with a cluster approach.
2. Poor, small, marginal and tribal farmers have a larger stake in this scheme.
3. An important objective of the scheme is to encourage farmers of commercial crops to shift to millet cultivation by offering them free kits of critical inputs of nutrients and micro irrigation equipment

Select the correct answer using the code given below:

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

Answer: c)

Mains: (Level-Moderate)

Q. Millets have enormous potential to form a core component in climate-smart agriculture whilst offering nutritional, food and health security benefits in India. Discuss.

[15 marks, 250 words]



TOPIC: River Pollution

Issue in brief –CPCB report shows fewer polluted river stretches, but worst ones remain unchanged
<https://www.thehindu.com/news/national/fewer-polluted-river-stretches-but-worst-stretches-unchanged/article66304409.ece#:~:text=The%20number%20of%20polluted%20stretches,but%20made%20public%20this%20week.>

Where in Syllabus:

GS 3: Environmental Pollution

❖ Why in news?

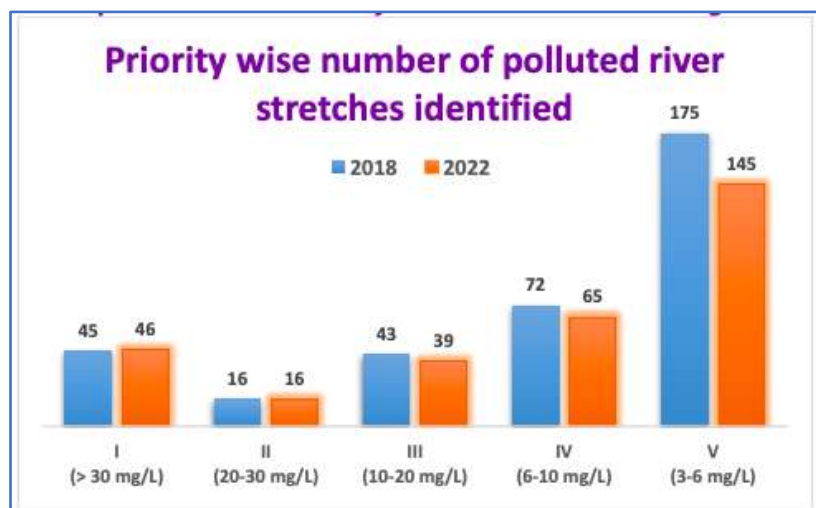
According to a recent report from the Central Pollution Control Board (CPCB), the number of polluted stretches in India's rivers has fallen from 351 in 2018 to 311 in 2022, though the number of most polluted stretches is practically unchanged.

❖ Key Findings of the Report

- All of the improvements were in river stretches that required relatively lesser intervention i.e., Priority 5 rivers.
- There is no change/ slight change in the Priority I & II category of polluted river stretches.

State wise data:

- While Gujarat and Uttar Pradesh had the maximum number of 'Priority 1' river stretches (6), Maharashtra had the maximum number of polluted rivers stretches i.e., 55, followed by Madhya Pradesh (19), Bihar (18), Kerala (18), Karnataka (17) and Uttar Pradesh (17).
- CPCB monitors** the water quality in India under National Water Quality Monitoring Programme. The CPCB network monitors water quality at 4,484 locations in 28 States and seven Union Territories including rivers, lakes, creeks, drains and canals.
- According to CPCB, a river is considered polluted if it satisfies following conditions:
 - Biochemical oxygen demand (BOD) exceeds 3 milligrams per litre (mg/l)
 - Two or more polluted locations identified on a river in a continuous sequence are considered as a "polluted river stretch. [A BOD less than 3 mg/l means the river stretch is fit for "outdoor bathing"]
- Categorisation of Polluted River:** The polluted river stretches are prioritised in five categories based on biological oxygen demand concentration consistently.
 - **Priority 1:** River stretches with a BOD exceeding 30 mg/L are considered the most polluted and thus need the most urgent remediation.
 - **Priority 5:** Indicating 3-6 mg/L.





❖ Reasons for River Pollution

- **Urbanization and Industrialisation:** Discharge of sewage waste from cities / towns and industrial effluents into the rivers.
- **Dumping of solid waste** on river banks
- **Non-point sources of pollution:** Discharge of pollutants from diffuse sources or from a larger area such as runoff from agricultural fields (agricultural runoff), grazing lands, construction sites, abandoned mines and pits, roads and streets.
- **Gap between sewage generation and treatment:** This gap between sewage generation and treatment remains a major point source for the increase in pollution of rivers.
 - According to Central Pollution Control Board (CPCB) sewage generation from urban areas in the country is estimated at 72,368 million litres per day (MLD), against the sewage treatment capacity of 31,841 MLD.
- **Amount of Flow of Rivers:** Impact on river water quality resulting from discharges of treated or untreated wastewater into the river will depend on the dilution offered by the quantum of flows in the river.
- **Religious and Social Practices:** Religious faith and social practices also add to the pollution of the rivers, especially Ganga.
 - Dead bodies are cremated on the river banks. Partially burnt bodies are also flung into the river.
 - Mass bathing in a river during religious festivals is another environmentally harmful practice.

❖ Consequences of River Pollution

- **Impact on Biodiversity:** River contamination threatens biospheres and nature conservation areas.
- **Loss of Livelihood:** Fishermen and fish farms that once flourished on banks of various Indian rivers are finding it increasingly difficult to find sufficient catch of fish.
- **Food Security and human health hazard:** Fish from polluted rivers is found to be high in mercury, lead and cadmium and hence, unfit for human consumption.
- **Poor quality drinking Water:** According to Niti Aayog, whopping 200,000 people lose their lives every year due to various problems caused by consuming contaminated water.
 - The health hazards associated with infected water range from cancer to gastrointestinal disorders that occur due to deadly microbes that are creeping into the rivers.
- **Decline in Productivity of Agriculture:** Polluted water does not allow seeds to germinate and cause stunted growth, denying farmers of a bumper harvest.

❖ Steps Taken to tackle River Pollution

- **National Water Quality Monitoring Programme (NWMP):** CPCB, in association with State pollution Control Boards / committees in different states / Union territories, have been monitoring the water quality of rivers and other water bodies across the country through a network of monitoring stations under the National Water Quality Monitoring Programme.
- **Ministry of Jal Shakti launched 'Jal Shakti Abhiyan':** campaign for water conservation and water security. The campaign run through citizen participation while focus on water-stressed districts and blocks in the country.
- Recently, the National Green Tribunal (NGT) directed the Ministry of Jal Shakti to devise an appropriate **National River Rejuvenation Mechanism** for effective monitoring of steps to curb pollution and for rejuvenation of all polluted river stretches across the country.



- **National Water Policy (2012):** It aims to take cognizance of the existing situation, to propose a framework for creation of a system of laws and institutions and for a plan of action with a unified national perspective.
 - Started by the Ministry of Water Resources, it highlights the importance of water for human existence as well as for economic development related activities.
 - It suggests frameworks to conserve water resources through optimal, economical, sustainable and equitable means.
- **National Water Mission (2010):** It ensures integrated water resource management leading to water conservation, less wastage, equitable distribution forming better policies.
- **National Mission for Clean Ganga (NMCG):** It envisages a five-tier structure at national, state and district level to take measures for prevention, control, and abatement of environmental pollution in river Ganga. It aims to ensure continuous adequate flow of water so as to rejuvenate the river Ganga.
- **Namami Gange Project:** It integrates the efforts to clean and protect the Ganga River in a comprehensive manner.

❖ Way Forward

- **Maintaining Minimum Flow of the River:** To maintain and restore the wholesomeness of the river (Aquatic ecosystem), there is a need to maintain the minimum flow.
- **Comprehensive Waste Management Policy:** There is a need for a comprehensive waste management policy that stresses the need for decentralised garbage disposal practices as this will incentivise private players to participate.
- **Bioremediation:** It is important that Bioremediation (i.e. use of microbes to clean up contaminated soil and water) is made compulsory for areas wherever they can be applied.
- **Behavioural Change:** To overhaul the waste management sector and induce the necessary behavioural change, citizen participation and engagement is the key.

Basic terms/related concepts and facts:

- **What is Biological Oxygen Demand (BOD)?**
 - BOD is defined as the amount of dissolved oxygen needed by bacteria in decomposing the organic wastes present in water. The higher value of BOD indicates low dissolved oxygen content of water.
- **What is Central Pollution Control Board (CPCB)?**
 - The Central Pollution Control Board (CPCB) of India is a **statutory organisation** under the Ministry of Environment, Forest and Climate Change.
 - It was established in 1974 under the **Water (Prevention and Control of Pollution) Act, 1974**.
 - CPCB was entrusted with the powers and functions under the Air (Prevention and Control of Pollution) Act, 1981.



Practice Questions

Prelims (UPSC CSE Prelims 2017):

Q. Biological Oxygen Demand (BOD) is a standard criterion for:

- a) Measuring oxygen levels in blood
- b) Computing oxygen levels in forest ecosystems
- c) Pollution assay in aquatic ecosystems
- d) Assessing oxygen levels in high altitude regions

Answer: c)

Mains: (Level-Moderate)

Q. Highlight the findings of the report from the Central Pollution Control Board (CPCB) in context of the polluted stretches in Indian rivers? Discuss the reasons for the river pollution and measures taken by the Government of India to tackle the menace of river pollution in India.

[15 marks, 250 words]

DIY:

1. <https://www.downtoearth.org.in/blog/pollution/behind-polluted-indian-river-stretches-inadequate-sewage-treatment-77957>
2. <https://cpcb.nic.in/wqm/RS-criteria-status.pdf>



TOPIC: Decarbonization

Issue in brief: Recently, Government of India approves Green Hydrogen mission which brings to the forefront the importance of decarbonizing the Indian economy.

<https://indianexpress.com/article/opinion/columns/india-transition-to-net-zero-8364223/>

Where in Syllabus:

GS 3: Environmental Conservation, environmental pollution and degradation.

GS 2: Government policies and interventions for development in various sectors and issues arising out of their design and implementation.

❖ Why in news?

- Recently with the approval of Green Hydrogen mission, decarbonisation of Indian economy gain prominence.
- India's ambition to become a net-zero emitter by 2070— a progressive way to decarbonise India's economic growth.

❖ Facts related to India's carbon emission

- India is the third-largest emitter globally after China & USA, emitting a net 2.9 gigatons of carbon-dioxide equivalent (GtCO₂e) every year and it is expected to grow to 11.8 Gt in 2070.
- The bulk of these emissions (about 70 percent) are driven by six sectors: *Power, Steel, Automotive, Aviation, Cement, and Agriculture.*
- The current atmospheric carbon dioxide (CO₂) concentrations are higher than at any time in the last two million years.



❖ What is Decarbonisation?

- Decarbonisation is the process of reducing the amount of carbon, mainly carbon dioxide (CO₂), sent into the atmosphere.
- Its objective is to achieve a low-emission global economy to attain climate neutrality via the energy transition. Decarbonisation is achieved by switching to usage of low carbon energy sources.

