

CURRENT AFFAIRS

WEEKLY

WEEK: I
JULY
2022

MAINS

GS-II

- ❑ G7 summit: Ukraine crisis and major takeaways for India
- ❑ Status of Statistics in India
- ❑ Juvenile Justice Amendment Act may backfire
- ❑ Political Inclusion of Tribes
- ❑ Maharashtra political crisis and Governor's crucial role
- ❑ Election Commission deletes 111 'non-existent' political parties from list

GS-III

- ❑ New VPN rules and its impact
- ❑ Open source technology
- ❑ Increasing Tourism induced Disaster in Himalayas
- ❑ River Interlinking Projects: Boon or Bane for India
- ❑ To include wetland conservation in upcoming biodiversity, climate change negotiations
- ❑ WTO's Twelfth Ministerial Conference in Geneva
- ❑ Payment Vision 2025
- ❑ India's gig workforce to reach 2.35 crore by 2030: NITI Aayog
- ❑ India's emerging twin deficit problem

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- ❑ No space for protest movement in political science

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- ❑ Goa's Sao Joao festival
- ❑ Goa to host 3-day international Shiva festival next year

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- ❑ Snake Island

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- ❑ Eco-Sensitive Zone and Kerala
- ❑ The High court cites Muslim personal law

INTERNATIONAL RELATIONS

- ❑ Hasina opens Padma multipurpose bridge

ECONOMY

- ❑ What is a black swan event?
- ❑ PM inaugurates 'Vanija Bhawan' and launches NIRYAT portal
- ❑ National Conference on Millets on the theme 'The Future Super Food for India'

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- ❑ Four new corals recorded from Indian waters
- ❑ G-7 Launches Climate Club to Try and Avoid Green Trade Wars
- ❑ Understanding bird strikes and aviation safety

- ❑ Herbs dominate flowering plants in new Assam national park
- ❑ First patient of animal hospice in Wayanad sanctuary convalescing
- ❑ Kerala to have its own regional red list of birds
- ❑ Udaipur's 'bird village' to be declared wetland
- ❑ World's biggest bacterium found in Caribbean mangrove swamp
- ❑ New spider from Thar Desert named after Malayali arachnologist
- ❑ India's striped hyenas
- ❑ A Rare Dragonfly spotted in Kerala

SCIENCE & TECHNOLOGY

- ❑ WHO considers declaring monkey pox a global health emergency
- ❑ Iskander-M missile system
- ❑ Typhoid: S. Typhi is more drug-resistant
- ❑ Stunning close-up of Mercury captured by European-Japanese BepiColombo
- ❑ New class of stellar system called 'blue blobs' found: Research
- ❑ Udhampur gets earthquake observatory

GS SCORE

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— **Disclaimer** —

The current affairs articles are segregated from prelims and mains perspective, such separation is maintained in terms of structure of articles. Mains articles have more focus on analysis and prelims articles have more focus on facts.

However, this doesn't mean that Mains articles don't cover facts and PT articles can't have analysis. You are suggested to read all of them for all stages of examination.

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SECTION: A
(MAINS)

CURRENT AFFAIRS

G7 SUMMIT: UKRAINE CRISIS AND MAJOR TAKEAWAYS FOR INDIA

CONTEXT

Prime Minister Narendra Modi, invited by Olaf Scholz, Chancellor of Germany, participated in the G7 Summit meeting in Germany. The summit is being hosted by Germany in its capacity as the chair of G7.

- Germany has held the G7 presidency from 1 January and will continue till 31 December 2022.
- Its choice of the guest countries was a recognition of the importance of democracies sticking together, no matter whether they also talk to Russia and China in a parallel way.

◎ BACKGROUND

- The G7 summit is held in the shadow of the continuing Ukraine war, with no end in sight.
- There were determined agenda items on which India made its contribution.
- These included issues of environment, energy, climate, food security, health, gender equality, and democracy.

What is G7?

- The Group of Seven (G7) is an inter-governmental political grouping consisting of Canada, France, Germany, Italy, Japan, the UK and the US.

Key takeaways from the summit

- **Climate change:** G7 nations are moving closer on their climate strategies, but differences over key details will prevent more concerted action for now.
- **Building back better and greener:** G7 countries will channel more international development finance into infrastructure and climate change projects, but they refused to label the initiative as a direct rival to China's Belt and Road Initiative (BRI).
- **Shifting approach towards China:** The G7 conference official communiqué directly mentioned competition with China for the first time—a notable shift from previous summits, although countries differ in their approach.
- **Global Covid-19 vaccine rollout:** G7 countries are ramping up their vaccine diplomacy efforts; however, the implementation of pledges will remain to be seen, and G7 states have lost the public relations battle to China and Russia.
- **Global tax agreement remains elusive:** Leaders endorsed the 15% global minimum corporate tax plan, but major obstacles to its implementation remain.
- One important takeaway is India's inclusion in the **Just Energy Transition Partnership**.

- ▶ This was initiated with South Africa at COP26, as a long-term ambitious approach to support transition to a low carbon, climate resilient economy.

- US has announced to lead **the Partnership for Global Infrastructure and Investment**.

- ▶ This PGII intends to cover the infrastructure gap in developing countries and strengthen global economic and supply chains and thus contribute to the security among the friends of the US.

Other major outcomes included the

- Global Alliance on Food Security
- Climate Club
- a \$600 billion Partnership for Global Infrastructure and Investment

Why G7 assumes significance for India?

- **An influential grouping:** The G7 is not just seven rich countries, but a group of more than 30 Western nations. The European Union as a whole also participates in all meetings.
- **Big numbers:** G-7 members comprising Canada, France, Germany, Italy, Japan, UK and the US currently represent close to 45% of the global GDP and more than 10% of the world's population.
- **Solution for global challenges:** In addition to addressing economic issues, the G-7 has become a forum for consultation where common grounds are being found for major global challenges.
 - ▶ The G-7 has taken some important decisions with regard to global food security, supply chain resilience, digital and net zero transitions.

Why India assumes significance for G7?

- **Strong figure:** India has very strong economic and strategic ties with major economies.
- **Beneficial investment point:** As the Indian economy is likely to be one of the fastest growing economies in the post-pandemic phase,

partnership with India is attractive for the West.

- **Attractive investments:** For its sustainable modernisation and energy transition, India is keen to attract investment, technology, and green finance from G7 nations.

To overcome challenges from Russia and China:

The G7 relations with Russia are bad, and tensions with China have grown. The main focus of **NATO's Madrid summit** which is taking place immediately after the G7 meeting is the direct security threat from Moscow, and challenges posed by China.

- ▶ In these circumstances, strengthening partnership with New Delhi is useful for the G7.
- **To meet global targets:** Moreover, major global targets related to green transition and Sustainable Development Goals cannot be met without robust and equitable Indian economic growth.

- **Potential:** India has the potential to scale up new emerging technologies, bringing costs down, and making it affordable to other developing countries.

- **India is an active participant in plurilateral groupings like the Quad, I2U2, and BRICS,**

- **Other strengths** of the Indian economy:

- ▶ Ambitious climate target and performance
- ▶ Contribution to global food security

◎ CONCLUSION

In this scenario, G7 summit and invitation to India is a welcome development. G-7 summit is an opportunity to expand the global dimension of India's growing partnerships with the US and the West.

STATUS OF STATISTICS IN INDIA

CONTEXT

June 29, is National Statistics Day, in recognition of the contributions made by Prof. P.C Mahalanobis, the 'Plan Man' of India.

- Given the emerging importance of 'data' in today's world, it is important to analyse the status of 'statistics' in the country.

◎ BACKGROUND (HISTORICAL)

• Before Independence (statistical thinking in ancient times)

- **Mahabharata:** In India, statistical knowledge and probabilistic ideas were attributed to the kings and rulers mentioned in the great Indian epic, the **Mahabharata**.
- **Mauryan period:** During the **Mauryan period**, they had a **detailed description of the system of data** collection relating to agricultural, population and economic censuses in villages and towns during the period.
- **Mughal period:** The tradition of collecting data in detail continued during the period of Mughal emperor Akbar around 1590 A.D.
 - The **Ain-i-Akbari** written by **Abul Fazal** during 1596-1597 A.D. has the best compilation of that period containing a wealth of information.
 - This had details of several government departments including the system of legalized measurements, land classification and crop yields and other information.
 - Abul Fazal was "**regarded as a statistician**".
- **British India:** Later, it was developed during the British Raj. In the first phase, statistics were used for Famine data collection and for several data collection on land.

• After Independence

- **P.C Mahalanobis** was appointed as **honorary Statistical Adviser** to the Indian Cabinet in 1949.
 - A **Central Statistical Unit** was set up in the Cabinet Secretariat in 1949 under his technical guidance.
- A couple of years later the **Central Statistical Organisation (CSO)** were formed in 1951 to coordinate the statistical activities in independent India.

Why statistics matter?

The meaning

Statistics is a mathematical science involving the collection, analysis, and interpretation of data, as well as the effective communication and presentation of results relying on data.

- **Good governance:** Statistics plays a key role in planning, monitoring and evaluation of socio-economic policies and improving governance.
- **Better policy formulation:** Local level statistics have immense significance for understanding the socio-economic reality and thereby appropriate policy formulation.
- **Science:** The concepts in statistics are the building blocks of the techniques and tools.
- **Economic development:** Statistics help identify needs, set goals, and monitor progress. Without good statistics, the development progress is blind: policy makers cannot learn from their mistakes, the public cannot hold them accountable.
- **Other use**
 - evidence-based policy making
 - planning, progress monitoring and evaluation of development activities
 - global monitoring
 - reliable, up to date and easily accessible database

Advantages of the statistics as a discipline

- **Easy presentation:** The bulk data can be presented in a precise and definite form.

Loopholes of statistics

- **Misuse:** The statistical data can lead to misuse.


Analysis

- | | |
|--|---|
| <ul style="list-style-type: none"> • Easy conclusion: The comparison and conclusions of data becomes easy. • Effective forecasting: Forecasting the trends becomes easy with statistics. | <ul style="list-style-type: none"> • Errors: There are chances of errors becomes easy when the statistical methods are not done by the experts. • Need of uniform data: For the comparison of the data, the data should be homogeneous and uniform. |
|--|---|

Assessing P.C Mahalanobis's contributions towards Statistics

- **As Initiator:** Mahalanobis was introduced to the subject of statistics by his tutor, the **Nobel Prize-winning physicist C.T.R. Wilson**.
 - In 1931, Mahalanobis founded **Indian Statistical Institute (ISI)**, which was the first institute of its kind anywhere in the world devoted mainly to the study of statistics.
 - He also established the **National Sample Survey Office (NSSO)** in 1950
- **As explorer:** The meeting of Mahalanobis and director of zoological survey resulted in the first paper (Mahalanobis, 1922) relating to the **statistical analysis of Anglo-Indian stature**.
 - He continued to work on the anthropological data (Mahalanobis, 1925, 1930, 1931, 1936) and built up new methodologies for classifying or distinguishing populations characterized by such measurements.
 - The famous **Mahalanobis D2** emerged in course of this work.
- Mahalanobis was perhaps the first person to organise and carry out an objectively defined large scale survey covering the whole of Bengal (about 59000 square miles) in 1941.
- This scheme was designed to estimate the yield of jute crop and acreage under jute in Bengal.
- **As Founder of discipline:** At Mahalanobis's initiative, the first post graduate course in Statistics was introduced at Calcutta University in 1941.
 - The first batch of students included **C.R. Rao**, who influenced the growth of the ISI more than anyone else except Mahalanobis and, along with Mahalanobis, is the most famous statistician to come out of the Indian subcontinent.

Scientist & applied statistician **Prasanta Chandra Mahalanobis** was born on this day, in 1893



FATHER OF INDIAN STATISTICS

Established the **Indian Statistical Institute** in Kolkata and **Central Statistical Organization** to coordinate statistical activities in the country

Devised **Mahalanobis Distance** — a very useful statistical measure of comparison between two data sets

In 1949, was appointed as **honorary statistical advisor to the Government of India**

Was instrumental in formulating India's strategy for industrialisation in the **Second Five-Year Plan (1956-61)**

His birthday is celebrated as **National Statistics Day**

Notable awards include **Padma Vibhushan (1968)**, **Officer of the Order of the British Empire (1942)**, **Fellow of the Royal Society**

TOI

About National Sample Survey Office (NSO)

- The National Sample Survey Office used to work under the **Ministry of Statistics** of the Indian government until May 2019.
- On 23rd May 2019, the Indian government passed the order to merge the NSSO with the **Central Statistics Office (CSO)** to form the **National Statistical Office (NSO)**.
- The Government stated that the NSO will be headed by the **Ministry of Statistics and Programme Implementation (MOSPI)**.
- **Its activities include:**
 - National Account Statistics (NAS)
 - Conduct of Annual Survey of Industries (ASI), Economic Censuses and its follow up surveys
 - Index of Industrial Production Compilation, as well as Consumer Price Indices for Urban Non-Manual Employees. (Read about Index of Industrial Production (IIP) from the linked article.)

- Human Development Statistics
- Gender Statistics
- Imparting training in Official Statistics
- Five Year Plan work relating to the Development of Statistics in the States and Union Territories
- Broadcasting statistical information, energy, construction, and environment statistics, work relating to trade revision of National Industrial Classification, etc.

Future prospects of the discipline

- **Career Opportunities:** Statistics is listed among the Bureau of Labour Statistics' fastest growing careers in 2018 and it's predicted to grow 33 per cent by 2026.
- **In modern Development:** Statistics is indispensable in this modern age aptly termed as "the age of planning".
- **Economic Development:** Business executives are relying more and more on statistical techniques for studying the preference of the customers.

JUVENILE JUSTICE AMENDMENT ACT MAY BACKFIRE

CONTEXT

State Commissions for the Protection of Child Rights in Delhi, Punjab, Chandigarh, Rajasthan and West Bengal have publicly spoken out against the 2021 JJ Act amendment and have even flagged it to the Union government.

◎ BACKGROUND

- The JJ Act was introduced and passed in Parliament in 2015 to replace the **Juvenile Delinquency Law and the Juvenile Justice (Care and Protection of Children Act) 2000**.
- This provision received impetus after the 2012 Delhi gang rape in which one of the accused was just short of 18 years, and was therefore tried as a juvenile.
- The JJ Act, 2015, was amended in 2021 to introduce multiple changes. It has received Presidential assent and has been notified as well.
 - However, its implementation has still not been ordered.

◎ ANALYSIS

How has the Act evolved?

- **Year 2000**
- The Juvenile Justice (JJ) system is based on principles of promoting, protecting and safeguarding the rights of children.
- It was enacted by the Indian Parliament in 1986.
- In the year 2000, the Act was comprehensively revised based on the
 - United Nations Convention on the Rights of the Child (CRC), which India had ratified in 1992
 - the Beijing Rules
 - the United Rules for the Protection of Juveniles Deprived of their Liberty; and all other national and international instruments
- The Act clearly defined children as persons up to the age of 18 years (Section 2 (k) of the Act defines "child" as a person who has not completed eighteen years of age.)
 - The Act is based on the provisions of Indian Constitution and the four broad rights defined by the UN CRC:
 - Right to Survival
 - Right to Protection

- Right to Development
- Right to Participation

• Year 2015

- The **JJ Act, 2015** combined and amended the law associated to children who are positively asserted and found in conflict with the law and the child needs to provide care and security.

Recent amendments to the JJ Act, 2015:

- **Adoption:** Under the Act, once prospective adoptive parents accept a child, an adoption agency files an application in a civil court to obtain the adoption order. The adoption order issued by the court establishes that the child belongs to the adoptive parents.
 - The amendment provides that instead of the court, the district magistrate (including additional district magistrate) will perform these duties and issue all such orders.
- **Appeals:** The 2015 Act provides that there will be no appeal for any order made by a Child Welfare Committee concluding that a person is not a child in need of care and protection.
 - The amendment removes this provision.
- **Serious offences:** The Act provides that the Juvenile Justice Board will inquire about a child who is accused of a serious offence.
 - The amendment adds that serious offences will also include offences for which maximum punishment is imprisonment of more than seven years, and minimum punishment is not prescribed or is less than seven years.
- **Offences against children:** The Act provides that an offence under the Act, which is punishable with imprisonment between three to seven years, will be cognizable (where arrest is allowed without warrant) and non-bailable.
 - The amendment provides that such offences will be non-cognizable and non-bailable.

Serious offences are those for which the punishment is imprisonment between three to seven years.

What important bodies are pointing out at the amendments?

- **Preventing police from making arrest:** The child rights bodies pointed out an amendment in **Section 86 (2) of the JJ Act, 2015**, which changed the nature of certain serious crimes from "cognisable" to "non-cognisable".
 - ▶ The crucial amendment will prevent the police from arresting the accused without a warrant and start an investigation without the permission of the court.
- **Violates India's international obligation:** The commissions also argued that the amendment to the 2015 Act violates India's international obligation for being a signatory in **United Nations Convention on the Rights of the Child** or even the progressive spirit of the JJ Act, 2015.

What is claimed by the government?

- The Union government had claimed that it had **reclassified the crimes** in the amended act to shield children from arrest without warrant in such cases.

Facts:

- Data from the **National Crime Records Bureau (NCRB)** shows that since it started recording these crimes in 2017, they had risen by over 700% by 2019.
- The NCRB in 2017 recorded 278 cases of crimes committed by CCI in-charges across India involving 328 child victims.
- These cases rose to 1,968 by 2019, involving as many as 2,699 child victims.

◎ WAY FORWARD

Government should constitute a panel taking members from different stakeholders to examine and scrutinize all the details of the act once again from alpha to omega. Also the government should take the state commissions, child activists, civil societies, and people at large, in confidence and ensure that their apprehensions are taken care of.

POLITICAL INCLUSION OF TRIBES

CONTEXT

Droupadi Murmu, former Jharkhand Governor, has been nominated for President Election candidature.

- Belong to 'Santhal Tribal community' she is going to be the first Tribal women to hold such a higher position in politics of India.

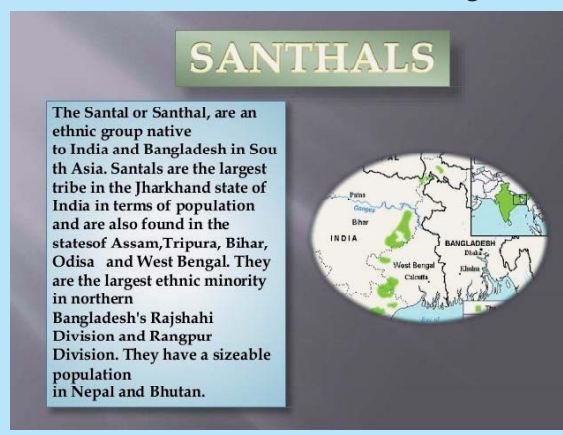
◎ BACKGROUND

- Tribal communities, outside the Northeast, generally have lower levels of literacy.
- But the Santhals have higher – a result of pro-school education awareness since at least the 1960s – literacy rate compared to other tribes in Odisha, Jharkhand and West Bengal.
- Many of the community have entered the creamy layer of Indian society.
- For example, Jharkhand **CM Hemant Soren is a Santhal**.
- The incumbent Comptroller and Auditor General of India (CAGI) Girsh Chandra Murmu, who was the first Lt Governor of the UT of Jammu and Kashmir, also belong to Santhal community.

◎ ABOUT

Santhal Tribes

- Santhal, also spelt as Santal, literally means a calm, peaceful man. Santha means calm, and ala means man in the Santhali (also spelt as Santali) language.
- Santhals are the third largest Scheduled Tribe community in India after **Gonds and Bhils**.
- The Santhali population is mostly distributed in **Jharkhand, Odisha and West Bengal**.



- The Santhals were a nomadic stock before they chose to settle in the Chotanagpur plateau.
- By the end of the 18th century, they had concentrated in the Santhal Parganas of Jharkhand (earlier Bihar).

Cultural features of Santhals

• Religion:

- ▶ They are nature worshippers and could be seen paying obeisance at Jaher (sacred groves) in their villages.
- ▶ River Damodar holds a special place in the religious life cycle of a Santhal.
- ▶ Their traditional dress includes dhoti and gamuchha for men and a short-check saree, usually blue and green, for women, who generally put on tattoos.

Society:

- ▶ Various forms of marriage are accepted in the Santhal society – including elopement, widow remarriage, levirate, forced (rare) and the one in which a man is made to marry the woman he has impregnated.
- ▶ Divorce is not a taboo in the Santhal society. Either of the couple could divorce the other.

Art forms:

- Santhals are fond of their folk song and dance that they perform at all community events and celebrations.
- They play musical instruments like kamak, dhol, sarangi and flutes.
- Most Santhals are agriculturists, depending on their farmlands or forests.
- Their homes, **called Olah**, have a particular three-colour pattern on the outer walls.
- The bottom portion is painted with black soil, the middle with white and the upper with red.

◎ ANALYSIS

Why tribals are considered vulnerable section in the society?

- Tribal communities are often identified by some **specific signs such as**;
 - Primitive traits
 - Distinctive culture
 - Geographical isolation
 - Shyness to contact with the community at large
 - Backwardness
- Though their vulnerability is defined by **several factors**;
 - Dependency on hunting and gathering for food
 - Having pre-agriculture level of technology
 - Zero or negative growth of population
 - Extremely low level of literacy
- These groups are called **Particularly Vulnerable Tribal Groups**.

Issues faced by tribal population

- The tribal communities have not received the full benefits of development processes undertaken over the **past six decades**.
- Plus, they are adversely affected by the developmental projects undertaken during this period.
- While tribes have a distinct culture and history, they also share commonalities with other marginalised sections of Indian society, such as the
 - lack of adequate political representation
 - economic deprivation
 - cultural discrimination

How tribal leadership can help India?

- **Leaders of the tribal middle class**: They are connected to the global indigenous people's network. They are a little more vocal about issues of land, water and forest, but are hardly involved in any sustained movement.
- **The grassroots leaders**: They know the issues better than anybody.
- **Economic growth**: The leader will help them to acquire proper job opportunities and their inclusion in main stream society, which can help them to generate revenue for their survival.
- **Add to Heritage of India**: Many local art forms and practices which are indigenous to Tribal living

in secluded forests are unknown to common people, which are beneficial for ancient medicinal knowledge and other techniques.

Xaxa Committee report

- Accordingly, the Prime Minister's Office constituted a High-Level Committee (HLC) in 2013, under chairmanship of **Prof. Virginius Xaxa**.
- The Committee was mandated to examine the socio-economic, educational and health status of tribal communities and recommend appropriate interventional measures to improve the same. **It submitted report in May, 2014.**
- The **five critical issues**: Livelihood and employment, Education, Health, Involuntary displacement and migration, and Legal and constitutional matters have been studied by **Xaxa Committee**.
- In one of the discourses, the overall condition of tribal people, including their poverty, is attributed to **their social and geographical isolation**.
- **Verrier Elwin** attributed their deplorable and impoverished condition to their contact with the outside world, which had led to indebtedness and loss of control over their land and forests. **(Verrier Elwin (1902 – 1964) was a British self-trained anthropologist, ethnologist and tribal activist.)**

◎ WAY FORWARD

- **Improving Health related concerns**: Health is the foremost aspect to be taken care for tribals and making them aware of the diseases evolving **such as COVID19**.
- **Making primary education accessible to them in local language**: Lack of Education makes them deprive to higher political positions and better livelihood conditions in general.
 - Accessibility of education in their language will make easy for them to understand the concepts clearly.
 - Even they can relate to the studies better.
- **Awareness drives about Political rights**: Political rights of tribals are unreached to them even after 75 years of Independence due to the lack of awareness among them about their rights.
 - By **Conducting rallies and community meetings** can help to make them more aware.

MAHARASHTRA POLITICAL CRISIS AND GOVERNOR'S CRUCIAL ROLE

CONTEXT

As the Maharashtra political crisis continues to play out, the Governor's powers under the Constitution to call for a floor test takes Centre stage.