❖ How to decarbonise various sectors of economy

- **Electricity sector:**
 - Pursue the well-managed *retirement* of coal power plants and make significant investments in transmission and distribution infrastructure and a doubling of storage capacity. These efforts will prepare India's electricity grid to become more flexible and *ready for a renewable energy-powered future.*



- Implement a carbon-free electricity standard to achieve 90 percent of electricity from non-fossil fuel sources by mid-century. This target is a 20 percentage points increase from the current trajectory of 70 percent renewables under business-as-usual.
- Subsidize costlier emerging technologies such as off-shore wind in the near-term, and then reduce the subsidies as the technology becomes cost-competitive.
- **Transport sector:** India has a massive and diverse transport sector, which is also the third most CO₂ emitting sector.
 - Data from International Energy Agency (IEA), 2020 and Ministry of Environment Forest and Climate Change, 2018 suggests that within the transport sector, road transport contributes to more than 90% of the total CO₂ emissions.
 - Incentivise the build-out of *electric vehicle charging infrastructure* alongside implementing EV sales mandates.
 - Establish stricter fuel economy standards for heavy-duty vehicles in the near term, along with a longer-term policy to convert the fossil-fuel dependent heavy duty vehicle segment to electrification and hydrogen.
 - Mode shift at least one-third of passenger vehicle demand to electrified public transport options
 - Promotion of walking, cycling and public transport coupled with electrification of motor vehicles should be the right strategy for the country.
- **Agriculture sector:** In 2016, agriculture and livestock emitted around 14% of total emissions. Out of this, 61.3% is linked to livestock.
 - Reducing biogenic methane from cattle and rice cultivation.
 - Inculcating resource efficiency by reducing consumption of irrigation water, chemical fertilizers, and energy as well as farm waste processing
 - Reducing waste in the food supply chain
 - Building climate resilience through deploying automation and technology.
- **Industrial sector:** Around 25% of global GDP is produced by the industrial sector, but it also emits around 28% of Green House Gases (GHG) emissions.
 - Expand the *Perform, Achieve, and Trade (PAT) scheme* from a pilot programme and reduce the energy use across cement, iron, and steel, and chemicals industries by 25 percent.
 - Implement a progressive carbon tax that incentivises industries to further reduce their dependence on fossil fuels through material efficiency improvements and conversion to electrification and green hydrogen use.

❖ India's efforts towards Decarbonisation

- **Panchamrit promises (Updated Nationally Determined Contributions):**
 - Reach **500 GW Non-fossil energy** capacity by 2030.
 - **50 per cent** of its energy requirements from **renewable energy** by 2030.
 - Reduction of total projected **carbon emissions** by **one billion tonnes from now to 2030**.
 - Reduction of the **carbon intensity** of the economy by **45 per cent by 2030**, over 2005 levels.
 - Achieving the **target of net zero emissions by 2070**.
- **Nationally Determined Contributions (NDCs) – Previous Targets (2015):** They are submitted to UNFCCC every 5 years:
 - To reduce emission intensity of its GDP by 33-35% by 2030 from 2005 level.
 - To achieve about 40% cumulative electric power installed capacity from non-fossil fuel-based energy resources by 2030.
 - To create an additional carbon sink of 2.5-3 billion tonnes of CO₂ equivalent through additional forest and tree cover by 2030.



- **Various schemes in respective sectors:**

- **Faster Adoption and Manufacturing of (Hybrid &) Electric Vehicles Scheme:**
 - India leapfrogged from Bharat Stage-IV (BS-IV) to Bharat Stage-VI (BS-VI) emission norms by April 1, 2020, the latter being originally scheduled for adoption in 2024.
 - A voluntary vehicle scrapping policy to phase out old and unfit vehicles complements the existing schemes.
 - The Indian Railways is also charging ahead, targeting the full electrification of all broad-gauge routes by 2023.
 - India is among a handful of countries that support the global **EV30@30 campaign**, which aims for at least 30% new vehicle sales to be electric by 2030.
 - **PM-Ujjwala yojana:** The **Pradhan Mantri Ujjwala Yojana** has helped 88 million households to shift from coal-based cooking fuels to LPG connections.
 - More than 367 million LED bulbs have been distributed under the **UJALA scheme**, leading to a reduction of 38.6 million tonnes of CO₂ per year.
- **Green Hydrogen Mission:** This mission will emphasize hydrogen from clean sources.
 - It also envisages linking the country's growing renewable energy capacity with the hydrogen economy.
 - The end-users of hydrogen energy are the transportation sector, chemical industry and steel sector. These sectors contribute to 1/3rd of all greenhouse gas emissions because of their using fossil fuels.
 - Replacing fossil fuels with hydrogen in these sectors will help reduce GHGs in a big way.

❖ Challenges in the path of decarbonizing Indian economy

- **Issues in Smooth Transition to Renewables:** Identification of land with Renewable Energy potential and the time-consuming procedures of land clearance.
- **Lack of Technology and Skilled Labour for EV Manufacturing:** India is technologically deficient in the production of electronics that form the backbone of the EV industry, such as batteries, semiconductors, controllers, etc.
 - EVs have higher servicing costs which require higher levels of skills. India lacks dedicated training courses for such skill development.
- **Challenges for Coal-Powered Companies:** A transition from coal to non-fossil fuel-based power generation/transportation is relatively easier for the companies operating in the services sector.
 - However, the low-carbon transition challenge is bigger for companies that are largely coal-powered and contribute more than half of our country's emissions.
- **Reluctance of States:**
 - Huge revenue loss for poorer Indian states such as Chhattisgarh, Odisha, Jharkhand, West Bengal, Madhya Pradesh and Uttar Pradesh.
 - For states such as Chhattisgarh and Jharkhand, close to 15% of the state revenue comes from the mining sector.
 - These states would lose out on employment, as new employment in the renewable sector would be created in western and southern India which has better solar and wind resources.
- **Lack of funds:** According to McKinsey report, India may need an estimated \$7.2 trillion of green investments until 2050 to decarbonise its economy.
- **Pressure on land systems:** In the accelerated scenario, growth and decarbonisation combined may require 45 million more hectares of land than is available, of which nearly ten million hectares would be needed for renewable power and eight million for carbon sinks and forests.



❖ Way forward

Against the above backdrop following actions can be taken to accelerate India's decarbonisation:

- **Set timely targets:** We should focus on laying out a detailed medium-term decarbonisation plan with sector-specific priorities and policy frameworks that account for interdependencies across sectors and provide demand signals to guide corporates to invest.
- **Accelerate implementation of a compliance carbon market:** This would also require the creation of demand signals, especially in hard-to-abate sectors, and incentives linked to investments in newer technologies Carbon, Capture, Utilisation and Storage (CCUS).
- **National land use plan:** Empower a nodal authority to define a national land-use plan. Lay clear land-use guidelines for optimized use across urbanization, industrial needs, carbon sinks, agriculture, and renewables.
- **Green transition bank:** Enable banks to support the transition, catalyzed by a green-transition bank. Banks could be asked to come up with their investment glide paths and build the necessary capability for assessing risks in these new spaces.
- **Targeting the power sector** - The power sector has to be focused because it is the biggest source of GHG emissions and also the easiest one to decarbonise. Accelerate renewable adoption in the power sector to scale up capacity addition by four times and to deepen market reforms with a 30-year outlook.
- **Unlocking of opportunities:** Government can unlock the opportunities by evaluating five carbon capture and storage hubs in Gujarat (Jamnagar), Odisha (Paradeep), Rajasthan (Barmer), Maharashtra (Pune), and Andhra Pradesh (Vizag) potentially in public-private partnership for utilization and storage of captured carbon.
- **Recycling:** Government should focus on creating a national circularity mission with recycling hubs in the top 20 Indian cities (contributing 35 percent of municipal solid waste), mandated targets on recycling rates, recycled raw-material use (for example, blending norms), and landfill levies.
- **Enhance the National Hydrogen Mission:** Enhancing of Green Hydrogen Mission with government playing a key role in accelerating demand through blending mandates, boosting cost competitiveness via capital subsidies and R&D investments, and enabling export opportunities via international trade agreements is the need of the hour.
- **Setting up an autonomous agency** – A technically credible agency like the Climate Change Committee (CCC) in the UK should be set up.

❖ Conclusion

India needs to take thoughtful actions now to set itself up for an accelerated and orderly transition. Looking beyond the short term and laying the foundation for this transformation within this next decade is the imperative for a decarbonised India and world.

Basic terms/related concepts and facts:

Green Hydrogen Mission

- It is a program to incentivize the commercial production of green hydrogen and make India a net exporter of the fuel.
- The Mission will facilitate demand creation, production, utilization and export of Green Hydrogen.
- The objective is to develop green hydrogen production capacity of at least 5 MMT (Million Metric Tonne) per annum, alongside adding renewable energy capacity of about 125 GW (gigawatt) in India by 2030.
- It aims to entail over Rs 8 lakh crore of total investments and is expected to generate six lakh jobs.
- It will also lead to a cumulative reduction in fossil fuel imports by over Rs 1 lakh crore and an abatement of nearly 50 MT of annual greenhouse gas emissions.



Practice Questions

Prelims:

Q. Consider the following statements regarding India's updated Nationally Determined targets:

1. To reduce emissions intensity of its GDP by 33-35% by 2040 from 2005 level.
2. To achieve 50% of cumulative electric power installed capacity from non-fossil fuel-based energy by 2030.

Which of the above statement(s) is/are *correct*?

- a) 1 only
- b) 2 only
- c) Both
- d) None

Ans. b)

Mains: (Level-Moderate)

Q. India needs to look beyond short-term targets in order to embark on an orderly transition to net-zero and decarbonizing Indian economy. Analyze. **[10 marks, 150 words]**



TOPIC: Human-Animal Conflict

Issue in brief – The latest incident in the series of wild elephant attacks in Kerala direct our attention towards the growing instances of human-animal conflict and steps to address the problem

https://epaper.thehindu.com/ccidist-ws/th/th_delhi/issues/21048/OPS/GFLAO0J0H.1.png?cropFromPage=true

Where in Syllabus:

GS 3: Conservation

❖ Why in news?

- Recently, there has been a series of wild elephant attacks in Kerala which injured a person.
- While capture provided huge relief to the people of the area, they were nonetheless disgruntled over the perceived lack of apathy on the part of the government in effectively implementing plans to mitigate human-animal conflict.
- Human wildlife conflict has become a serious wildlife management problem in Kerala in a last few years. People living on the fringes of the reserve forest and sanctuary have a heightened sense of insecurity.



❖ What is human-animal conflict?

The Human-wildlife conflict is when encounters between humans and wildlife lead to negative results, such as loss of property, livelihoods, and even life.

- Between 2018-19 and 2020-21, 222 elephants were killed by electrocution across the country, 45 by trains, 29 by poachers and 11 by poisoning.
- Among the 222 elephant deaths caused by electrocution, Odisha accounted for 41, Tamil Nadu for 34 and Assam for 33. Odisha (12 out of 45) also had the highest number of elephant deaths caused by trains, followed by West Bengal (11) and Assam (9). Poaching deaths were highest in Meghalaya (12 out of 29) while poisoning deaths were highest in Assam (9 out of 11, including 8 in 2018-19 alone).
- Among human casualties of conflict with animals, elephants killed 1,579 humans in three years — 585 in 2019-20, 461 in 2020-21, and 533 in 2021-22.
- Among tigers, too, 29 were killed by poaching between 2019 and 2021, while 197 tiger deaths are under scrutiny.
- Tigers killed 125 humans in reserves between 2019 and 2021. Maharashtra accounted for nearly half these deaths, at 61.

❖ Why is human-wildlife conflict on the rise?

- **Habitat loss and fragmentation:** As human populations grow and expand, natural habitats are often destroyed or fragmented, making it harder for animals to find food and shelter. This can lead to animals venturing into human-populated areas in search of resources, increasing the likelihood of conflict.
- **Invasive species:** Exotic invasive weeds like Latana and senna leading to a loss of natural forest feed.



- **Competition for resources:** As human populations grow, there is often increased competition for resources such as food, water, and land. This can lead to conflicts with animals that rely on the same resources.
- **Changes in land use:** Changes in land use, such as the conversion of natural habitats to agricultural land or urban development, can disrupt the natural balance of ecosystems and lead to increased competition for resources.
- **Perceptions and attitudes:** Perceptions and attitudes of humans towards wildlife can also play a role in human-animal conflict. Negative perceptions of certain animals, such as snakes or wolves, can lead to indiscriminate killing or persecution of these animals, even when they pose no threat to humans.
- **Climate change:** Climate change can affect the distribution and abundance of certain species, leading to increased conflicts with humans.
- **Human-caused changes in animal behavior:** Human activities such as hunting and poaching can disrupt the natural behavior of animals, leading to increased conflicts with humans.