◎ BACKGROUND

- Defection by legislators occurs in many democracies.
- They can undermine the stability of the government, which is dependent on the support of the majority party's own elected legislators and/or a coalition of those elected to represent other parties.
- Prior to the introduction of the anti-defection law, both the central Government of India and the governments of some of its states and territories had experienced instances of perceived instability resulting from legislators changing their political allegiance.
- In 1985, the **Tenth Schedule of the 52nd amendment** to the Constitution of India was passed by the Parliament of India to achieve this.
- Following recommendations from many constitutional bodies, Parliament in 2003 passed the **Ninety-first Amendment** to the Constitution of India.
- The **anti-defection law** punishes individual **Members of Parliament (MPs)/MLAs** for leaving one party for another.

◎ ANALYSIS

What is Anti-defection Law?

- The anti-defection law punishes individual **Members of Parliament (MPs)/MLAs** for leaving one party for another.
- It sets the provisions for disqualification of elected members on the grounds of defection to another political party.
- Provisions:** The members disqualified under the law can stand for elections from any political party for a seat in the same House.
 - The decisions on questions as to disqualification on ground of defection are referred to the Chairman or the Speaker of such House, which is subject to 'Judicial review'.
 - However, the law does not provide a timeframe within which the presiding officer has to decide a defection case.

Can the Governor dissolve the State Assembly?

- Cabinet of a government with doubtful majority cannot recommend dissolution of House; Supreme Court has ruled that floor test is the best way to test majority.
- The Governor can use his **discretionary power** and may choose not to dissolve the Assembly — even if Chief Minister seeks the same — if she is convinced that the council of ministers, in whose name the recommendation is made, does not enjoy the confidence of the House
- In Madhya Pradesh, the then CM had recommended the dissolution after the defection of two dozen-odd MLAs, but the Governor called for a floor test instead.

What is a floor test?

A floor test is a **legislative procedure** through which an incumbent government that is suspected to have lost majority is required to prove it still retains the confidence of the House.

The procedure:

- The whole idea of floor test is incorporated in the Constitution of India to ensure transparency in the constitutional process.
- The voting takes place in the Legislative Assembly or the Lok Sabha at the central level.
- When a floor test is called for in the assembly of a state, the Chief Minister will move a **vote of confidence** and prove that he has the majority support.
 - A confidence motion or a vote of confidence or a trust vote is sought by the government in power on the floor of the House.
 - A trust vote or confidence motion has to be moved by an MLA or an MP, and the objective is to find out whether the chief minister has the 'trust' or 'confidence' of the House.
- If the floor test fails, the CM needs to give his/her resignation.

What does constitution say?

- **Article 163: Council of Ministers to aid and advice Governor:** There shall be a Council of Ministers with the Chief Minister at the head to aid and advise the Governor in the exercise of his functions, except in so far as he is by or under this Constitution required to exercise his functions or any of them in his discretion
- **Article 174(2) (b):** gives powers to the Governor to dissolve the Assembly on the aid and advice of the cabinet.
 - ▶ However, the Governor can apply his mind when the advice comes from a Chief Minister whose majority could be in doubt.
- Under **Article 175(2)**, the Governor can summon the House and call for a floor test to prove whether the government has the numbers.
- If the Assembly is in session, then the Speaker can call for the floor test. If the Assembly is not in session, then the Governor can allow the Speaker to call for a floor test under his residuary powers under Article 163.

Related Apex court verdict:

- In 2020, the Supreme Court, in Shivraj Singh Chouhan & Ors versus Speaker, Madhya Pradesh Legislative Assembly & Ors, upheld the powers of the Speaker to call for a floor test if there is a prima facie view that the government has lost its majority.
 - ▶ "The Governor is not denuded of the power to order a floor test where on the basis of the material available to the Governor it becomes evident that the issue as to whether the government commands the confidence of the House requires to be assessed on the basis of a floor test,"

- In the landmark S.R. Bommai case, the Supreme Court ruled that the refusal of the Chief Minister to undergo the floor test will be considered as the Government losing the faith of its own legislature.
- In the 2019 Pratap Gowda Patil vs State of Karnataka case, the top court ruled that the rebel MLAs have the right to skip the floor test voting process in the House.

What are the issues with Anti Defection Law?

- **Undermining Representative & Parliamentary Democracy:** Due to Anti-Defection law, the chain of accountability has been broken by making legislators accountable primarily to the political party.
- **Controversial Role of Speaker:** There is no clarity in the law about the timeframe for the action of the House Chairperson or Speaker in the anti-defection cases.
- **Promote Horse Trading:** Defection also promotes horse-trading of legislators which clearly go against the mandate of a democratic setup.
- **Subversion of Electoral Mandates:**
- **Affects the Normal Functioning of Government:**
- **Allows only Wholesale Defection:**

◎ CONCLUSION

The role of governor is indispensable for the successful working of the constitutional democracy. He must refrain from aligning himself to any political ideology. The virtue of impartiality must be withheld to ensure a free and fair election in a democracy.

ELECTION COMMISSION DELETES 111 'NON-EXISTENT' POLITICAL PARTIES FROM LIST

CONTEXT

The Election Commission of India has ordered the deletion of 111 registered unrecognized political parties as it found to be “non-existent” and referred three of the parties to the Department of Revenue for legal action for “serious financial impropriety”

◎ BACKGROUND

- There are **2,796 Registered Unrecognized Political Parties (RUPPs)**, according to EC's data till September 2021.
- The number of registered unrecognized political parties has increased two-fold from 2010 to 2019, according to a report by **Association for Democratic Reforms (ADR)**.
- Till September 2021, as many as 2,796 RUPPs were listed, which was an increase of over 300% since 2001.

◎ ANALYSIS

What are registered unrecognized political parties (RUPPs)?

- RUPPs are the newly registered parties or those which have not secured enough percentage of votes in the assembly or general elections to become a state party, or those which have never contested elections since being registered are considered unrecognized parties.

Conditions for recognition as a national party: Constitutional Provisions

A political party shall be treated as a **national party** if it fulfills any of the following conditions:

- Secure **at least 6 per cent of votes** polled in **four or more states** in the Lok Sabha or Assembly elections, and, in addition, it has at least four members in the Lok Sabha.
- It also has to have **at least 2 per cent** of the total Lok Sabha seats and its candidates come from **not less than three states**.
- It is recognized as a **state party** in at least **four states**.

Need to Un-register these parties

The Election Commission of India issued guidelines on '**Transparency and Accountability in party funds and election expenditure – submission of reports by un-recognized political parties**' which were applicable to all political parties w.e.f 1st October, 2014.

As per these guidelines:

- All unrecognized parties are required to submit their requisite reports in the office of the respective state Chief Election Officers (CEOs).
- Scanned copies of annual audited accounts, contribution reports and statements of election expenditure shall be uploaded on the websites of CEOs of the respective-states, within three days of receipt of the same for viewing by the public.

◎ FINDINGS:

- Increased Number:
 - There are 2,360 political parties registered with the Election Commission of India and 97.50% of them are unrecognized.
 - From 1,112 registered unrecognized parties in 2010, the number has increased to 2,301 in 2019.
- Donation to these Parties:** The contribution reports of only 78 or 3.39% of the total 2,301 registered unrecognized parties are available in the public domain for Financial Year (FY) 2018-19.

How the move will be beneficial?

- It will encourage the political parties to become more responsible and transparent.
- Government will also be motivated to focus on enumerating proper guidelines for political parties to adhere to
- Will allow the citizens to make better choices in elections
- It will act as one step forward in the direction to keep political parties under the purview of RTI.

◎ CONCLUSION

Transparency and trust is the hallmark of electoral democracy. Political parties are one of the most important stakeholders in the election process. They themselves should focus on their functioning and conduct because that will become the blue print for their voters to vote for them during elections.

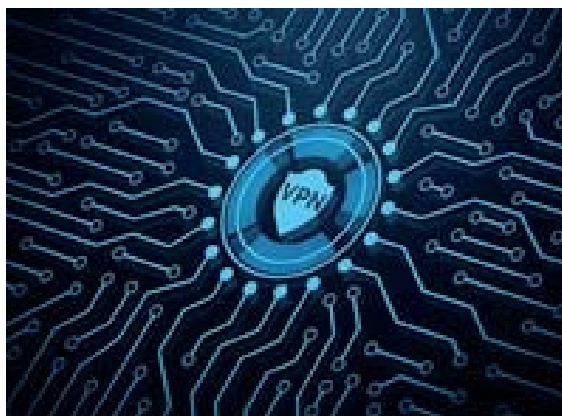
NEW VPN RULES AND ITS IMPACT

CONTEXT

India's cyber security watchdog Computer Emergency Response Team (CERT-In) had issued a new set of rules for the VPN companies to store personal data of the users.

◎ BACKGROUND

- In the era of globalized, liberalized and interconnectivity, internet plays the central role.
- Emergence of new age technologies, like, Artificial Intelligence, Internet of Things, Machine Learning and cloud computing etc, usage of cyber space and internet have increased.



- Recent pandemic and worldwide lockdown has increased the usage and importance of internet in various fields.
- Amidst strong pushback from various concerns, central government had told the companies to either comply with the rules or exit from India.

◎ ANALYSIS

What is VPN?

- **Virtual Private Network (VPN)**, a service that allows users to surf the internet anonymously by preventing the IP address from being tracked by websites, law enforcement agencies, cybercriminals and others.
- Every time a user connects to a VPN, an intermediary is created between the user's device and the destination website.
- Corporate employees are the most frequent VPN users, mainly for securely accessing company networks.

What are the major purposes for using VPN?

- **Secure encryption:** A VPN connection hides the traffic of your data online and protects it from external access. Unencrypted data can be viewed by anyone who has access to the network and wants to see it. With VPN, cyber criminals cannot clear this data.
- **Hiding where you are:** VPN servers actually act as your proxy on the Internet. Because human location data comes from a server in another country, your location cannot be determined.
- **Data privacy is managed:** Most VPN services do not keep logs for your activities. Some providers, on the other hand, record your behaviour, but do not transmit this information to other people. This means that any potential record of your user behaviour is kept permanently hidden.
- **Regional content access:** Regional web content is not always available everywhere. Services and websites often contain content that can be accessed only in certain parts of the world.
- **Protect data transfer:** If you work remotely, you may need to access important files in your company network. For security reasons, this type of information requires a secure connection. To gain network access, a VPN connection is usually required.

What are the new sets of rules?

- VPN companies are advised to store the personal information of the users, like, **name, email-id, phone number and IP address** for a period of 5 years.
- Apart from VPN companies, new sets of rules have also mandated data centres, virtual service network providers and cloud service providers to record and maintain similar data in the form of KYC.
- Virtual asset service providers, virtual asset exchange providers and custodian wallet providers have the obligations to record same set of data for the same period of time along with financial transactional records.

What is the rationale behind the step?

- **Secured cyber space:** In order to enhance the cyber security posture and ensure safe and trusted internet in the country government has initialized the new sets of rule.
- **Investigative purpose:** CERT-In, watchdog for the cyber-attacks has observed that non-availability of data hampers analysis and investigation.
- **Internal security:** Cyber space and internet usage are prone to cyber-attacks, threats and abuse. Cyber-space with VPN provides a safer platform to the extremist and terrorist organisations, creating a potential threat to the security of the nation.

How this will impact the users?

- **Privacy Concern:** Storing of data of the users breaches the privacy of the users, which is a fundamental right of every individual under article 21 of the Constitution of India.
- **Freedom of information and internet:** Right to freedom of information and internet are explicit right provided under the free speech and expression. New sets of rules curb the freedom of the individuals, impacting the ideals of democracy and modern political arena.

- **Misuse and potential abuse:** The stored information could be misused against the users. 'Broad' and 'overreaching' law opens the scope of potential abuse by cybercriminals and the states.
- Money laundering will be difficult.
- Bank fraud and scams will be reduced.

◎ CONCLUSION

India has over 270 million VPN users, about 20% of the country's population, who use them to access company networks securely, remain anonymous, access geo-restricted content, stay safe on public Wi-Fi networks, and get around internet curbs, among other things. In the age of internet and cyberspace it becomes essential part of the state to provide a safe and secured cyber space and have an upper hand on tackling the internal security instances. At the same time, it is also important to ensure the privacy and basic rights of the citizen, thus, there requires a proportionate balance between national security and privacy of the individuals.

OPEN SOURCE TECHNOLOGY

CONTEXT

Technological interventions in the governance structure can improve the efficiency of the policy implementation while ensuring accountability and transparency in the governance process.

◎ BACKGROUND

- In the changing demand of socio-political and socio-economical dynamics, there is a dire need for reforms in the governance structure to be more accountable and responsive.
- However, the recent pandemic had shown the flaws and gaps in the governance process while handling the emergency crisis.
- In this dire need and flaws in the governance structure, the emergence of new technologies is inevitable.
- New technology like open technology can push for significant governance reform, with the special characteristics of accountability, responsibility and answerability.



◎ ANALYSIS

What is meant by 'Openness' in technology?

- Openness of technology refers to free availability of the source code to every user or developer for usage, modification and redistribution.
- The concept of openness in technology involves two major pillars:
 - Digital Public Goods (DPGs)

► Digital Public Infrastructure (DPI)

- Both the pillars DPGs and DPIs are anchored in the idea of 'openness' and open source.
- These are accessible and available to anyone who wishes to use them, modify them or build upon it.

What are DPGs?

- Open-source software, open data, open AI models, open standards and open content that adhere to privacy and other applicable laws and best practices.
- It has the potential capacity to achieve Sustainable Development Goals (SDGs)
- DIVOC is one of the examples of Digital Public Goods used by India and other nations to provide vaccine certificates for COVID doses.

What are Digital Public Infrastructures (DPIs)?

- Open-source software, open data, open AI models, open standards and open content that adhere to privacy and other applicable laws and best practices,
- One example of DPI is OpenG2P, which digitized the cash transfer during the **West African Ebola Crisis**.

What are the benefits of open source technology that India can derive?



- **Free availability and accessibility:** As compared to proprietary software open source doesn't have any vendor lock-in, i.e., no fee is charged for the use and modification of the technology.
- **A community for developers:** Any successful project would have a thriving community of developers to build suitable target-oriented software open-source software provides the platform to the desired developers.
- **Secure software:** Open source technology and software are vulnerable to the security breach, when such vulnerability is reported the team of developers gets the upper hand to resolve the issue, which makes it more secure and safe.
- **Governance structure:** Digital Public Goods and Digital Public infrastructure along with community engagement has the potential to democratize the governance structure of the nation. More accountable and responsive governance.
- **Networked health care:** Open source technology can bring a revolution in the health care sector in a geographically diversified country like India. Accessible and affordable healthcare services can be enabled for every citizen.
- **Quality education:** Emerging digital education can be fostered by open source technology.
- **Service ecosystem:** India is one of the largest service sector exporters in the world, availability of open source technology will help the Indian companies to hire developers and make their service route safer, secure and target-oriented.
- **Digitization of payment:** Open source technology has the potential capacity to be used in the digital India mission and make the payment system cashless.

Comparison

Open source	Proprietary Software
Advantages: <ul style="list-style-type: none"> • Source code available, modifiable • Redistribute solutions • Diversified usage rights 	Advantages: <ul style="list-style-type: none"> • Predictable releases • Entity to hold responsible for bugs, errors and updates • Consistent feature development

<ul style="list-style-type: none"> • Elimination of single point failure • Democratic forum for action • No vendor lock-in 	<ul style="list-style-type: none"> • More stable framework • More consistent training option • Easier access to support
Disadvantages: <ul style="list-style-type: none"> • No guarantee of consistent development • Intellectual property issue • Support consistency 	Disadvantages: <ul style="list-style-type: none"> • Higher start-up costs • Single company releasing patches • Vendor owns software

What are the major steps that need to be taken to implement the technological reform?

- **Moving from words to action:** To implement the process of Open source technology, accessible and affordable internet service plays a crucial role. The policy framers at the national and sub-national levels need to bridge the gap of the digital divide and penetrate the use of open source technology.
- **Building deeper country capacity:** Policy framers should focus on building up the infrastructure and frameworks for secure cyberspace to support the growth and penetration of open source technology and software.
- **Leave no one behind:** The objective of the implementation plan needs to be inclusive and democratic, which involves people's participation and development for all.

◎ CONCLUSION

Open source approaches to technologies can help the government more efficiently develop a tailored solution to big and urgent challenges. Implementing GPGs to leverage DPIs can provide crucial interventions for emergencies and development. DPGs and DPIs when combined with community engagement can make the governance structure more transparent and accountable. Some major challenges lie ahead in the implementation process of the technology which needs to be catered to achieve the Sustainable Development Goals' 2030.

INCREASING TOURISM INDUCED DISASTER IN HIMALAYAS

CONTEXT

There is a need to pre-empt the disastrous effects of unregulated tourism and learn lessons from the over-exploited tourist destinations in the Himalayan region, highlighted in a report published named- 'Environmental assessment of tourism in the Indian Himalayan region'.

◎ BACKGROUND

- The Himalayas are ecologically fragile and economically underdeveloped, with geo-environmental constraints imposing severe limitations on the level of resource productivity.
- Consequently, **subsistence agriculture** constitutes the main source of livelihood in the region.
- The **rapid growth of tourists** in the region has brought about extensive land-use changes in the region, mainly through the extension of cultivation and large-scale deforestation.
- This irrational land transformation process has not only disrupted the ecological balance of the Himalayan watersheds through reduced groundwater recharge, increased run-off and soil erosion, but has also adversely affected the ecology and economy of the adjoining Indo-Gangetic plains by recurrent floods and decreased irrigation potential.

The Himalayas

The Himalayas span five countries: **Bhutan, India, Nepal, China and Pakistan.**

It covers 2,500 km running west-northwest to east-southeast in an arc.

The Himalayan range is bordered

- on the northwest by the **Karakoram** and the **Hindu Kush ranges**
- on the north by the **Tibetan Plateau**
- on the south by the **Indo-Gangetic Plain**
 - Some of the world's major rivers, the Indus, the Ganges, and the Tsangpo–Brahmaputra, rise in the vicinity of the Himalayas, and their combined drainage basin is home to some 600 million people with 53 million people living in the Himalayan regions.

The Himalayan mountain ranges contain 60,000 km² of ice – storing more water than only the Arctic and Antarctic.



◎ ANALYSIS

Key Highlights of the Report

- There is a need to scrutinize the disastrous effects of unregulated tourism and learn lessons from the over-exploited tourist destinations in the Himalayan region.
- The demand for tourism has increased pressure on hill stations. It is becoming a major concern for change in land use and land cover.

Tourism Potential of India

- India ranks 15th in the world in terms of **International Tourism Receipts**, with a share of 1.62%. India registered 8.03 million foreign tourist arrivals in 2015, an annual growth of 4.5% over the previous year.
- It is the **third highest foreign exchange earner**, after gems, jewellery, and garments (Economic Survey of India, 2018).
- India aims to create **100 million jobs** through tourism and attract 40 million foreign tourists annually in the next five years.
 - At present, 14.4 million international tourists visit India annually.
- However due to environmental fragility (e.g. ban on green felling) tourism is not necessarily an investment friendly aspect.

Why Himalayan region is susceptible to disasters?

The Hindu Kush Himalayan region is prone to numerous types of disasters because of its

- Steep terrain
- fragile geology
- intense and variable precipitation
- Common incidents of floods and landslides
- neo-tectonic mountain-building process, like earthquakes, landslides, floods, etc
- **Other factors**
 - **Overexploitation of the ecosystem** (tourism, increased consumerism)
 - **Exploitative development projects:** The indiscriminate exploitation of the fragile Himalayan region in the name of development projects has extracted a heavy price in terms of environmental damage.
 - **Fragmentation of natural resources:** String of hydroelectric and road projects in the Himalayan States have already resulted in the fragmentation of natural systems.

Recent events

The 2012 floods in the **Seti River** in Pokhara, Nepal.

The **Uttarakhand flood of 2013**, torrential rains caused landslides and floods.

The **Chorabari Lake** outburst and debris flow

The tragic **Chamoli flash flood**, 2021

Impacts of Unregulated Tourism in Himalayas

The negative environmental impacts of tourism are substantial. They include:

- **Floods, landslides and forest fires**
- **Leads to overuse of water:** Example is Ladakh, an area with water deficiency. It is mostly dependent on snow / glacial melt and flow of River Indus. Individual water consumption by a resident is **75 litres per day on an average**, whereas a tourist consumes about **100 l / day**.
- **Greenhouse gas emission:** Tourism contributes to more than 5 per cent of global greenhouse gas emissions, with transportation accounting for 90 per cent of this.
- **Changing land use pattern:** Tourism puts enormous stress on local land use, and can lead to soil erosion, increased pollution, natural habitat loss, and more pressure on endangered species.

- **Earthquakes:** Himalayan region comes under **Zone V of the earthquake** which indicates highest earthquake prone regions of India. Regardless of this, people continue to use these places adding to its vulnerability for disasters.
- **Floods:** Due to the presence of perennial river systems originating from glaciers in Himalayas, the region has high probability of floods. Rivers are in their youthful stage and makes turns through the valleys of the mountains.
 - Hence excessive tourism in the region will lead to more heat in hill region and more water start to melt and increases flow in the rivers leading to floods.
- **Biodiversity losses:** Indigenous as well as migrant species and birds are present in the Himalayan ecosystem which is one of India's most diverse and rich Biodiversity Hotspot on Earth.
 - With increasing Human interventions and practices with climate change we are making this heritage vague.

Sustainable tourism in Himalayas: Recommendations

DISASTER MANAGEMENT ARMS

Ministry of Home Affairs:

Nodal government agency to manage most natural disasters. NDMA comes under it. Every state has similar arrangements.

Ministry of Agriculture and Farmers Welfare: Manages natural hazards such as drought, hailstorm and pest attack.

National Crisis Management Committee: An apex body chaired by cabinet secretary, who coordinates with states.

FORECASTING

India Meteorological Department: Rainfall, cyclone, heat wave, fog, thunderstorm etc.

Geological Survey of India: Landslide

Central Water Commission: Flood

Source: MHA

12.6%

India's landmass prone to landslides

2,500

No. of people who die due to thunderstorms and lightning on average every year

59%

Accuracy of IMD's heavy monsoon rainfall forecasts, if issued 5 days in advance; the strike rate is **77%** for a prediction made 24 hours earlier

12

No. of battalions of NDRF; each has 1,150 personnel

Source: Geological Survey of India, NDMA, IMD

- **Regulated tourism practice:** There is need to establish regulated tourism practices with promotion of sustainable agendas for the **Indian Himalayan region (IHR)**.

- ▶ Also, there is need of maintenance of proper tourist capacity in every tourist place.
- **Vigilance and patrolling:** Protected areas require vigilance and regular patrolling to reduce unwanted wildlife-tourist interaction as well as habitat destruction due to off-road driving and encroachment.
- **Early Warning System:** It is important to have early warning and **better weather forecast systems** in order to forecast the disaster and alert the local population and tourists.
- **Regional Cooperation:** There is a need for a trans-boundary coalition of Himalayan countries to share and disseminate knowledge about the mountains and preservation of the ecology there.
- **Area Specific Sustainable Plan:** What is most critical is to review the area's present status and draw up **a sustainable plan** that respects the specific requirements of this fragile region and the impact of the climate crisis.

- **Promote Ecotourism:** Initiating a dialogue on adverse impacts of commercial tourism and promoting **ecotourism**.

◎ CONCLUSION

Tourism is all about enjoying the gifts of nature and people and appreciating beautiful sights responsibly. However, it goes against the nature where it poses more negative than positive effects on the tourist sites, local communities, and the economy. Therefore, there is need of 'responsible tourism', that respects the tourism destination's environment, community, and culture and also correct the adverse effects caused by irresponsible mass tourism.

This type of tourism aims to create sustainable tourism development that protects the interest of local communities and the heritage sites within these communities.