❖ Impact of human-animal conflict

- **Direct impact:** Direct impacts of human-animal conflict refer to the immediate and direct effects of the conflict on humans and animals.
 - ✓ Economic losses: Damage to crops, loss of livestock, and destruction of property are direct economic impacts of human-animal conflict.
 - ✓ *Human injury and death*
 - ✓ *Animal injury and death*
- **Indirect impact:** Indirect impacts of human-animal conflict refer to the secondary or long-term effects of the conflict on humans and animals.
 - ✓ Ecological impacts: Changes in the balance of ecosystems caused by the decline of certain animal populations.
 - ✓ Social impacts: Reduced mobility, access to resources, and negative perceptions of certain animals that can lead to their persecution and decline.
 - ✓ Psychological impacts: Fear, anxiety, and trauma, especially in communities living close to wild animals.
 - ✓ Conflicts with conservation efforts: Negative attitudes towards conservation and wildlife, and diverting resources away from conservation to conflict management.
 - ✓ Indirect economic losses: Indirect economic losses can result from reduced tourism, increased cost of living and lost income from activities such as farming and hunting.
 - ✓ Indirect health impacts: Diseases spread by wildlife (eg COVID19, SARS), reduced access to health care, and increased mental stress.

❖ Mitigation of human-animal conflict

Mitigation of human-animal conflict involves strategies and actions aimed at reducing or resolving the negative impacts of human activities on wildlife and their habitats.

- ✓ Habitat protection and restoration: protecting and restoring habitats to ensure that wildlife has enough space and resources to survive and thrive.
- ✓ Crop-raiding prevention: Using physical barriers, such as electric fences, solar fences etc. to protect crops from wildlife, and using repellents and scaring devices to deter wildlife from entering crops.



- ✓ Wildlife corridors: Creating wildlife corridors to connect fragmented habitats and allow wildlife to move between them safely.
- ✓ Non-lethal control methods: Using non-lethal methods to reduce human-wildlife conflicts, such as wildlife proofing homes and buildings, changing cropping patterns, and humanely relocating problem animals.
- ✓ Community engagement and education: Both the government and society should work together as single entity.
- ✓ Monitoring and research: Monitoring and researching human-wildlife conflicts to understand the causes and patterns, and to evaluate the effectiveness of mitigation strategies.

Case study

Kerala recorded only 14 of the 251 elephants (5.6%) that India lost to electrocution and poaching. The factors that have contributed to the success of elephant conservation and helped limit conflict are:

- The frontiers between wilderness and civilization have remained relatively unaltered in recent years.
- Changes in agricultural practices in cropland in adjoining forest- preferring plantation crops like pepper, tea or coffee in which elephants have little interest.
- Proactive perception management and stricter enforcement by the state can ease pressure on the elephants.

❖ Challenges in mitigation strategy

- **Lack of resources**: Mitigation strategies can be resource-intensive, and may require significant funding and personnel to implement effectively.
- **Difficulty in identifying the cause**: Identifying the underlying causes of human-animal conflict can be difficult, and this can make it challenging to develop effective mitigation strategies.
- **Complexity of the problem**: Human-animal conflict can be a complex problem that involves multiple factors such as biology, ecology, human behavior, and governance, which can make it challenging to develop effective mitigation strategies.
- **Resistance from local communities**: Local communities may resist mitigation strategies that they perceive as threatening their livelihoods or culture.
- **Political and administrative challenges**: Political and administrative challenges can arise from lack of coordination among different agencies, lack of legal framework, and lack of capacity to implement and enforce the strategies.

❖ Government steps

- The Standing Committee of National Board of Wildlife(SC-NBWL) has approved the advisory for management of Human-Wildlife Conflict(HWC) in the country.
- ✓ Empowering gram panchayats in dealing with the problematic wild animals as per the section 11 (1) (b) of Wild Life (Protection) Act, 1972.
- ✓ Utilising add-on coverage under the Pradhan Mantri Fasal Bima Yojna for crop compensation against crop damage due to HWC.
- ✓ Augmenting fodder and water sources within the forest areas are some key steps envisaged to reduce HWC.
- ✓ Payment of a portion of ex-gratia as interim relief within 24 hours of the incident to the victim/family.
- ✓ Inter-departmental committees at local/state level.
- ✓ Adoption of early warning systems, creation of barriers, dedicated circle wise Control Rooms with toll free hotline numbers which could be operated on 24X7 basis.



- ✓ Identification of hotspots and formulation and implementation of special plans for improved stall-fed farm animal etc.
- List of critically endangered species for taking up conservation efforts with financial support under Centrally sponsored Scheme-Development of Wildlife Habitat.
- Integrated Development of Wildlife Habitats,' 'Project Tiger,' and 'Project Elephant'.

❖ Way forward

- *A Future for All Report 2021* report jointly published by WWF and UNEP suggests an approach of coexistence between humans and wildlife, and involvement of local communities, as it is not possible to wholly suppress human-wildlife conflict.
- Legislative backing: A latest report by a parliamentary standing committee that analysed the amendments proposed to India's Wildlife Protection Act 1972 by the union government has said that human-animal conflict is a complex issue and needs legislative backing.
- Skill development programs for people living in and around the forest would offer them better opportunities for self-employment and consequently reduce the combined pressures on agricultural land as well as forest land.
- Eco-friendly measures like eco bridges to mitigate impacts of linear infrastructure on wildlife.
- Creating buffer zones.

Practice Questions

Prelims:

Q. Consider the following statements about National Board for Wildlife (NBWL):

1. Minister of Environment, Forests and Climate Change is the ex officio chairperson of the NBWL.
2. No alteration of boundaries of the protected areas is possible without the NBWL's approval.
3. The board is advisory in nature.

Which among the above statement(s) is/are incorrect:

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

Answer: a)

Mains: (Level-Basic)

Q. In the light of increasing human animal conflict, enumerate reasons for the rise and possible solution to reduce them.
[10 marks, 150 words]



TOPIC: Filling Up of Ozone Hole

Issue in brief – UN backed scientific assessment has suggested that the ozone hole is now expected to be completely repaired by 2066.

<https://indianexpress.com/article/explained/explained-climate/ozone-hole-filling-up-now-antarctica-montreal-protocol-greenhouse-gases-climate-change-8374040/>

Where in Syllabus:

GS 3: Environmental Pollution & Degradation

❖ Why in news?

A recent scientific assessment has suggested that the **ozone hole is now expected to be completely repaired by 2066**.

❖ Findings of the Report

- The ozone layer over Antarctica, where the hole is the most prominent, will take a **long time** to heal completely.
- If current policies continued to be implemented, the ozone layer is expected to recover to 1980 value by **2066 over Antarctica**, by **2045 over the Arctic**, and by **2040 for the rest of the world**.
- **How it became possible:**
 - Successful elimination of some harmful industrial chemicals, together referred to as **Ozone Depleting Substances or ODSs**.
 - Implementation of the 1989 **Montreal Protocol**.
 - Nearly 99 per cent of the substances banned by the **Montreal Protocol** have now been eliminated from use, resulting in a slow but definite recovery of the ozone layer

❖ What is Ozone and ozone layer?

- Ozone (chemically, a molecule having three Oxygen atoms, or O_3) is found mainly in the **stratosphere, between 10 and 50 km** from the Earth's surface.
- Ozone is classified into two types: **Good Ozone and Bad Ozone Anthropogenic Sources**
- **Good Ozone:**
 - **Ozone occurs naturally** in the Earth's upper atmosphere (Stratosphere) where it forms a **protective layer** that shields us from the sun's harmful ultraviolet rays.
 - This "good" ozone is gradually being destroyed by man-made chemicals referred to as **Ozone-Depleting Substances (ODS)**, including chlorofluorocarbons (CFCs), hydrochlorofluorocarbons (HCFCs), halons, methyl bromide, carbon tetrachloride, and methyl chloroform.





- **Bad Ozone:**

- In the Earth's lower atmosphere (troposphere) near ground level, ozone is formed when **pollutants emitted by cars, power plants, industrial boilers, refineries, chemical plants, and other sources react chemically in the presence of sunlight.**
- Surface level ozone is a **harmful air pollutant.**

- ❖ **Importance of Ozone layer**

Ozone layer covers the entire planet and protects life on earth by absorbing harmful **ultraviolet-B (UV-B) radiation** from the sun. Harmful impact of UV-B rays on Earth includes:

- **Impact on Plants:** UV radiation affects growth of the plants by causing deformities in plants, how nutrients are distributed within the plant, timing of developmental phases and secondary metabolism)
- **Impact on Human Health:** With a weakening of the Ozone Layer shield, humans would be more susceptible to skin cancer, cataracts and impaired immune systems.
- **Impact on On Marine Ecosystem:** Exposure to solar UV radiation has been shown to affect both orientation and motility in phytoplankton, resulting in reduced survival rates for these organisms
- **Impact on Biogeochemical Cycles:** Increases in UV radiation could affect **terrestrial and aquatic biogeochemical cycles**, thus altering both sources and sinks of greenhouse and **chemically important trace gases** (e.g., carbon dioxide, carbon monoxide, carbonyl sulfide, ozone, and possibly other gases).
- **Impact on Materials:** Increases in UV levels will **accelerate the breakdown of polymers** thus limiting the length of time for which they are useful outdoors.

- ❖ **What is Ozone Hole?**

- **Ozone-Depleting Substances (ODS)**

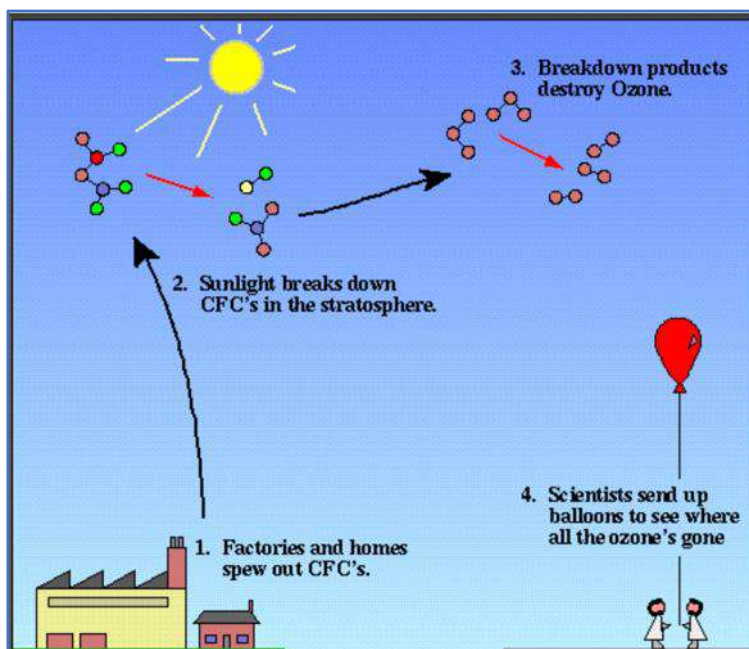
are released to the atmosphere through human activities. These chemicals combine with certain weather conditions to cause reactions in the ozone layer, leading to *ozone molecules being destroyed*.

- Depletion of the ozone layer occurs globally, however, the severe **depletion of the ozone layer** over the Antarctic is often referred to as the **ozone hole**.
- This is linked to the unique **meteorological conditions** (temperature, pressure, wind speed) that prevail over Antarctica.

- Usually, ozone holes form over the Poles during the onset of the spring seasons. The ozone hole over Antarctica is the biggest during the months of September, October, and November.