RIVER INTERLINKING PROJECTS: BOON OR BANE FOR INDIA

CONTEXT

- Environmental groups in Karnataka have criticised the project to link the Bedti and Varada rivers in Karnataka, calling it 'unscientific' and a 'waste of public money'.
- This issue has aroused questions on several river interlinking projects across the country, and brought them under scrutiny.

◎ BACKGROUND

- The initial plan to interlink India's rivers came in **1858** from a British irrigation engineer, **Sir Arthur Thomas Cotton**.
- In 2014, the **Ken-Betwa River Linking Project** got Cabinet approval.
- However, the project is yet to take off because of the opposition faced by the government chiefly from environmentalists.

◎ ABOUT

What is Inter-linking of rivers?

- River Linking** is a project of linking two or more rivers by creating a network of manually created reservoirs and canals, and providing land areas that otherwise does not have river water access and reducing the flow of water to sea using this means.
- It is based on the assumptions that surplus water in some rivers can be diverted to deficit-river by creating a network of canals to interconnect the rivers.
- Uses:**
 - For Irrigation purposes
 - flood control in the region
 - for Livelihood needs of locals
 - Building Dams for water conservation

What was the issue raised under 'Bedti-Varada river project'?

- The issue highlighted the government's planning of interlinking two opposite directional flowing rivers with each other that lack sufficient source of water in them.
- The investigating group has made allegation on government for using river interlinking project for their benefit and corruption, making profit to contractors, builders and wasting valuable resources in the region.

National River Linking Project (NRLP)

- NRLP, formerly known as the **National Perspective Plan**, proposes to connect **14 Himalayan** and **16 peninsular rivers** with 30 canals and 3,000 reservoirs to form a gigantic **South Asian Water Grid**.
- NRLP includes two components:
 - Himalayan component:** This component aims to construct storage reservoirs on the Ganga and Brahmaputra rivers, as well as their tributaries in India and Nepal. It will connect-
 - The Ganga and Brahmaputra basins to the Mahanadi basin
 - The Eastern tributaries of the Ganga with the Sabarmati and Chambal river systems.
 - Peninsular component:** It includes 16 links that propose to connect the rivers of South India. It envisages linking
 - The Mahanadi and Godavari to feed the Krishna, Pennar, Cauvery, and Vaigai rivers
 - The Ken river to the Betwa, Parbati, Kalisindh, and Chambal rivers
 - West-flowing rivers to the south of Tapi to the north of Bombay
 - Linking some west-flowing rivers to east-flowing rivers
- The NRLP is managed by **National Water Development Agency (NWDA)** under the **Ministry of Jal Shakti**.
- Recently, it has been reported that the Centre is deliberating on creation of a **National River Interlinking Authority (NIRA)**.
- It will have powers to set up SPV for individual link projects.



- ▶ Similarly, other projects such as **Parambikulam Aliyar, Kurnool Cudappah Canal, Telugu Ganga Project**, and **Ravi-Beas-Sutlej** were undertaken.
- ▶ **Godavari River** has also been formally interlinked with the **Krishna River** at Ibrahimpatnam (near Vijayawada) in Andhra Pradesh in September 2015.

What are the advantages of interlinking Rivers?

- **Reduce dependence on Rainfall**
- **Used for Navigation**
- **For Agriculture purposes**
- **Power Generation**
- **Other benefits:**
 - ▶ **Water supply:** The project envisages a supply of clean drinking water amounting to 90 billion cubic meters. It can resolve the issue of drinking water scarcity in India.
 - ▶ Similarly, interlinking of rivers has the potential to provide 64.8 billion cubic meter of **water for industrial use**.
 - ▶ Apart from that, interlinking can help the survival of **fisheries; protect wildlife in the summer months** due to water scarcity. It can also reduce forest fires occurring in India due to climatic conditions.
 - ▶ India can also **explore an additional line of defence** in the form of waterline defence.

What are the challenges associated with River-Interlinking?

Despite the many benefits that are associated with the river interlinking project, the project is yet to take off because of the many hurdles it is facing. Some of the challenges in this regard are as follows:

- **Project feasibility:** There is a requirement of huge structures which requires a great engineering capacity. So, the cost and manpower requirement is immense.
- **Environmental impact:** The huge project will alter entire ecosystems. The wildlife, flora and fauna of the river systems will suffer because of such displacements and modifications.
 - ▶ Many national parks and sanctuaries fall within the river systems.
- **Can lead to displacement:** Building dams and reservoirs will cause the displacement of a lot of people. This will cause a lot of agony for a lot of people.
 - ▶ They will have to be rehabilitated and adequately compensated.
- **Myth of controlling floods:** There have been instances where big dams like Hirakud Dam, Damodar Dam, etc. have brought flooding to Odisha, West Bengal, etc.
- **Inter-state disputes:** River water has no boundary and flows across different states. Hence River water remains a matter of dispute between the states normally.
 - ▶ Interlinking of those already disputed rivers can further worsen the situation between the states.
- **International disputes:** In the Himalayan component of the project, the effect of building dams and interlinking rivers will have an effect on the neighbouring countries. This will have to be factored in while implementing the project.

Bangladesh has opposed the transfer of water from the **Brahmaputra to the Ganga**.

TO INCLUDE WETLAND CONSERVATION IN UPCOMING BIODIVERSITY, CLIMATE CHANGE NEGOTIATIONS

CONTEXT

Experts from the 'Wetlands International' suggested that wetland conservation should feature as an independent topic of discussion in the negotiations at the upcoming biodiversity and climate change conferences for effective carbon sequestration, mainly in CoP15, and CoP27.

◎ BACKGROUND

The issue of 'wetland conservation' is often avoided or ignored at international level.

- Global Biodiversity Framework, 2002 failed to mention 'wetlands' in text.
- Focus area for negotiations in COP15 would include achieving global biodiversity targets. However, it also missed out on **wetland conservation on land and sea**.

◎ ANALYSIS

What are the Wetlands?

- Wetland refers to almost any habitat where water is key to the environment and its wildlife.
- Examples:** swamps, marshes, billabongs, lakes, salt marshes, mudflats, mangroves, coral reefs, fens, peat bogs, or bodies of water - whether natural or artificial, permanent or temporary.
- Water within these areas can be static or flowing; fresh, brackish or saline; and can include inland rivers and coastal or marine water to a depth of six metres at low tide.
- There are even underground wetlands.
- Anywhere from estuaries, lakes and rivers to underground aquifers, mangroves, coral reefs and rice paddies count.

The Indian definition

- However, the Indian government's definition of wetland excludes river channels, paddy fields and other areas where commercial activity takes place.
- The **Wetlands (Conservation and Management) Rules, 2017** define wetlands as;

"area of marsh, fen, Peat land or water; whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, including areas of marine water the depth

of which at low tide does not exceed six meters, but does not include river channels, paddy fields, human-made water bodies/ tanks specifically constructed for drinking water purposes and structures specifically constructed for aquaculture, salt production, recreation and irrigation."

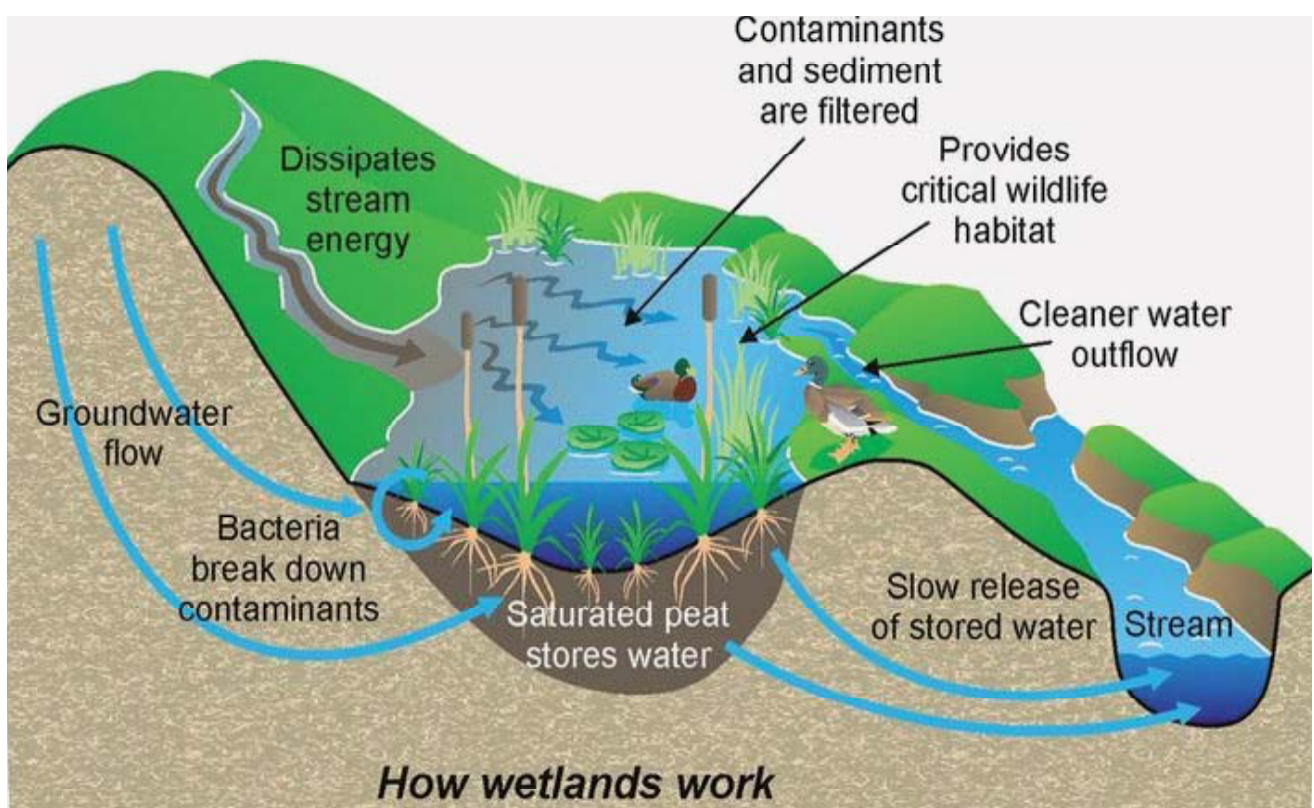
Distribution of wetland in India

- Globally, wetlands cover 6.4 per cent of the geographical area of the world.
- In India, wetlands are spread over 1,52,600 square kilometres (sq km) which is 4.63 per cent of the total geographical area of the country.
- Of the 1,52,600 sq km,
 - inland-natural wetlands-** 43.4%
 - coastal-natural wetlands-** 24.3%
 - Rivers/streams occupy-** 52,600 sq km
 - reservoirs/barrages-** 24,800 sq km
 - inter-tidal mudflats-** 24,100 sq km
 - tanks/ponds-** 13,100 sq km
 - lake/ponds-** 7300 sq km
- India has 19 types of wetlands.
- State-wise distribution:** Gujarat is at the top with 34,700 sq km (17.56 percent of total geographical area of the state), or 22.7 percent of total wetlands areas of the country thanks to a long coastline.
 - It is followed by Andhra Pradesh (14,500 sq km), Uttar Pradesh (12,400 sq km) and West Bengal (11,100 sq km).

Why wetlands are valuable for the environment?

- Balancing ecosystem:** Wetlands provide a wide range of important resources and ecosystem benefits such as food, water, fibre, groundwater recharging, water purification, flood moderation, erosion control and climate regulation. They are also one of the major supplies of freshwater.

- **Biodiversity hotspot:** The wetlands support rich biodiversity and help stabilise water supplies, cleanse polluted waters, protect shorelines, and recharge groundwater aquifers.
 - ▶ 200 new species are found in freshwater wetlands and are responsible for sequestering almost one third of the global soil carbon.
- **Food basket:** Wetlands play an integral role in the ecology of the watershed. The combination of shallow water, high levels of nutrients and primary productivity are ideal for the development of organisms that form the base of the food web and feed many species of fish, amphibians, shellfish and insects.
- **A safe habitat:** They are multifunctional habitats—they nurture a great diversity of life. They are also important as feeding and breeding grounds for migratory birds.
- **Climate protection:** Wetlands store carbon within their plant communities and soil instead of releasing it to the atmosphere as carbon dioxide. Thus wetlands help to moderate global climate conditions.
- **Flood protection:** Wetlands function as natural sponges that trap and slowly release surface water, rain, snowmelt, groundwater and floodwaters, which lowers flood heights and reduces erosion.