- Other regions where Ozone Hole has been detected:

- Although ozone losses are **less radical in the Northern Hemisphere**, significant thinning of the ozone layer is also observed over the Arctic and even over continental Europe.





- According to a recent study, a new ozone hole has been detected over the tropics, at latitudes of 30 degrees South to 30 degrees North. It appears across all seasons.
- In the mid-latitudes, for example, over Australia, the ozone layer has also started depleting.

❖ Global and Indian efforts to repair the Ozone Hole

Before 1979, scientists had not observed atmospheric ozone concentrations below **220 Dobson Units**. In the early 1980s, scientists using ground-based and satellite measurements began to realise that the Earth's natural sunscreen was thinning dramatically **over the South Pole each spring**. This thinning of the ozone layer over Antarctica came to be known as the ozone hole.

Global Efforts:

- 1985: **Vienna Convention** for the Protection of the Ozone Layer agreed.
- 1987: **Montreal Protocol** on Substances that Deplete the Ozone Layer agreed. It sets binding obligations for countries to phase out production of all the major ozone depleting substances.
- 2016: The **Kigali Amendment to the Montreal Protocol** seeks to eliminate 80-90% of the hydrofluorocarbons (HFCs) currently in use by the year 2050. This is expected to prevent another 0.3 to 0.5 degree Celsius of global warming by the turn of the century.
- The **Montreal Protocol was amended** to extend its mandate over HFCs that have replaced the CFCs in industrial use. HFCs do not cause much damage to the ozone layer - the reason they were not originally banned, but are very powerful greenhouse gases (GHGs).
- **TEAP – The Technology and Economic Assessment Panel (TEAP)**: It provides technical information related to the alternative technologies that have been investigated and employed to make it possible to virtually eliminate use of Ozone Depleting Substances (such as CFCs and Halons), that harm the ozone layer.
- **OzonAction**: UNEP's Division of Technology, Industry, and Economics OzonAction Programme provides industry, government, and other stakeholders in developing countries with information exchange services, training, and networking. In addition to these core clearinghouse services; the Programme also provides assistance with Country Programmes and Institutional Strengthening projects.

India's Efforts:

- **Montreal Protocol**: India **phased out** Chlorofluorocarbons, Carbon tetrachloride, Halons, Methyl Bromide and Methyl Chloroform for controlled uses as on 1 January 2010, in line with the Montreal Protocol schedule.
 - India is among the countries which has stated that the **country's sustainable development will be such that net zero is achieved by 2070**.
 - Currently, Hydrochlorofluorocarbons are being phased out as per the accelerated schedule of the Montreal Protocol.
- **Kigali Amendment**: After ratifying the Kigali Amendment in September 2021, the central government is working towards developing a **national strategy**, in close consultation with the industry stakeholders, for phasing down Hydrofluorocarbons (HFCs).
- **India Cooling Action Plan (ICAP)**: The goal is to provide socio-economic and environmental benefits related to reduced refrigerant use, climate change mitigation and Sustainable Development Goals over the period 2037-38.
- **Research and Development**: The Environment Ministry will soon be entering into **collaboration with eight Indian Institutes of Technology** to promote research and development of chemicals with low global warming potential, including blends. These can be used as **alternatives to substances** controlled under the Montreal Protocol.



❖ Way Ahead

- Ensuring that **existing restrictions** on ozone-depleting substances are **properly implemented** and global use of ozone-depleting substances continue to be reduced.
- Ensuring that permitted uses of ozone-depleting substances are **not diverted to illegal uses**.
- **Reducing** use of ozone-depleting substances in applications that are not considered as consumption under the Montreal Protocol.
- Ensuring that **no new chemicals or technologies emerge** that could pose new threats to the ozone layer (e.g., very short-lived substances).

The success of the Montreal Protocol in repairing the ozone hole is often offered as a model for climate action. It is argued that emissions of greenhouse gases can also similarly be curtailed to arrest rapidly rising global temperatures.

Basic terms/related concepts and facts:

- **The Dobson Unit (DU):** It is the measure of the total amount of ozone in a vertical column of air above the Earth's surface
- **UV-B light** causes skin conditions like sunburns, and cancers like basal cell carcinoma and squamous cell carcinoma.
- **UV-A light** is even more harmful than UV-B, penetrating more deeply and causing deadly skin cancer, melanoma, and premature aging.

Practice Questions

Prelims (UPSC 2015):

Q. Which one of the following is associated with the issue of control and phasing out of the use of ozone depleting substances?

- a) Bretton Woods Conference
- b) Montreal Protocol
- c) Kyoto Protocol
- d) Nagoya Protocol

Answer: b)

Mains (Level- Moderate):

Q. Discuss in detail the Ozone hole emphasising its formation, effects and mitigation.

[10 marks, 150 words]

DIY:

- <https://www.downtoearth.org.in/news/climate-change/does-tropical-ozone-hole-exist-experts-are-divided-83745>
- <https://pib.gov.in/PressReleasePage.aspx?PRID=1859829>



TOPIC: Groundwater Governance

Issue in brief – As one of the fastest growing economies, India will need adequate groundwater resources to manage anthropogenic pressures. Therefore, the groundwater governance becomes important.

<https://www.thehindu.com/opinion/op-ed/indias-groundwater-governance-is-in-better-shape/article66440954.ece>

Where in Syllabus:

GS 3: Conservation

❖ Why in News?

Data show that India, with nearly 18% of the world's population, occupies about 2.4% of the total geographical area and consumes 4% of total water resources. A World Bank report says that India is the largest groundwater user. A rapidly growing economy and population are straining the country's groundwater resources.



❖ Groundwater and its importance

Water, stored in subterranean spaces, is called groundwater and it is important for several reasons:

- ✓ Groundwater is the backbone of India's agriculture and drinking water security in rural and urban areas.
- ✓ Meeting nearly 80% of the country's drinking water and two-thirds of its irrigation needs.
- ✓ Groundwater helps reduce the risk of temporary water shortage and caters to the needs of arid and semiarid regions Flood Control: Groundwater storage helps regulate the flow of water in rivers and reduces the impact of floods.
- ✓ Ecosystem Health: Groundwater provides a critical source of water for ecosystems, including wetlands, rivers, and springs.
- ✓ Climate Change Mitigation: Groundwater recharge helps mitigate the effects of climate change by storing water during periods of heavy rainfall and releasing it during dry spells.
- ✓ The fact that the theme of *UN World Water Day 2022* was '*Groundwater, Making the Invisible Visible*' is a reflection of the importance given to the resource across the globe.

❖ Availability of ground water in India

As a vast country, India has distinct and varying hydro-geological settings. For example,

- ✓ **Hard-rock aquifers of peninsular India:** These represent around **65%** of India's overall aquifer surface area, mostly found in **central peninsular India**.
- ✓ **Alluvial aquifers of the Indo-Gangetic plains:** Found in the Gangetic and Indus plains in Northern India, these have significant storage spaces.
- ✓ Estimated utilizable water resources of the country is 1123 Billion Cubic Meter (BCM)/year, out of which, share of surface water and ground water is 690 and 433 BCM/year respectively.

❖ What is ground water governance and why it matters now?

- The UNDP's concept of water governance is defined by the political, social, economic and administrative systems that are in place and which directly or indirectly affect the use, development and management of water resources and the delivery of water services at different levels of society.



- Groundwater governance *has four components*:
 - ✓ An effective and articulate legal and regulatory framework
 - ✓ Accurate and widely-shared knowledge of the groundwater systems concerned, together with awareness of the sustainability challenges
 - ✓ An institutional framework characterized by leadership, sound organizations and sufficient capacity, permanent stakeholder engagement, and working mechanisms to coordinate between groundwater and other sectors
 - ✓ Policies, plans, finances and incentive structures aligned with society's goals.
- Need for ground water governance:**
 - ✓ As per the 2021 CAG report, groundwater extraction in India increased from 58% to 63%, between 2004-17, exceeding the groundwater recharge rate.
 - ✓ Climate change effects such as intermittent rainfall further alters the recharge potential, posing a huge threat to groundwater availability and quality.
 - ✓ NITI Aayog, in its report titled “Composite Water Management Index” published in June 2018, had mentioned that 21 major cities were expected to run out of groundwater by 2020.
 - ✓ Pumping technology facilitated by subsidized or free power along with changes in cropping pattern have been mainly responsible for the rapid expansion in overexploitation of ground water resources in India.
 - ✓ The average rate of groundwater decline in this part of India has been 1.4 cm per year in this century. Depletion is not so acute in regions where groundwater is brackish.
 - ✓ The agrarian economy of the Indo-Gangetic plains is sustained by groundwater. But there are fears that the Indo-Gangetic basin aquifer may soon be incapable of supporting so much irrigation. This is very noticeable in Punjab, Haryana and Rajasthan.
 - ✓ The Central Groundwater Board has categorised 16.2 per cent of the total assessment units Blocks, Mandals or Talukas numbering 6607 as ‘Over-exploited’. It has categorized an additional 14 per cent as either at ‘critical’ or ‘semi-critical’ stage.
 - ✓ Fulfilling the objective of a key United Nations Sustainable Development Goal, of water for all.

❖ Groundwater Governance mechanism in India

- Constitutional and Legal Provisions for Ground Water Governance**
 - ✓ In the Constitution of India, water as a whole is included in Schedule VII in Entry 17 of list II, i.e., State List and Entry 56 of List I i.e., Union List.
 - ✓ There is no special mention of groundwater.
- Evolution of Groundwater Regulatory Regime in India:** India does not have any explicit legal framework specifying water rights. Ground water was considered an easement connected to land: he/she who owns the land: owns the ground water beneath the land.

Evolution of Groundwater Regulatory Regime in India

1882: Indian Easement Act – Gives landowners the right to manage, control and use unlimited groundwater in their land.

1970: Central Ground Water Board (CGWB) – Apex organization of the Ministry of Water Resources to develop groundwater policies, programs and practices.

1974: Water (Prevention & Control) Act – Central and State Pollution Control Board are established to monitor and enforce regulations to prevent and control water pollution.

1986: Central Ground Water Authority (CGWA) – Constituted under section 3(3) of the Environment (Protection) Act to regulate, control, manage & develop groundwater in the country.

2016: Draft National Water Framework Bill: Acknowledges the need to ensure integration of regulatory measures taken for surface and groundwater

2017: Groundwater (Sustainable Management Bill) – Provide template for state level groundwater regulation.



❖ Steps Taken by the Central Government for Sustainable Groundwater Management

- **In collaboration with States and Union Territories:**
 - ✓ A reduction in groundwater extraction to below 70%.
 - ✓ Increasing the network of groundwater observation wells.
 - ✓ Installing digital water level recorders for real-time monitoring.
 - ✓ Periodic monitoring of groundwater quality.
 - ✓ Aquifer mapping and data dissemination.
 - ✓ Having better regulation of groundwater extraction by industries.
 - ✓ Promoting participatory groundwater management and even periodic groundwater resource assessment.
- **Creation of Jal Shakti Ministry** (a merger of the erstwhile Ministries of Water Resources, River Development and Ganga Rejuvenation along with Drinking Water and Sanitation): This was to give impetus to the management of water resources with special focus on demand and supply management.
- **Jal Shakti Abhiyan** was launched subsequently *to transform Jan Shakti into Jal Shakti* through asset creation, rainwater harvesting ('Catch the Rain' campaign) and extensive awareness campaign.
- **A scientific approach:**
 - ✓ **Atal Bhujal Yojana (ABY):** With the *goal of "participatory groundwater management"*, ABY looks to inculcate behavioural change made possible by incentivisation.
 - ✓ **National Project on Aquifer Management (NAQUIM):** It envisages the mapping of sub-surface water bearing geological formations (aquifers) to help gather authentic data and enable informed decision-making.
 - ✓ **Region-wise aquifer management plans** are being prepared and shared with States.
 - ✓ **Monitoring:** There are around 65,025 monitoring stations in India, which include 7,885 automated stations. The numbers are set to go beyond 84,000; in this, the number of automated stations will rise to over 35,000, with a special focus on identified high groundwater extracting industrial and urban clusters and groundwater stressed regions.
 - ✓ **Dynamic groundwater assessments:** It will be done annually now and a groundwater estimation committee formed to revise the assessment methodology. A software, 'India-Groundwater Resource Estimation System (IN-GRES)', has also been developed.
- **Implementation of comprehensive groundwater guidelines** in 2020 for regulation in various sectors and making the processes of issuing a no-objection certificate transparent and time-bound using a web-based application.