What is the need for wetland conservation?

The wetlands account for just six per cent of the plant but are home to 40 per cent of world's plant and animals.

- **Disappearing at a fast rate:** It is estimated that wetlands are vanishing three times faster than forests and their rate of disappearance is increasing. For instance, 87% of wetlands have been lost since the 1700s and 35% have disappeared since the 1970s.
- **Exploitative developmental activities:** Wetlands in India are under threat due to urbanization and land-use changes, municipal and industrial pollution and global climate change, which is an important determinant of loss and change in wetland ecosystems.
- **Factors causing threat in the long run:** Various factors such as infilling for agriculture and construction, pollution, overexploitation of resources, invasive species and climate change threaten their existence.
- **Lack of protection & recognition:** In India, forests have been historically protected since colonial times, while wetlands have been ignored from long. Over the years people who were traditionally involved in managing wetland share no more there. Even in the way, wetland systems were considered by the government authorities has changed. All this together has impacted the wetlands and their future.

◎ CONCLUSION

Wetlands not only support high concentrations of biodiversity, but also offer a wide range of important resources and ecological functions such as food, water, fibre, groundwater recharge, water purification, flood moderation, storm protection, erosion control, carbon storage and climate regulation. Wetlands may comprise a minor portion of the planet, but are crucial parts of the ecosystem and are under tremendous pressure. Hence, their conservation is the need of the hour.

WTO'S TWELFTH MINISTERIAL CONFERENCE IN GENEVA

CONTEXT

- ❑ The 12th Ministerial Conference (MC12) of the World Trade Organization (WTO) concluded in Geneva.
- ❑ The 164-member World Trade Organization held its first ministerial conference in nearly five years, following Covid-19 postponements.

Key Highlights of the Conference

- **Aim:** To review the functioning of the multilateral trading system, to make general statements and to take action on the future work of the WTO.
- **Key areas of discussions:**
 - WTO's response to the pandemic
 - Fisheries subsidies negotiations
 - Agriculture issues including Public Stockholding for Food security
 - WTO Reforms and Moratorium on Custom Duties on Electronic Transmission
- India's demand to seek a permanent solution on **public stockholdings (PSH) of food grains** being pushed to next MC13 in **2023**.

WTO's Ministerial Conference

- The MC is at the very top of WTO's organisational chart.
- It meets once every two years and can take decisions on all matters under any multilateral trade agreement.
- All decisions at the WTO are made collectively and through consensus among member countries at varied councils and committees.

What is the need to focus on WTO reforms?

- **Issue of MSP:** Agriculture is the major source of livelihood for India's 70% of the population. Hence negotiations for issues due to Minimum support price under WTO restrictions are unavoidable for India.
- **Coordination for food security:** Food security challenges faced by world after pandemic has shown need to develop coordination for food grains from surplus to deficient regions and helping others.
- **To manage international issues:** Vaccine reforms and manufacturing allegations on several developed countries has made important intervention of WTO for such an issue.

🕒 ANALYSIS

What are the Outcomes of the conference?

- WTO Reform:
 - Members reaffirmed the foundational principles of the WTO and committed to an open and inclusive process to reform all its functions, from deliberation to negotiation to monitoring.
 - Notably, they committed to work towards having a well-functioning **dispute settlement system** accessible to all members by 2024.
- Agreement on Curtailing Harmful Fishing Subsidies:
 - It would curb 'harmful' subsidies on **illegal, unreported and unregulated** fishing for the next four years, to better **protect global fish stocks**.
 - Since 2001, member states have been negotiating the banning of subsidies that promote overfishing.
 - India and other developing countries were able to win some concessions in this agreement. They successfully lobbied to remove a section of the proposal that would threaten some subsidies which would assist small-scale artisanal fishing. Artisanal and traditional farmers would not face any restrictions under this agreement.
- Agreement on Global Food Security:
 - Members agreed to a binding decision to exempt food purchased by the UN's World Food Programme (WFP) for humanitarian purposes, from any export restrictions.
 - In light of the global food shortages and rising prices caused by the war between Ukraine and Russia, the group's members issued a declaration on the importance of trade in global food security and that they would avoid bans on food exports.
 - However, countries would be allowed to restrict food supplies to ensure domestic food security needs.

- Agreement on E-commerce Transactions:
 - ▶ From **2017-2020**, developing countries lost a potential tariff revenue of around USD 50 billion on imports from only **49 digital products**.
 - ▶ **WTO members** had first agreed to not impose custom duties on electronic transmissions in 1998, when the internet was still relatively new. The moratorium has been periodically extended since then.
 - ▶ However, all members agreed to continue the long standing moratorium on custom duties on e-commerce transmissions until the subsequent Ministerial Conference or until 31st March 2024, depending on whichever comes first.
- **Agreement on 'Covid-19' Vaccine Production:**
 - ▶ WTO members agreed to temporarily waive intellectual property patents on Covid-19 vaccines without the consent of the patent holder for 5 years, so that they can more easily manufacture them domestically.
 - ▶ This "will contribute to on-going efforts to concentrate and diversify vaccine manufacturing capacity so that a crisis in one region does not leave others cut off."
 - ▶ The current agreement is a watered down version of the original proposal made by India and South Africa in 2020. They had wanted broader intellectual property waivers on vaccines, treatments and tests.
- Rich pharmaceutical companies had strongly opposed this, arguing that IP's do not restrict access to COVID vaccines and that the removal of patent protections gives researchers that quickly produced life-saving vaccines, a negative message.
- The waiver agreed by the WTO was criticized by advocacy groups for being narrow in scope, as it did not cover all medical tools like diagnostics and treatments.
- This agreement fails overall to offer an effective and meaningful solution to help increase people's access to needed medical tools during the pandemic as it does not adequately waive IP on all essential Covid-19 medical tools and it does not apply to all countries.

Issues raised by India

- **On structural balances:** India believes that WTO reforms discussions must focus on strengthening its fundamental principles.
 - ▶ At this time, reserving **Special and Differential Treatment (S&DT)**, which includes consensus-based decision making, non-discrimination, and special and differential treatment, should not result in the preservation of inherited disparities or aggravate the imbalances.
- E-commerce Transactions:
 - ▶ India had asked the WTO to review the extension of the moratorium on custom duties on e-commerce transactions, which include digitally-traded goods and services.
 - ▶ It argued that developing countries faced the brunt of the financial consequences of such a moratorium.
- On Food Security:
 - ▶ WTO should renegotiate subsidy rules for government-backed food purchasing programs aimed at feeding poor citizens in developing and poor countries.
- **Policies of WTO- Government Procurement Agreement (GPA):** This was the first time India had included government procurement in a free-trade pact, however, it is only limited to a few central ministries.

What can be the solutions for issues in decisions made under the conference?

- India offered a proposal in which it took the lead in criticizing the **European Union** and Brazil's suggestions, both on the process and its goals. It was against an open-ended exercise on WTO amendments.
- India takes the initiative to suggest reforms for developing countries (Developing countries reform paper "Strengthening the WTO to Promote Development and Inclusion").
- India wants assurances that its public stock-holding program, which buys exclusively from the nation's farmers and has exported in the past, cannot be challenged at the WTO as illegal.

About World Trade Organization (WTO)

- It came into being in **1995**.
- The WTO is the successor to the **General Agreement on Tariffs and Trade (GATT)** established in the wake of the Second World War.
- Its objective is to help trade flow smoothly, freely and predictably.
- It has **164 members, accounting for 98% of world trade**.
 - ▶ It was developed through a series of trade negotiations, or rounds, held under the GATT.
 - ▶ GATT is a set of multilateral trade agreements aimed at the abolition of quotas and the reduction of tariff duties among the contracting nations.

25 years of the WTO Government Procurement Agreement (GPA) and 40 years since the GATT GPA

6-20%

Government procurement accounts for 6-20% of the national GDP in different regions of the world



1.7 trillion USD

Government procurement markets worth 1.7 trillion USD are covered by the current GPA



48

48 WTO members are currently bound by the GPA



166.5%

The number of WTO members covered by the GPA increased by 166.5% in relative terms since 1981, when the first GPA entered into force



9

The fastest first-time accession to the GPA since the WTO's establishment was 9 months from the date of the initial negotiating offer



3

3 dispute settlement panel reports on GPA disputes have been adopted since 1981



159

The Committee on Government Procurement has held 159 formal meetings since January 1981



- ▶ The WTO's rules – the agreements – are the result of negotiations between the members.
- The current set is largely the outcome of the 1986- 94 Uruguay Round negotiations, which included a major revision of the original GATT.
 - ▶ The WTO Secretariat is based **in Geneva (Switzerland)**.
- **WTO Ministerial Conference:**
 - ▶ It is the WTO's top decision-making body and usually meets **every two years**.

- ▶ All members of the WTO are involved in the MC and they can take decisions on all matters covered under any **multilateral trade agreements**.

◎ CONCLUSION

The issues discussed under the conference are very much significant for Today's scenario for India and world as a whole especially after pandemic shocks for the economy. However India's stand on Public stockholdings was unheard but it assured for its consideration.

PAYMENT VISION 2025

CONTEXT

The Reserve Bank of India (RBI), in a document for payments systems, outlined its vision on the architecture of digital finance- Payments Vision 2025.

About the Payment Vision 2025:

The journey of payment systems in India has been phenomenal in the recent couple of years.



- Payment systems promote economic development and financial stability and support investment. Ensuring **secure, reliable, affordable, and effective payment systems** have been the strategic objectives of the **Reserve Bank of India (RBI)**.
- Payments Vision 2021 aimed to give all Indians the power to access a wide range of electronic payment options, secure, convenient, fast and affordable, and set four goals in Competition, Cost, Easy and Confidence.
- Payment Vision 2025 has the core theme of (4Es).
- The vision comes with the aim of providing a strategic direction and implementation plan for the formal development of payment and payment systems in India through the periodic versions of Payments Vision, which was launched from 2001.

Vision of the draft

- Digital Payment Geo-tagging:** The RBI text has proposed the adoption of digital payment geo-tagging services and functions as well as a review of prepaid toolkit guidelines (PPIs), including closed system PPIs.
- Control of all key intermediaries:** The RBI also proposed a regulatory framework for all key intermediaries in the payment ecosystem and linked credit cards and credit components of banking products to the UPI.

- Check Truncation System (CTS):** Other proposals include bringing enhancements to the Check Truncation System which includes **One Nation One Grid specification** and payment concept, and creating an online payment processor to process online merchant payments using mobile and mobile banking.
- BigTechs Control:** The RBI also proposed control of BigTechs and FinTechs in the payment system.
- Buy-now-pay-later (BNPL) systems:** BNPL services have evolved into a new payment mode next to existing payment methods such as cards, UPI, and bank balances.
- Triple override:** Requires a triple override on the number of digital payments, increased debit card usage and less cash used.

Significance



- Easy to use and convenience:** It will empower users with affordable payment options that can be accessed anytime and anywhere easily.
- Digital community:** A trip to a low-income community with small cards.
- Global leader:** This will strengthen India's position as a world leader in the digital payment system.
- Increased mobile banking:** With the change in customer behaviour in accepting digital and tactile payment methods, in part due to COVID, there is a 50% increase in mobile banking users, indicating the inclusion of first-time digital users in the digital company.

- **Expand RTGS:** The RBI will look at whether it is possible to extend the RTGS to facilitate trade in major trading currencies such as the dollar, pound, and euro, and will also be considered through bilateral or multilateral programs.