❖ Effect of the above taken steps

- The findings of the groundwater assessment also indicate a positive inclination in the management of groundwater.
- There has been a 3% reduction in the number of 'overexploited' groundwater units and a 4% increase in the number of 'safe' category units as compared to 2017.
- There was an improvement in groundwater conditions in 909 units. The assessment also showed a reduction in annual extraction (of about 9.53 billion cubic meters).
- The data for irrigation, industrial and domestic use, respectively, is 208.49 BCM, 3.64 BCM and 27.05 BCM. Overall extraction saw a declining trend, of about 3.25% since 2017.

❖ Way Forward

- *The existing approach of dealing with surface water and groundwater independently has severe limitations.* As the Mihir Shah Committee (2016) proposed, the Central Water Commission and the Central Ground Water Board could be united and a national water framework with an integrated perspective developed.



- Need to work out local-level plans covering water resources in all its forms: rainwater, surface water, soil water and groundwater and the resource use sectors.
- Linking cropping patterns and crop intensity with groundwater availability, aquifer type, and the present state of groundwater extraction at the farm level is imperative.
- A community resource thus turns into a private resource due to the location of extraction site. Re-articulation of the legal framework for groundwater use gains relevance in this context.
- Active public participation and community regulatory options to maintain groundwater balance at the village/ watershed level.

Basic terms/related concepts and facts:

- **Dynamic ground water resource assessment:** It is done periodically by Central Ground Water Board (CGWB) in collaboration with States/UTs.
- **Central Ground Water Board:** A subordinate office of the Ministry of Jal Shakti, Government of India, is the National Apex Agency entrusted with the responsibilities of providing scientific inputs for management, exploration, monitoring, assessment, augmentation and regulation of ground water resources of the country.
- **Central Ground Water Authority (CGWA)** was constituted under sub-section (3) of Section 3 of the Environment (Protection) Act, 1986.

Practice Questions

Prelims:

Q. Consider the following statements:

1. According to the Central Ground Water Board, the annual groundwater withdrawal is considered to be safe when the extraction rate is limited to below 50% of the annual replenishable recharge.
2. Groundwater is not mentioned in the Schedule 7 of the constitution.
3. Central Ground Water Authority (CGWA) was constituted under sub-section (3) of Section 3 of the Water (Prevention and Control of Pollution) Act, 1974

Which of the above statements is/are *not correct*?

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

Answer: C)

Mains: (Level-Moderate)

Q. An effective groundwater governance has the potential to transform the water challenges in India. Elaborate the statement. **(15 marks, 250 words)**



TOPIC: Regulation of Fake News

Issue in brief – Union Ministry of Electronics and IT (MeitY) has recently proposed the amendments to the IT rules, 2021 to check fake news.

<https://indianexpress.com/article/technology/news-flagged-as-fake-by-pib-not-allowed-on-online-platforms-meity-8388127/>

Where in Syllabus:

GS 3: Role of Media and Social Networking Sites in Internal Security Challenges

❖ Why in news?

- The Union Ministry of Electronics and IT (MeitY) has recently proposed the amendments to the Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021.
- According to a draft proposal, any piece of news identified as "fake" by the fact-checking unit of the Press Information Bureau (PIB) will not be allowed on online intermediaries.



❖ What is Fake News?

- Fake news is the news **deliberately published** with an intent to mislead/misinform the audience in order to defame people, spread hatred in society, gain political motives, do financial frauds, etc. It is propagated through print, electronic and social media.
- **Causes of Spread of Fake News**
 - **Lack of media ethics:** Media sometimes spread the news without any fact checking for sensationalism and increasing TRP on television.
 - **Social Media:** It has decentralized the news creation and propagation intensity of creating and spreading fake news. Further, the vastness of the social media users makes tracing the origin of fake news difficult.
 - **Lack of proper regulation:** There is **no specific law to deal with fake news in India**.
 - Fake news to some extent is regulated by the mainstream media through Press trust of India, broadcaster associations etc. but **social media does not have such a mechanism and thus spread of fake news via social media is a major concern**.
 - Government recently tried to make rules for social media regulations but it is not fully implemented yet
 - **Low digital literacy and awareness:** Lack of awareness and digital literacy makes difficult to check authenticity of sources of news.
 - **Polarization of society:** Increasing divide in the society on ideological lines has made the job of spreading fake news easier.

❖ Consequences of Fake news

- **Social impact:** It affects social & communal harmony by inciting violence and hatred among the communities, swinging public opinions, mob lynching etc. E.g., **In 2013, a morphed video on YouTube was used to fan communal riots in Muzzafarnagar in Uttar Pradesh**



- **Economic impact:** Loss of jobs, supply chain gets affected due to fake news. E.g. Litchi growers suffered in Punjab after video on social media claiming a link between Acute Encephalitis Syndrome (AES) in Bihar with litchi.
- **Political impact:** It can be used to manipulate election, influence public opinions, to gain popularity or to malign the image, character of certain individuals or opponents or to defame them. Thereby, undermines the foundation of democracy in India. Eg. News about tampering of EVM during Uttar Pradesh elections of 2017 was based on false facts.
- **Security impact:** Fake news leads to spread of extremists' ideologies like radicalization of youths. Thus, creates law and order problem. The false portrayal of Kashmir as a place of human right abuse by international media has created a false image of the nation.

❖ Measures taken by the Government

- **Regulatory Institutions** like Indian Broadcast Foundation (IBF), Press Council of India, Broadcasting Content Complaint Council (BCCC) has been set up to look into the complaints against content aired by print and electronic media but not social media.
- **The Unit for Fact Checking by PIB** was established under Press Information Bureau (PIB) in November 2019. Fact Checking By PIB is an exercise which takes cognizance of fake news both suo motu and by way of queries sent by citizens on its portal or through e-mail and social media.
- **IPC Sections 153A and 295:** Under this action can be initiated against someone spreading fake news if it can be termed as hate speech.
- **Educating Public:** The Central government is also focusing on digital literacy with its various programmes like National digital literacy mission to make the young generation aware of social media.
- **Rajiv Gauba panel** was set up to suggest measures for social media and fake news.
- **Supreme Court in Tahseen Poonawala case** directed Police officials as Nodal officers who would be responsible for collection of information on person likely to contribute to spread of fake news and hate speech.
- **The Information Technology (IT) Act [Section 69 and 79]:** It imposes an obligation on intermediaries like Google, Facebook to remove any objectionable content pursuant to takedown notices by law enforcement agencies.
 - **Recently draft amendment to the IT Act** has been proposed to regulate fake news on social media.

❖ What are the new proposals?

- According to the latest proposal, there is now the **possibility of content takedowns** if something is **recognised as fake news by the PIB**.
- The condition has been added to the list of due diligence criteria that online intermediaries must follow in order to enjoy legal immunity from third-party content that they host.
- The proposal also suggests that content that has been marked as misleading by any other agency authorised by the government for fact-checking or in respect of any business of the Centre will not be allowed on online intermediaries.
- **Concerns related to the above proposals:**
 - **Threat to freedom of the press:** According to the Editor Guild of India, **determination of fake news** cannot be in the sole hands of the government and will result in the censorship of the press.
 - Amendment may silence the **legitimate criticism** of the government and will undermine the crucial role of media acting as fourth pillar of democracy and holding governments accountable.
 - **Content control:** The Guild had raised concerns over the IT Rules when they were first introduced in March 2021, claiming that they “**empower the Union government** to block, delete, or modify published news anywhere in the country without any judicial oversight”.
 - **Efficiency of PIB's Fact checking unit:** PIB's fact-checking unit was set up in 2019 to verify news related to the government's ministries, departments and schemes.



- It routinely flags content that it believes is false or misleading, **yet it rarely explains** why it has flagged a specific piece of information.
- The PIB's fact-checking unit has itself tweeted (occasionally) inaccurate information.

❖ Way Forward

- **Robust public information regime:** Increase the presence of Government officials on social media to spread authentic news.
- **Bring out policy and effective regulatory mechanism by** empowering existing regulatory bodies.
- People must be made **aware** of the menace of fake news.
- **Social media should step up.** For instance: Facebook recently announced that it has tied up with Boom Live, an Indian fact-checking agency, to fight fake news during the Karnataka elections.
- **Best Practice:** *Kannur rolls out Satyameva Jayate in govt schools to combat menace of fake news.* Teachers in 150 government schools in Kannur will be training students of Classes VIII to XII on how to spot false news and information, the lure of sensational news and the idea of the “filter bubble”

Basic terms/related concepts and facts:

- **The Press Information Bureau (PIB)** is the nodal agency of the Government of India to disseminate information to the print and electronic media on government policies, programmes, initiatives and achievements. It functions as an interface between the Government and the media and also serves to provide feedback to the Government on people's reaction as reflected in the media.

Practice Questions

Prelims:

Q. Consider the following statements about Press Information Bureau (PIB):

1. It is a statutory body.
2. It is the nodal agency of the Government of India to disseminate information to the print and electronic media about government policies and programmes.
3. Its objective is to preserve the freedom of the Press and to maintain and improve the standards of newspapers and news agencies in India.

Which among the above statement(s) is/are correct?

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

Answer: c)

Mains (Level- Moderate):

Q. Fake news is emerging as a serious law and order problem in India. By giving suitable examples, mention the causes and consequences of spread of Fake news. Suggest some measures to curb this menace.

[15 marks, 250 words]

DIY:

<https://www.thehindu.com/opinion/op-ed/are-law-and-technology-a-solution-to-fake-news/article35529346.ece>



TOPIC: Changing Nature of Internal Security Challenges

Issue in brief – Recent statement of the Union Home Minister on the changing nature of the internal security challenges in India leads to an analysis on the same.

https://epaper.thehindu.com/ccidist-ws/th/th_delhi/issues/22056/OPS/GBBAPBPS0.1.png?cropFromPage=true

Where in Syllabus:

GS 3: Challenges to Internal Security

❖ Why in News?

- Recently, the union Home minister said that internal security challenges of the country have transformed from “geographic” to “thematic”.
- “Earlier problems were geographical like unrest in the Northwest, terrorism in Jammu and Kashmir and Left Wing Extremism (LWE) in affected areas, but now they are thematic like Cyber security and data security. The problems have multidimensional as *narco terror and fourth generation war* have chipped in.” He said.

❖ What is internal security?

- Internal security can be defined as the management of security *within the border of a country*. It means preservation of sovereignty and integrity of the State from disruptive and anti-national forces from within the State. It comes under the domain of Ministry of Home Affairs.
- The internal security threat to the state today is from state and non-state actors and in physical and cognitive domain as well. However, the paradigm of internal security has now grown to include the threat from cyber, political warfare, transnational terror organisations, water scarcity, societal dissension and black swan events such as coronavirus and technology.

❖ The Emerging Concept of Internal Security

- The concept of internal security is set to change with the changing character of warfare. Thus, the concept of security in the twenty-first century is broad and dynamic to cover all the areas which concern the security of the state and its citizens.
- Till the recent past, national security was restricted to defending borders and preventing the loss of territory, but the paradigm of national security has now assumed, significance due to internal security challenges.
- The concept of national security is the “*protection of physical, political and cultural identity of a nation-state*”. Internal and external securities are overlapping and two cannot be separated. Today securing economic infrastructure, food supply chain, the protection of the environment, mitigating disasters, the prevention of erosion of the cognitive domain (that could be manipulated by inimical forces and radical organizations) and the security of citizens, assume even greater focus.
- The *cyber, information, psychological and political warfare* is emerging as a serious threat to internal security.
- These threats are amorphous in nature and require technology, the whole of government approach and legal frameworks to deal with these security challenges that can create internal fissures in society and states



❖ Internal Security Challenges to India

In the current milieu, the threat to states is more from asymmetric and political warfare rather than from conventional military capabilities.

- The **conventional domestic threats** to national security have been categorized by the Ministry of Home Affairs (MHA) in four groups:
 - Terrorism in the hinterland of the country
 - Cross-border terrorism in Jammu & Kashmir
 - Militancy in the north-eastern states
 - Left-wing extremism in certain states.
- **New challenges:**
 - **Political warfare** refers to the employment of military, intelligence, diplomatic, financial, and other means—short of conventional war—to achieve national objectives.
 - The political warfare thrives on internal instability and ethnic, communal and societal fault lines.
 - Political warfare is a vanguard to trigger hybrid and other asymmetric wars. With multiple secessionist and separatist movements going on in many parts of India, political warfare is a real challenge to the internal security of India and the lethal consequences of this warfare should not be ignored.
 - **Transnational Terrorism Threatening Cultural and Physical Frontiers:** Islamic State (IS) and Al Qaeda (AQ) are competing to spread their influence in India's neighborhood including Sri Lanka, Maldives, Bangladesh and even Myanmar.
 - In April 2019, Sri Lankan terror strikes that killed more than 300 people on Easter, is a reminder that ISIS has made landfall in South Asia and there is a need to put measures in place to prevent penetration of ISIS in the Indian states.
 - The traction of youths from India (though comparatively marginal) to join IS and AQ in Iraq and Syria.
 - The threat from transnational terrorism to India will get impetus if there is political shielding of radical organisations with linkages to terror organisations.
 - **Radicalisation Likely to Lead to Polarisation of State:** Over-regulation of the religious sphere in an effort to combat the radicalisation and jihadism could lead to religious contestation of societal space.
 - Radicalisation is a threat to democracy that leads to polarisation in society.
 - It breeds intolerance to others' belief and those who do not support their ideology automatically become enemies. Radicalisation ultimately justifies the use of violence against those who oppose their ideology or belief.
 - In 2014, the leader of AQ, Ayman al- Zawahiri, announced the creation of AQ in the Indian Subcontinent (Jamaat Qaidat al-Jihad fi'shibi al-qarrat al Hindiya) or AQIS.
 - The government must work with religious clerics, social scientists and psychologists to control the joining of people to these organisations. Security forces should be kept out of this gambit since they are neither structured nor can they effectively handle this aspect.
 - **Societal Dissent and Communal Divide:** Terrorist attacks could lead to a spike in hostile rhetoric and low- to medium-level communal violence, which in turn reduces the integration of the minority communities and could lead to acceptance and more tolerance of radicalism.
 - Non-state actors find roots and space when there is a societal and communal divide within a state
 - The objective of the violent extremists is to drag the state into a communal or sectarian divide to polarise the society and eliminate the societal space that represents coexistence between different ethnic and religious groups.
 - **Illegal Immigration:** India has been soft for decades, permitting illegal migrants from Bangladesh to settle in and change the demography in Assam and districts bordering Bangladesh and West Bengal.



- As a result, the demography of Assam stands altered and the threat of insurgency/terrorism is knocking at the most critical state of India's north-east.
- The major fallout is an encroachment on the traditional land that belonged to the communities and tribes and pressure on the state to provide free health, education and subsidised food.
- There is a likelihood of communal clash because of resource crunch and a sense of deprivation among the legal subjects of the states.
- The 'half open arms policy' to settle illegal migrants for vote bank is creating a volatile ground situation.
- **Cyber, Information and Influence Operations:** The collection of tactical information about an adversary as well as the dissemination of propaganda in pursuit of a competitive advantage over an opponent.
 - Cyber and digital media plays an important role and is used as an enabler to target the vulnerable section of the population.
 - The objective is to create disaffection with the state and an atmosphere of distrust with the institutions of governance.
 - Elections are influenced and government laws with regard to law and order, terrorism, radicalisation and uniform law for all citizens, are portrayed as anti-minority people and at times against communities.
 - Cyberwarfare can be used to destroy the core values of the society, especially in an open and democratic state, thereby questioning institutions of governance and opposing every decision of the state that appears to be against the idea of transparency.
- **Black Swan Events:** Black Swan Events such as Coronavirus and 26/11 or Mumbai serial bomb blasts in 1993 have a profound impact on internal security.
 - Disrupt freedom of society, supply chain, loss of jobs, economic shutdown and industries coming to a grinding halt apart from loss of lives.
 - Mass migration or relocation of the population that can put life support chain out of gear.
 - Black Swan Events can also be created by cyber in terms of disabling financial systems, services or even massive theft/leakage of data.
 - Therefore, intelligence agencies and risk management protocols must always be ready to handle such unpredictable situations.
- **Water Security:** Water wars have already begun. Water scarcity can cause mass migration and dislocation of the public from its life-sustaining chain. It is not possible for the states to immediately meet the requirement of housing, food and life support system for unexpected mass migration. It can lead to public disorder and uncontrolled chaos.

❖ Way forward

- **Technological fusion:** Fusion of Artificial Intelligence (AI), technology based platforms and human intelligence is vital for identification, monitoring and blocking perils of corridor.
- **The internal security is no more the domain of security forces.** It requires the whole of government approach to deal with the threats that are amorphous and diverse in nature.
- **Transparency and accountability:** To prevent the disaffection of the youths and eliminate dissention with the state, there is a need to deliver governance and ensure transparency in its functioning.
- **Robust Intelligence and Analysis System:** Coronavirus pandemic has taught the global community a lesson that, every nation must have a resilient intelligence system that can identify, monitor, and forewarn nations to put protocol of precaution in place so that it does not hurt the economy.



- Stronger integration of different actors in society, including non-governmental organisations, civil society and business organisations.
- internal security is the responsibility of every citizen and organ of the state. The man and machine both have an important role to secure the nation and make urban areas secure.

Basic terms/related concepts and facts:

- **Fourth Generation War:** Fourth generation warfare's goal is collapsing the enemy internally rather than physically destroying him. Targets will include such things as the population's support for the war and the enemy's culture.
 - ✓ It seems likely to be widely dispersed and largely undefined; the distinction between war and peace will be blurred to the vanishing point.
 - ✓ It will be non-linear, possibly to the point of having no definable battlefields. The distinction between “military” and “civilian” may disappear.

Practice Questions

Prelims:

Q. Consider the following statements about NATGRID:

1. NATGRID is the integrated intelligence grid connecting databases of core security agencies of the Government of India.
2. The office of NATGRID is attached to the Ministry of Defense
3. CBI & IB are the only agencies that have been authorized to access the database of NATGRID.

Which of the above statement(s) is /are correct:

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

Answer: a)

Mains: (Level-Moderate)

Q. Emerging threats to India's internal security demand a more comprehensive & coordinated strategy. Elucidate. **(15 marks, 250 words)**

TOPIC: Joshimath Crisis

Issue in brief – Uttarakhand's hill town Joshimath experienced rapid land subsidence
<https://www.thehindu.com/opinion/op-ed/a-mountain-reeling-under-human-aggression/article66356312.ece>

Where in Syllabus:

GS 3: Disaster and Disaster Management

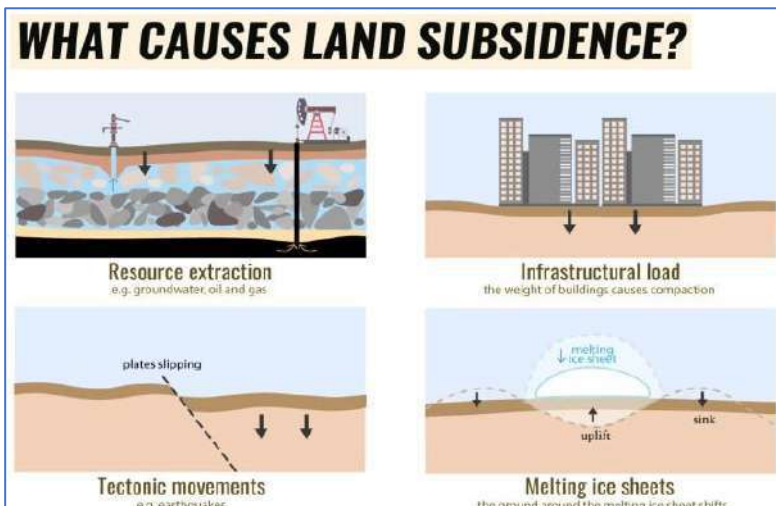
❖ Why in news?

Joshimath (in Uttarakhand) has been declared **landslide-subsidence zone** and over 60 families living in uninhabitable houses in the sinking town have been evacuated to temporary relief centres.



❖ What is Land Subsidence?

- According to National Oceanic and Atmospheric Administration (NOAA), Land subsidence is **sinking of the ground** because of underground material movement.
- Subsidence is generally caused by:
 - **Resource Extraction:** The removal of water, oil, natural gas, or mineral resources out of the ground by pumping, fracking, or mining etc.;
 - **Natural Events:** Natural events such as earthquakes, soil compaction, glacial isostatic adjustment, erosion, sinkhole formation, and adding water to fine soils;
 - **Infrastructural Load:** High load exceeding load-carrying capacity of the underlying soil.



❖ Reasons behind the Joshimath Crisis?

As per reports, the Uttarakhand government's expert panel in 2022 found that several pockets of Joshimath are "sinking" owing to man-made and natural factors.



Man-made Factors

- **Development Projects:** Various development projects are being undertaken nearby the sinking region. These include NTPC's 520 MW **Tapovan-Vishnugad Hydro Power Project** and Helang-Marwari bypass under the **Char-Dham Project**. These projects may have **weakened slopes** and **further destabilising the local topography**.
 - A tunnel being bore under the town of Auli (near Joshimath) had **punctured an aquifer** in 2009 leading to large-scale seepage and **drying-up of water resources in nearby regions**. Water has been seen pouring out from cracks in several locations in the present crisis.
 - Studies are being undertaken, but experts have blamed these large-scale projects for the current crisis.
- **Unsustainable tourism and urbanisation:** Joshimath serves as a gateway to **popular pilgrimage sites** like **Badrinath** and **Hemkund Sahib** as well as the popular international **skiing resort of Auli**.
 - This has resulted in the construction of hotels and marketplace in the ecologically sensitive zone.
 - Most of the buildings have been constructed without proper studies about the underlying soil.
 - The underlying soil may lack the load-carrying capacity of the ever-expanding infrastructure.
- **Water Withdrawal:** Increased withdrawal of water due to rising population may have contributed to sinking.
 - Subsidence occurs when large amounts of groundwater are withdrawn from specific types of rocks, such as fine-grained sediments. The rock compacts because the water helps to keep the ground in place. When the water is removed, the rocks collapse in on themselves.
- **Absence of Proper Drainage:** It leads to landslides. The existence of soak pits, which allow water to slowly soak into the ground, is responsible for the creation of cavities between the soil and the boulders. This leads to water seepage and soil erosion.
- **Administration turning a blind eye towards the fragile ecology:** **High-Powered committee (HPC)** on the Char Dham Project raised concerns about the geological vulnerability of the area and sanctioning of hydroelectric projects in the Joshimath, but no remedial measures were taken by the authorities.