Five major Goalposts of the Initiative

- **Integrity**
 - ▶ Weave in alternative authentication mechanism(s) for digital payment transactions
 - ▶ Broaden scope, usage and relevance of lei in all payment activities
 - ▶ Expand inter-operability to contactless transit card payments in offline mode
 - ▶ Enhance scalability and resilience of payment systems
- **Inclusion**
 - ▶ Enable geo-tagging of digital payment infrastructure and transactions
 - ▶ Revisit guidelines for PPIs including closed system PPIs
 - ▶ Consider framework for regulation of all significant intermediaries in payments ecosystem
 - ▶ Extend internal ombudsman scheme to all PSOs
- **Innovation**
 - ▶ Facilitate framework for IOT and context-based payments
 - ▶ Migrate all RBI operated payment system messages to ISO 20022 standard
 - ▶ Link credit cards and credit components of banking products to UPI
 - ▶ Create payment system for processing online merchant payments using internet / mobile banking
- **Institutionalisation**
 - ▶ Comprehensive review of legislative aspects of payment and settlement systems act provisions and regulations
 - ▶ Constitute payments advisory council (PAC) to assist BPSs
 - ▶ Operationalize national card switch for card transactions at POS and resultant settlements

- ▶ Active engagement and involvement in international fora (discussions of standard-setting bodies)

- **Internationalisation**

- ▶ Global outreach of RTGS, NEFT, UPI and Rupay cards
- ▶ Expand SFMS and INFINET frameworks across jurisdictions
- ▶ Seek inclusion of INR in continuous linked settlement (CLS)
- ▶ Bring further efficiencies in payment processing and settlements on introduction of CBDCS – domestic and cross-border

Potential issues and challenges

- **Geo political risk:** The document also addresses the filing of domestic payment systems, which includes the need to authorize the consideration of domestic payment services, due to the emerging risks of the country.
- **Fraud:** with the increasing adoption of digital payment methods there will be an increase in digital payment fraud.
- **Domestic data retention:** Banks and non-banking PSOs are allowed to process payments abroad under certain circumstances.
- **Costs on digital payments:** The Reserve Bank will also conduct a comprehensive review of all aspects of the costs involved in various digital payment channels.

◎ CONCLUSION

Payment systems foster economic development and financial stability as well as support financial inclusion. Ensuring safe, secure, reliable, accessible, affordable and efficient payment systems has been one of the important strategic objectives and goals of the Reserve Bank of India (RBI). Towards the pursuit of these objectives, India has developed one of the most modern payment systems in the world, be they large value, retail or fast.

INDIA'S GIG WORKFORCE TO REACH 2.35 CRORE BY 2030: NITI AAYOG

CONTEXT

According to a recent study, the number of workers engaged in the gig economy is expected to grow to 2.35 crore by 2029-30.

● ABOUT

- **Report title:** India's Booming Gig and Platform Economy
- **Released by:** NITI Aayog has released the report.
- **Objective:** To present comprehensive perspectives and recommendations on the gig-platform economy in India.
- **Key highlights of the study:**
 - The Indian gig workforce is expected to expand to 23.5 million workers by 2029-30, a near 200 per cent jump from 7.7 million now.
 - Gig workers will form 4.1 per cent of the total workforce in India by FY30, from 1.5 per cent now.

● ANALYSIS

What is gig economy?

- As per the **World Economic Forum (WEF)**, gig economy is defined by its focus on workforce participation and income generation via "gigs", single projects or tasks for which a worker is hired.
- **Classification:** Gig workers can be broadly classified into:
 - **Platform workers:** Those whose work is based on online software apps or digital platforms such as food aggregator platforms **Zomato, Swiggy, Ola, and others.**
 - **Non-platform-based workers:** generally casual wage and own-account workers in conventional sectors, engaged part-time or full-time.

What is India's potential for growth of gig economy?

- An estimated 56% of new employment in India is being generated by the gig economy companies across both the **blue-collar and white-collar workforce.**
- While the gig economy is prevalent among blue-collar jobs in India, the demand for gig workers in white-collar jobs such as **project-specific consultants, salespeople, web designers, content writers and software developers** are also emerging.

- The gig economy can serve up to **90 million jobs** in the non-farm sectors in India with a potential to add 1.25% to the GDP over the "long term".
- As India moves towards its stated goal of becoming a USD 5 trillion economy by 2025, the gig economy will be a major building block in bridging the income and unemployment gap.

RAISE Framework for Operationalizing the Code on Social Security (CoSS), 2020

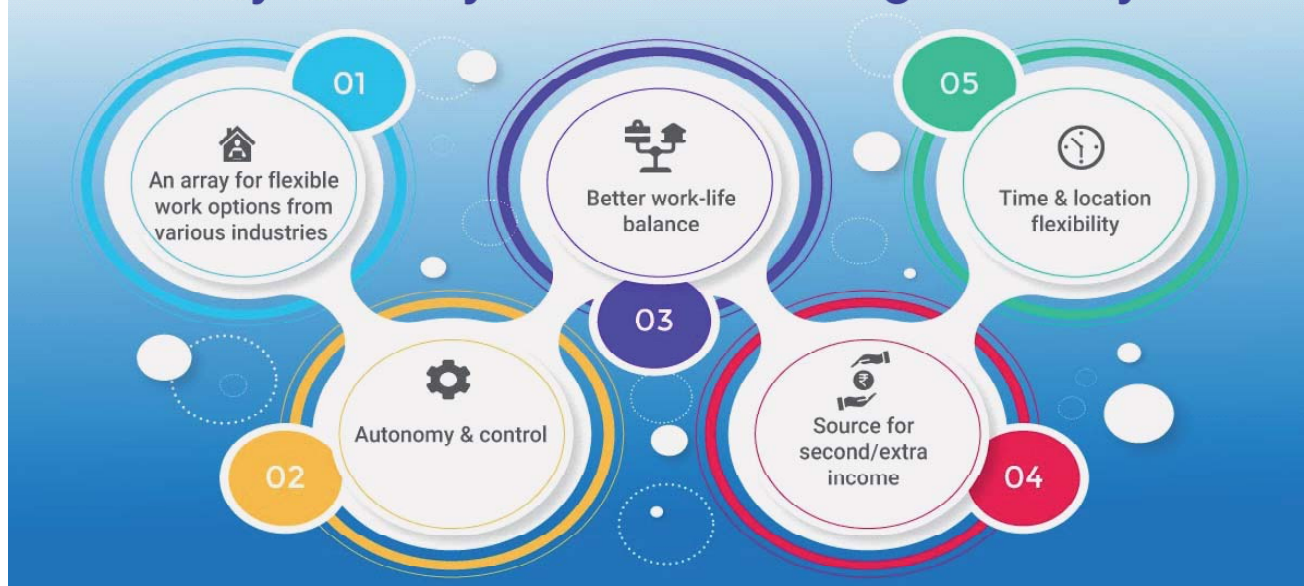
As Central and State governments draw up rules and regulations under CoSS 2020, they could adopt the **five-pronged RAISE approach** to ensure realisation of full access to social security for all gig and platform workers:

- Recognise the varied nature of platform work to design equitable schemes.
- Allow augmentation of social security through innovative financing mechanisms.
- Incorporate, while designing schemes, the specific interests of platforms, factoring the impact on job creation, platform businesses and workers.
- Support workers to subscribe to government schemes and welfare programmes through widespread awareness campaigns.
- Ensure benefits are readily accessible to workers.

What are the Major Issues Raised by the Report?

- **Accessibility:** Even though the gig economy, with the wide variety of employment options it offers, it is accessible to all those who are willing to engage in such employment, access to internet services and digital technology can be a restrictive factor.
 - This has made the gig economy largely an **urban phenomenon.**
- **Job and Income Insecurity:** Gig Workers do not get benefit from labour regulations pertaining to wages, hours, working conditions, and the right to collective bargaining.

Why should you choose the Gig Economy?



Occupational Safety and Health Risks:

- Workers engaged in employment with the digital platforms, particularly, women workers in the app-based taxi and delivery sectors face various occupational safety and health risks.

Skills Mismatch:

- Varying degrees of vertical and horizontal skills mismatch can be observed on online web-based platforms.
- According to International Labour Organization (ILO) surveys, workers with higher educational achievements are not necessarily finding work commensurate with their skills.

Challenges faced due to Terms of Contract:

- Working conditions on digital platforms are largely regulated by the terms of service agreements. They tend to characterize the contractual relationship between the platform owner and worker as other than one of employment.

Benefits in the sector

- Flexibility of working:** In the digital age, the **worker need not sit at a fixed location**—the job can be done from anywhere, so employers can select the best talent available for a project without being bound by geography.
- Enormous potential for job creation in India:** The **start-up ecosystem in India has been developing rapidly**. For start-ups, hiring full-time employees leads to high fixed costs and therefore, contractual freelancers are hired for non-core activities.

- Start-ups are also **looking at hiring skilled technology freelancers** (on a per project basis) in areas such as engineering, product, data science and ML to bolster their tech platforms.

- Better income opportunities to those previously engaged in similar non-platform jobs:

MNCs are adopting flexi-hiring options, especially for niche projects, to reduce operational expenses after the pandemic.

- This trend is significantly contributing to the gig culture in India.

Rising challenges

- lack of job security
- Irregularity of wages and uncertain employment status for workers
- The contractual relationship between the platform owner and worker is characterised as other than one of employment
- No workplace protections and entitlements.

NITI Aayog's recommendation

- Social security measures** to gig workers and their families, including sick leave, insurance, and pension.
- Platformisation:** Introducing a '**Platform India initiative**', on the lines of the 'Start-up India initiative' built on the pillars of accelerating platformisation by simplification and handholding, funding support and incentives, skill development, and social financial inclusion.

- ▶ Self-employed individuals may also be linked to platforms so that they can sell their produce to wider markets in towns and cities.
- **Focus on social security:** Measures should be taken to provide social security, including paid leave, occupational disease and work accident insurance, and support during irregularity of work and pension plans for the gig workforce in the country.
- **Improving women participation in gig-economy:** Fiscal incentives such as tax-breaks or start-up grants may be provided for businesses

that provide livelihood opportunities where women constitute a substantial portion (say, 30 per cent) of their workers.

◎ CONCLUSION

The rapidly burgeoning gig workforce is ushering in a new economic revolution globally. India – with its demographic dividend of half-a-billion labour force and the world's youngest population, rapid urbanisation, widespread adoption of smartphones and associated technology – is the new frontier of this revolution.

INDIA'S EMERGING TWIN DEFICIT PROBLEM

CONTEXT

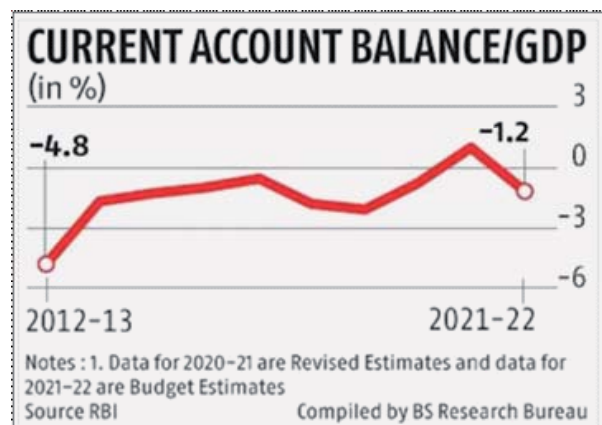
RBI in its 'Monthly Economic Review' report highlighted two key areas of concern for the Indian economy: the fiscal deficit and the current account deficit (or CAD).

◎ BACKGROUND

- As the on-going **Russia-Ukraine conflict** and **global supply chains remain unrepaired**, the trade disruptions, export bans and the resulting surge in global commodity prices will affect several **factors of Trade in the world**.
- The Finance Ministry in its latest monthly economic report said that India faces near term challenges in managing its fiscal deficit due to various global challenges.
- It added that there is now an upside risk to gross budget deficit due to additional welfare and subsidy spending and cut in excise duty on fuel.

What does the report says?

- On Fiscal deficit:** Fiscal deficit may be high due to cuts in excise duties on diesel and petrol.
- On Current account deficit:**
 - Higher import bills may increase CAD:** Costlier imports such as crude oil and other commodities will not only widen the CAD but also depreciate the rupee.
 - A weaker rupee will, in turn, make future imports costlier.
 - Pulling out of funds from emerging markets:** Rupee can also weaken if, in response to higher interest rates in the western economies especially the US, foreign portfolio investors (FPI) continue to pull out money from the Indian markets, which too will hurt the rupee and further increase CAD.