Natural Factors

- **Geology:** The **Mishra Committee Report** states that Joshimath is **situated on a sand and stone deposit**. A majority of the town has been constructed on the **debris of landslides**, leading to smooth and eroded rocks and **loose soil on the surface**. These slopes can be destabilised even by slight triggers. Hence such slopes are not suitable for a township. The town is **not actually built on the “main rock”** of the mountain.
 - The town also sits on a tectonic fault line and falls in **Zone V of the Seismic Zonation Map** and has witnessed several earthquakes over decades.
 - This has made the town highly vulnerable to sinking because of tectonic activity.
- **Geographic fault:** The Mishra Committee Report has also pointed out that subsidence in Joshimath might have been triggered by the **reactivation of a geographic fault** where the Indian Plate has pushed under the Eurasian Plate along the Himalayas.
 - The town sits on a tectonic fault line and falls in **Zone V of the Seismic Zonation Map** and has witnessed several earthquakes over decades. **Eg. 1999 Chamoli earthquake**
 - Tectonic activity has made the town highly vulnerable to sinking.
- **Erosion by rivers:** Undercutting (erosion of river banks) by Alaknanda and Dhauliganga river is causing landslides in the region.
 - **Floods in the Rishiganga and Dhauliganga rivers in 2021** is likely to have impacted the stability of the slope on which Joshimath town is situated



❖ Steps Taken by the State Government to address the Crisis

- The government has declared **Joshimath town as landslide-subsidence zone**.
- **The construction** of the NTPC Hydro Power Plant and the Helang Bypass has been stopped till further orders and **technical resources** from nearby areas have been **summoned** to Joshimath to find a solution.
- Controlled demolition of most vulnerable buildings is being undertaken
- **Evacuation plans** are in the works and the government has put in an order for 4,000 **prefabricated homes** to help the residents of Joshimath.
- The government is also planning to set up **micro-seismic observation systems** in Joshimath that would generate risk resilient parameters for safer dwellings and infrastructure
- A team of experts led by National Disaster Management Authority (NDMA) will investigate the situation and offer their recommendations

❖ Way Forward

- **Sustainable Development:** There is need to balance development needs of the region with the protection of the environment. The natural assets of the Himalayas, such as biodiversity, local ecology and environmental balance should be at the centre of any development plan for the area. Ensuring sustainability should be the top priority.
- **A time-bound reconstruction plan:** This includes developing a **risk sensitive urban development plan** that could help in long-term solution to the crisis.
- **Low scale projects:** Instead of focusing on massive dam construction, attention should be given to smaller projects that can help meet the energy needs of the community.
- **Information dissemination:** The state government should establish a clear and continuous communication channel with the residents to prevent scare and chaos.
- **Mishra Committee Recommendations** should be implemented for all development projects
 - Put restriction on heavy construction activities in the region.
 - Construction should only begin after the soil's weight-bearing capacity and site stability have been assessed. It's also important not to dig too deep into slopes.
 - When repairing roads or building structures, it was recommended that the boulders not be removed by digging or blasting the hillsides. In landslide areas, stones and boulders should not be removed from the bottom of the hill because this would remove toe support, increasing the likelihood of landslides.
 - It is necessary to fill in any cracks that have appeared on the slopes.
 - It has also recommended that extensive plantation work be done in the area to conserve soil and water resources, and has cautioned against cutting trees in the landslide zone.
 - There should be strict regulations on tree cutting for the township's timber and firewood needs, and that the locals would be required to have access to alternative fuels.
 - **Ensure that slopes are not used for agricultural purposes.**
 - To prevent future landslides, **open rain water seepage must be stopped** through the construction of a **pucca drainage system**. Water should not be allowed to accumulate in any depression; instead, drains should be built to transport it to safe areas.
 - Cement blocks should be positioned in areas of the river bank that are susceptible to erosion in order to stop the bank from eroding.
 - In order to **prevent erosion and train rivers**, measures should be taken, and the hanging boulders at foothills should be given the appropriate support they need. (River training is the construction of structures to direct the flow of a river).



Basic terms/related concepts and facts:

- As per the Govt. data, considering the recorded history of earthquakes in the country, a total of ~59% of the land mass of India (covering all states of India) is prone to earthquakes of different intensities.
- As per the seismic zoning map of the country, the total area is classified into four seismic zones (zones V, IV, III and II). Zone V is seismically the most active region, while zone II is the least.
- Approximately, ~ 11% area of the country falls in zone V, ~18% in zone IV, ~ 30% in zone III and remaining in zone II.
- National Centre for Seismology under Ministry of Earth Sciences is the nodal agency of Government of India (GoI), for monitoring earthquakes in and around the country.

Practice Questions

Prelims:

Q. If you travel to Joshimath region, you are likely to see which of the following plants naturally growing there?

1. Deodar
2. Rhododendron
3. Sandalwood

Choose the correct option from the codes given below:

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

Answer: a)

Mains (Level- Basic):

Q. Disasters are caused by both natural and man-made factors. Discuss in the light of recent Joshimath land subsidence crisis. **[10 marks, 150 words]**



TOPIC: Controlling India's Population

Issue in brief – India must build awareness on population control rather than on forced population control measures

<https://www.thehindu.com/opinion/op-ed/india-must-build-awareness-on-population-control/article66314085.ece#:~:text=India%20needs%20to%20adopt%20population,impact%20the%20rate%20of%20aging.>

Where in Syllabus:

GS 1: Population and associated issues

❖ Why in news?

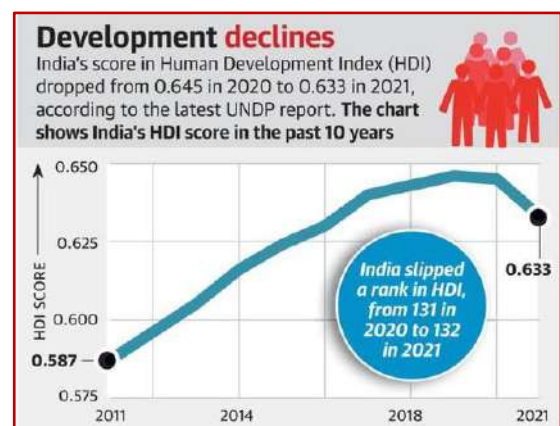
- Recently, two Members of Parliament introduced in the Lok Sabha a private members' Bill aimed at population control in India.
- The bill came up after the United Nations raised a concern that the population of India can surpass China, becoming the world's most populous country.

❖ Reasons for bringing Bill on Population Control

- United Nation stated that population rise is the most significant reason for India's slow rate of development and argued for an immediate need for population control.

For instance: India has low rank in Human development Index [**Rank: 132/191 in 2021**]. It is mainly attributed to high population in India.

- Earlier Population Policies** framed by various governments have not been able to control the population and **there is no law on population control**.
 - **For instance:** National population policy 2000 is a well intentioned policy with the objectives of family planning and reduction in maternal mortality ratios. However, it needs to include focus on the ageing population and reproductive health.
- Rapid population growth makes eradicating poverty, combating hunger and malnutrition, and increasing the coverage of health and education systems more difficult.



❖ Key provisions of the bill proposed by private member

Objectives of the Bill

- The Bill adds **new directive principle in Part IV of the Constitution - Article 47A**. Article 47A would direct the State to take all steps to control population growth by promoting small family norms and achieve a stable population.
- The Bill also adds a **Fundamental duty in Part IVA of the Constitution** for citizens to adopt small family norms and contribute towards national effort of achieving a stable population of the country.

Key Provisions of the Bill:

- Two-child policy:** It proposes to introduce a two-child policy per couple.
- Encourage adoption:** Encourage adoption through various measures such as educational benefits, taxation cuts, home loans, free healthcare, and better employment opportunities to the couple.



- **Birth spacings:** It proposes to ensure healthy birth spacing through measures related to augmenting the availability, accessibility and affordability of quality reproductive health services.
- **Penalties:** Couples not adhering to the two-child policy will be debarred from contesting in elections; becomes ineligible for government jobs, subsidies on various facilities, goods given by the government, etc.

❖ Criticism of the Bill

- **Forced control measure:** The forced population control measures will further encourage sex-selection and unsafe abortion because of the prevalence of Meta-son preference in Indian society as pointed by Economic Survey too.
 - It would affect **sex ratio** in India. *External Affairs Minister S. Jaishankar* has countered the need for such a law by saying, “forced population control can have very dangerous consequences, it can create a gender imbalance”.
 - **Past incident:** Forced sterilization in 1970s by the government backfired and it led to increase in the population and not decrease.
 - Forced population control measures have not shown promising results in the countries that have implemented them, the most relevant example being India’s immediate neighbour, China.
 - ✓ The one-child policy has proved to be disastrous, causing a demographic imbalance.
 - ✓ The population of China is aging faster than in any other modern country, owing to the policies of forced population control.
- **Violates Fundamental Right to equality and liberty:** Violates the couples right to choose freely the number of children they will have.
- **A validation of the majoritarian politics:** The new bill argued that there has been a **difference in Hindu and Muslim population growth rate** in various states, underlining the view that a minority community is to blame for the population explosion. However, **NFHS data** indicates that although the total fertility rate (TFR) of Muslims is higher than Hindus, the gap between the two has shrunk substantially.
 - **For example**, in 1992-93, the gap between the Hindu and Muslim fertility rate was 1.1, which now has reduced to 0.35.

❖ Steps taken by government for population control:

- **Mission Parivar Vikas:** For substantially increasing access to contraceptives and family planning services in high fertility districts with TFR of 3 and above.
- **Contraceptive tools:** Injectable contraceptive and a new method of IUCD (Intrauterine Devices) insertion immediately after delivery i.e., post-partum IUCD has been introduced.
- **Awareness building:** The packaging for Condoms, emergency contraceptive pills, etc., has been redesigned so as to increase their demand alongside 360-degree media campaign.
- **Compensation scheme for sterilization acceptors:** Health Ministry provides compensation for loss of wages to the beneficiary and also to the service provider (and team) for conducting sterilizations.
- **Scheme for Home delivery of contraceptives by ASHAs:** At doorstep of beneficiaries.
- **Family Planning Logistic Management and Information System (FP-LMIS):** A dedicated software to ensure smooth forecasting, procurement and distribution of family planning commodities across all the levels of health facilities.
- **National Family Planning Indemnity Scheme (NFPIS):** The clients are insured in the eventualities of death, complication and failure following sterilization.



❖ What should be the various ways to control population?

India's TFR that was around **5.9% in 1950s dropped to 2% (NFHS 5) and slipped below the replacement level fertility (which is 2.1 children per woman) in 2021**. This is a significant advancement in population control parameters, demonstrating **that India does not require a law for forced population control. Thus, India should take the following measures:**

- **Empowerment of women:** To actually realise Population Control, educating women and giving them freedom to make choice and implement it, should be first priority of the Government.
 - Done through effective enforcement of Hindu marriage Act [raise the legal age of marriage of women to 21 years], providing access to education, health facilities, reducing the digital divide, mentoring adolescent girls on vocational training and providing economic opportunities. Educated women are health conscious and avoid frequent pregnancies and thus help in lowering birth rate.
- Make **adoption** process accessible and affordable to all parents without harassment by officials.
- **Adequate investments** (at least 5% of GDP) are needed in family planning and youth capacity enhancement with proper implementation of schemes like Samagra Shiksha Abhiyan, Skill India Mission, PM Kaushal Vikas Yojana etc.
- **Universalise Social Security measures** so that parents don't depend on children in the event of old age, sickness, unemployment etc.
- Make people aware about **family planning** through ASHA workers, setting up Family clinics, advertisements, movies, etc.
 - The communication media like TV, radio and newspaper can propagate the benefits of the planned family among masses.
- State must ensure **contraceptives** are accessible, affordable and available in a range of forms acceptable to those using them.
- **Increase employment opportunities** by ensuring growth in agriculture and industry sector. Jobs would increase income of the people thereby improving their living standards. In order to maintain their higher standard of living, people prefer to have a small family.
- **Urbanisation:** Urban areas have low birth rate than those living in rural areas.
- **Incentives:** The govt. can give various types of incentives to the people to adopt birth control measures.

Basic terms/related concepts and facts:

- **Total Fertility Rate (TFR):** It is the average number of children who would be born to any women in her lifetime. It was revealed in the fifth round of the National Family Health Survey, or NFHS-5 that the TFR has declined from 2.2 in 2015-16 to 2.0 in 2019-21.
- **Replacement Level Fertility:** It represents the level at which a population exactly replaces itself from one generation to the next, thus leading to zero population growth if the level sustained over a sufficiently long period.
- India's TFR of two is currently below the replacement level of fertility of 2.1 children per woman.



Practice Questions

Prelims:

Q. Which among the following statement (s) is/are *correct*?

1. India's Total Fertility Rate (TFR) has is far above from the Replacement Level Fertility.
2. India's TFR is currently below the Replacement Level of Fertility.
3. All states have achieved a replacement-level of fertility of 2.1
4. TFR among rural women has increased in the last three decades whereas the same in urban women has substantially decreased.

Choose the correct option from the codes given below:

- a) 1 and 4
- b) 3 and 4
- c) 2 only
- d) 4 only

Answer: c)

Mains:

Q. Forced population control measures are considered ineffective. Comment.

[10 marks, 150 words]

Topic: Smart Urbanization

Issue in brief: Prime Minister on various platforms highlights the India's need for smart urbanization embedded in the idea of promoting cities that provides ease of living to its citizens, with core infrastructural development, a clean and sustainable environment and access to resources through the adoption of data-oriented “smart solutions”.

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Where in Syllabus:

GS 1: Urbanization- problems and remedies

❖ Why in news?

- The model of urbanization over the past two decades has been far from “smart” and sustainable.
- In the last few years, various reports by respective institutions such as World Bank and IPCC have highlighted the need for Smart Urbanization.
- Our cities are growing very quickly and spontaneously. Decreased planning and excessive urban expansion, alongside reduced density, is leading us to unprecedented levels of chaos, urban poverty and environmental degradation highlights the need for smart urbanization.



❖ What is Urbanization?

- Urbanization (or the growth of urban settlement), is the process of becoming urban, moving to cities, changing from agriculture to other pursuits common to cities, such as trade, manufacturing, industry and management, and corresponding changes of behavior patterns. An increase in the size of towns and cities leading to growth of urban population is the most significant dimension of urbanization.
- Urbanization results due to the concentration of large-scale and small scale industrial and commercial, financial, and administrative set up in the cities; technological development in transport and communication, cultural and recreational activities.
- Urbanization is an integral part of economic development, as the economy develops, there is an increase in the per capita income and also the demand for non-farm goods in the economy.
- In the context of India, the process of urbanization is seen as a socio-cultural process, an economic process, and a geographical process.

❖ Why Smart Urbanization is the need of the hour (Problems of Urbanisation)?

- **Rising number of urban populations:** Over 34% of India's current population lives in urban areas, rising by 3% since 2011. More importantly, while existing large urban agglomerations (those with a population above 50 lakh) have remained mostly constant in number since 2005, smaller clusters have risen significantly (from 34 to 50 clusters with 10-50 lakh population).



- **Unplanned urbanization:** Various factors responsible for the process of urbanization like migration, better economic opportunities led to settling down of people either in already densely populated cities or the fringe areas around the cities. This rapid urbanization leads to the development of cities without any urban planning and eventually that becomes unsuitable for living.
- **Creation of Slums:** With large scale migration to urban areas many find that the only option they have is substandard conditions of slums. Slums are characterized by sub-standard housing, overcrowding, lack of electrification, ventilation, sanitation, roads and drinking water facilities. As per the census 2011, 17% of the urban population in India lives in slum which is expected to increase rapidly considering the huge migration from rural to urban area.
- **Over Crowding:** In major cities in India like Delhi, Mumbai, Kolkata, Pune and Kanpur, somewhere between 85% and 90% of households live in one or two rooms. In some households, five to six persons live in one room.
- **Rising demands for basic services** such as clean water, public transportation, sewage treatment and housing
- **Rural urban divide:** As skilled population move to cities and considering the trend of the increased urbanization, government focus has also shifted from rural to urban area. Consequently, rural areas have started witnessing social changes like transformation of workforce (feminization), changes in land relations, absence of leadership etc.
- **Climate change:** The recent report by IPCC warns that every fraction of rising temperature the impact of climate change will intensify. India needs rapid transformations across all systems to avoid the worst climate and to achieve India's new emission pledges.
- **Urban Crimes:** Urbanization in India has not only been fast but also unplanned. This leads to an imbalance in resource availability that manifests itself in dearth of space, shelter, food and basic amenities for the rising population leading to competition, rivalry, insecurity and crimes.

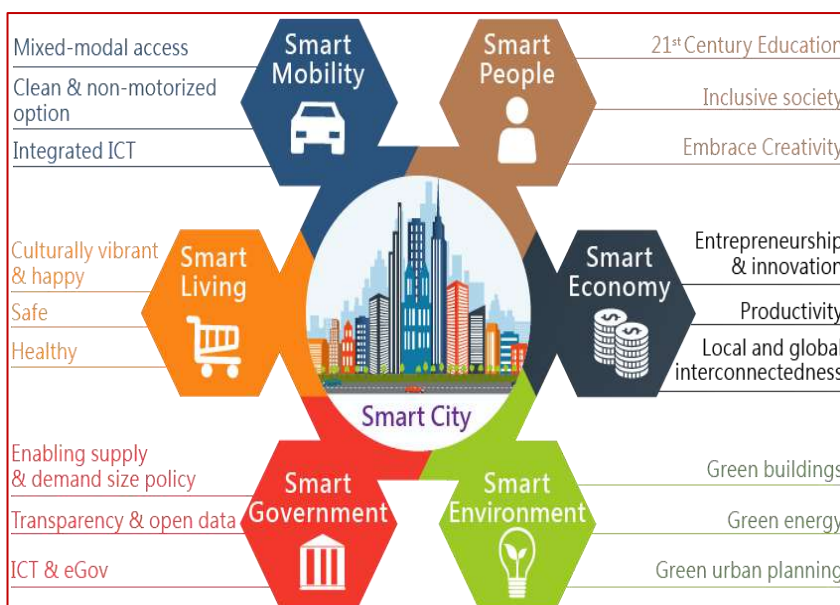
❖ Five Pillars of Smart Urbanization

The diagnosis for a more sustainable and “smart” urban model is found in five fundamental pillars of smart urbanization:

1. **National Urban policies:** The first of the fundamental pillars of urbanization is the call for national governments to assume their responsibility in the process of urbanization, by implementing properly developed and established national urban policies. Sustainable urbanization must be led by national governments working closely with subnational and local governments.
2. **Establishing rules and regulation:** The second is the categorical need for urbanization to be based in the rule of law. Urbanization without rules and regulations tends to be spontaneous and ad-hoc.
3. **Urban planning and design:** The third pillar refer to the design of buildable plots and public spaces, and the relationship between the two. Urbanization without the proper allocation of basic space and the correct design of street patterns and buildable plots is doomed to failure.
4. **Form a financial plan:** Urbanization should be approached not as a cost, but as an investment, because the cost of urbanization is minimal compared to the value that it can generate. In the last few years, various reports have estimated a huge demand for funding urban infrastructure; for example, the Isher Judge Ahluwalia report says that by 2030, nearly ₹39.2 lakh crore would be required.
5. **Local implementation:** Local governments, in particular, are often not given the means to address the challenges of unplanned urbanization. The New Urban Agenda offers planned city extensions, urban redevelopment and planned city infills as the best three tools to address rapid urban growth within our cities.

❖ Government Initiatives

- **Smart City Mission:** The Smart Cities Mission aimed at promoting cities that provide core infrastructure and give a decent quality of life to its citizens, a clean and sustainable environment, and the application of 'Smart' Solutions.
- **National Urban Digital Mission (NUDM):** It will create a shared digital infrastructure for urban India.
 - It shall work across the three pillars of people, process, and platform to provide complete support to cities and towns.
- **National Urban Learning Platform (NULP):** It aims to propagate solutions and innovations that are underway, and act as an enabler of the rapid development of diverse new solutions developed by cities and states.
- **Ease of Living Index (EoLI):** The EoLI is an assessment tool by the Ministry of Housing & Urban Affairs that evaluates the quality of life and the impact of various initiatives for urban development in the city.
- **India Smart Cities Awards Contest (ISAC):** It was launched to reward the cities, projects and innovative ideas promoting 'smart' development in cities.
- **The Urban Learning Internship Programme (TULIP):** TULIP is a program for providing fresh graduates with experiential learning opportunities in the urban sector.
 - It would help enhance the value-to-market of India's graduates and help create a potential talent pool in diverse fields like urban planning, transport engineering, environment, municipal finance etc.
- **Other initiatives:** AMRUT scheme, HRIDAY, Swachh Bharat mission, etc.



❖ Way Forward

- **Planned smart city:** A city that has an advanced model of technology but is badly planned, with outdated legal frameworks or lacking a good financial model, will only aggravate the dysfunction in the city. A 'smart city' is a city that uses technology in a 'smart' way to reinforce the pillars of urbanization."
- **Strengthening of Urban local bodies:** A real step-up in the capabilities and expertise of urban local bodies will be critical to devolution and improvement of service delivery. The vast number of urban local bodies showcases the potential to leverage growth and development in all critical areas such as housing, sanitation, education and health. Hence, it is essential to strengthen the urban local bodies and giving them fiscal autonomy.
- **Improved Governance:** Governance forms an integral part of Urbanization. Governance is the weakest and most crucial link which needs to be repaired to bring about the urban transformation so urgently needed in India. It includes strengthening of municipalities, creation of waste to energy plants and so on.
- **Real time database for monitoring:** Create real-time urban information hub at local level, integrated with the regional, state and national level database for informed decision making.



- **National Council of Town and Country Planners:** A report by Niti Aayog recommends the constitution of a 'National Council of Town and Country Planners' as a statutory body of the Government of India.

❖ Conclusion

A new urbanization policy that seeks to rebuild Indian cities around clusters of human capital, instead of considering them simply as an agglomeration of land use, is a welcome transition. We need to empower our cities, with a focus on land policy reforms, granting urban local bodies the autonomy to raise funds and enforce local land usage norms.

Practice Questions

Prelims:

Q. Consider the following statements:

1. 11th schedule of the constitution deals with the Urban Local Governance.
2. Maintenance of law and order is not the concern of Urban Local Government.

Which of the above statement(s) is/are **correct**?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) None

Ans. b)

Mains: (Level-Moderate)

Q. "There are various problems which originated out of the speedy process of urbanization in India". In the light of above statement discuss the need for smart urbanization and government initiatives in that direction.

[15 marks, 250 words]



OUR ONGOING INITIATIVES

1

ANSWER WRITING PROGRAMS

- Daily Answer Assessment Programs (DAAP, DAAP Plus & DAAP Advance) 2023
- Comprehensive Mains Answer Assessment Program (C-MAAP) 2023
- Mini Revision Tests (MRT) 2023

2

Essay Assessment Program (EAP) 2023

3

Syllabus Affairs

Comprehensive Analysis of Relevant News)

4

Relevant News Listing

–What to read daily from Newspaper

5

Daily Answer Writing Practice

–A Free Initiative on Current Affairs

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