What does a Deficit mean for an Economy?

- A **deficit** implies that more money is going out of the country than coming in via the trade of physical goods. Similarly, the same country could be earning a surplus on the invisibles account — that is, it could be exporting more services than importing.
- Definition of Stagflation:** Stagflation is defined as an economy that is suffering both an increase in inflation and low growth.
 - Stagflation was initially identified in the 1970s, when an oil shock caused fast inflation and significant unemployment in many industrialised economies.
 - The latest RBI report also point out that “even as the world was looking at a distinct possibility of widespread stagflation, India was at low risk due to its stabilisation policies.”

About

Current Account Deficit (CAD)

It has two parts:

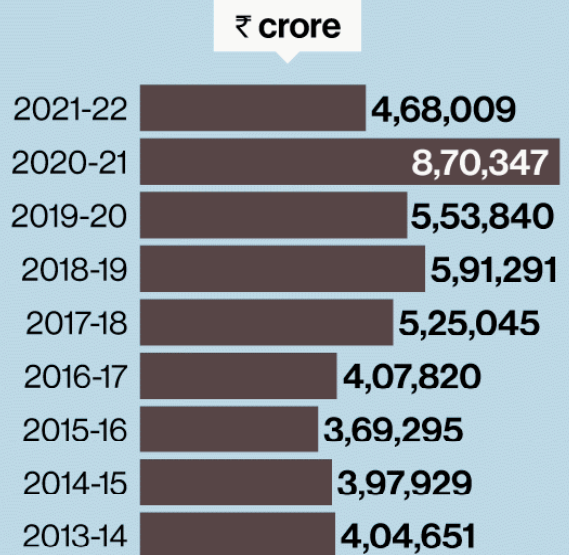
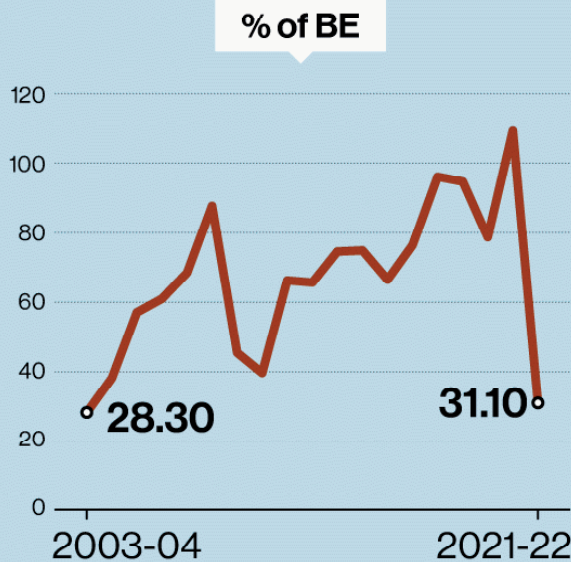
- Trade account (Import and Export of goods):**
 - If a country imports more goods than it exports, it is said to have a trade account deficit.
- Invisible account (Import and export of services):**
 - If the net effect of a trade account and the invisibles account is a deficit, then it is called a current account deficit or CAD. A widening CAD tends to weaken the domestic currency because a CAD implies more dollars (or foreign currencies) are being demanded than rupees.

Fiscal deficit:

- The fiscal deficit is essentially the **amount of money that the government has to borrow in any year to fill the gap between its expenditures and revenues**.
- Higher levels of fiscal deficit typically imply the **government takes money from the market**, thus leaving less money for private sector for its own investment needs (also called **crowding out** effect)

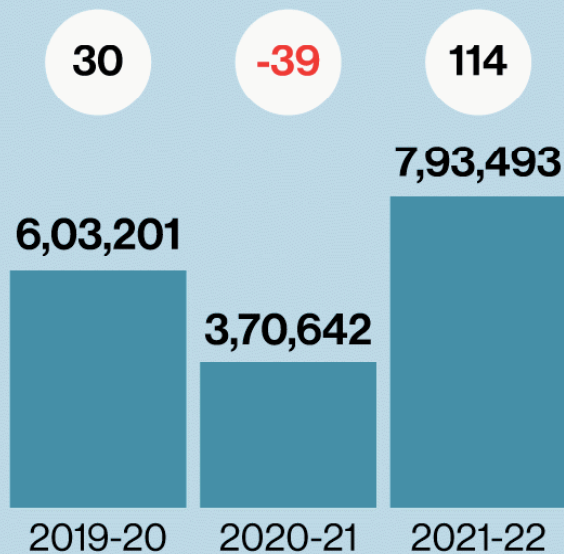
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Fiscal Deficit



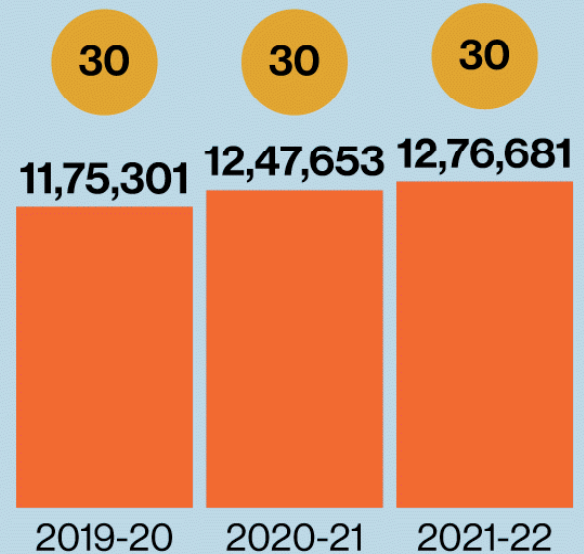
Revenue Receipts

₹ crore % change YoY



Total Expenditure

₹ crore % change YoY



Source: CGA

Impacts of twin deficit on India

- Although no cause of worry in the short term, the twin deficit may in the long-term reduce the savings, depreciate the rupee and imbalance the financial investments of the government for social purposes.
- Costlier imports such as crude oil and other commodities will not only widen the CAD but also put downward pressure on the rupee. A weaker rupee will, in turn, make future imports costlier.
- If, in response to higher interest rates in the western economies especially the US, **foreign portfolio investors (FPI)** continue to pull out money from the Indian markets, that too will hurt the rupee and further increase CAD.
- As government revenues take a hit following cuts in excise duties on diesel and petrol, upside risk to the budgeted level of gross fiscal deficit has emerged. An increase in the fiscal deficit may cause the current account deficit to widen, compounding the effects of costlier imports, and weaken the value of the rupee, thereby further aggravating external imbalances, creating the risk (admittedly low, at this time) of a cycle of wider deficits and a weaker currency.
- As per the report, the recent surge in inflation in EMEs is mainly on due to supply-side shock arising from the Russian-Ukraine conflict.

What needs to be done?

- Trim revenue expenditure** (or the money government spends just to meet its daily needs)
- Rationalizing non-Capex (capital) expenditure** to avoid fiscal slippages

- Use tight monetary policy** to achieve fiscal consolidation
- Import cut of non-essential goods** and make exports of Indian goods competitive
- Reforming the Indian market** to make it attractive for FDI and FII.

Governmental Intervention for managing Twin Deficit

- Improve the efficacy of public spending** so that improvements in productivity increases in financial resources can drive higher public service delivery.
- Reduce the share **of physical savings**.
- Empower the States** on the basis of their superior fiscal record to become the apex level of government responsible for public service delivery. This can be done by an increase in vertical devolution to the States equivalent to the current plan revenue expenditure.
- Reducing expenditure** on fiscal 'bads' like **food and fertiliser subsidy** would then not trigger expenditure switching, thereby enabling a net reduction in the Central Government revenue deficit.
- The government should focus more on **attracting more FDI**, create a better environment for businesses, relax some regulations, and build the necessary infrastructure.

India needs to maintain the **balance of payments** with its net capital inflow, which means it should focus more on FDIs rather than FPIs as a stable source of income.

NO SPACE FOR PROTEST MOVEMENT IN POLITICAL SCIENCE

CONTEXT:

In the contemporary times, Indian political sphere is experiencing a turmoil regarding acceptance of public policies by the public, and hence, several instances of protests are increasing.

◎ BACKGROUND:

- Recent government schemes, due to lack of acceptance by the public are providing an impetus to the rising violence in the country.
- Protests and dissent are integral part of democracy which is required to bring a structural change in the socio-economic and political sphere.
- Despite the fact that protests are necessary element of the democracy and free speech, it is also important to check the action and consequences of the protest, limiting the protest from turning into violence.
- Fine balance between the free speech and national security needs to be catered and state must look into non-violent way to curb the protests and listen to the voice of democracy.

◎ ANALYSIS:

What is the right to protest? Is it a 'right' OR 'moral' duty too?

- The right to peaceful protest is granted to citizens of India by our Constitution. It is part of the freedom of speech and expression, which is a fundamental right under **Article 19(1)(a)**.
- However, there is more to it. Protesting against injustice is also a moral duty.

Reasonable Restrictions

- Article 19 (3) says this right is subject to "reasonable restrictions" in the interest of public order.
 - If the security of the state is in jeopardy
 - If the friendly relationship we share with a neighbouring country is at stake
 - If public order is disturbed
 - If there is contempt of court
 - If the sovereignty and integrity of India are threatened

Major stake holders involved:

- Civilians

- State
- Protestors
- Social stakeholder:
 - Public property
 - Fraternity
 - Integrity

'Protest' is it justifiable in democracy?

- Contributing to all spheres of life:** Protests play an important part in the civil, political, economic, social and cultural life of all societies.
- Positive social change:** Historically, protests have often inspired positive social change and the advancement of human rights, and they continue to help define and protect civic space in all parts of the world.
- Advancement of human rights:** Protests encourage the development of an engaged and informed citizenry.
- Strengthening democracy:** They strengthen representative democracy by enabling direct participation in public affairs.
- Making authorities accountable:** They enable individuals and groups to express dissent and grievances, to share views and opinions, to expose flaws in governance and to publicly demand that the authorities and other powerful entities rectify problems and are accountable for their actions.
- Essential for marginalised section:** This is especially important for those whose interests are otherwise poorly represented or marginalised.

When does protest crosses the ethical lines?

- Violent activities:** Protests that turns into a violent activities leading to destruction of public properties and lives, should be curbed and controlled.
- Communal intolerance:** Protests that give rises to the communal mistrust and provides impetus to communal intolerance.
- Loss of life**
- Loss of public property**

- **Loss of civil harmony**

- Apart from these, violation to the following reasonable restrictions on right to freedom, can be considered unethical in nature:
 - ▶ The state's security
 - ▶ In the interests of India's sovereignty and integrity
 - ▶ Public order violation
 - ▶ In terms of ethics or morality
 - ▶ In connection to contempt of court, defamation, or encouragement to commit an offence
 - ▶ Relations with other countries that are friendly

What are the major concerns of protest?

- **Potential Violence:** Although citizens are allowed to assemble peacefully, march and protest, these protests can sometimes be violent, damaging people's lives and property.
- **Political interference:** Political interference in a protest is often made by the opposition government to support its political objectives.

- **Impact on people's daily activities:** Protests can sometimes be a public nuisance for people who do not have the same vision or who simply wish to continue their daily activities.
- **Public property:** Violent activities of protests lead to loss and destruction of public property.
- **Public order:** Protests in unorganized and unspecified place creates disturbances in the public order like; blockade of roads, public mobility etc.
- **Fraternity:** Violence and communal tensions negatively impacts the fraternity among the citizens.
- **Loss of lives**
- **National security and integrity**

◎ CONCLUSION:

Ideals and democracy and national interest including sovereignty, security and public order should be balanced and steps need to be taken.

SECTION: B

(PRELIMS)

CURRENT AFFAIRS

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GOA'S SAO JOAO FESTIVAL

© **CONTEXT:** The Catholic community in the state of Goa celebrates Sao Jao, the feast of St. John the Baptist every monsoon.

About Sao Joao festival:

- Sao Joao festival is a Catholic festival, immensely popular in North Goa.
- The celebrations include revellers sporting crowns made of fruits, flowers and leaves, and the major draw of the feast is the water bodies – wells, ponds, fountains, rivers – in which the revellers take the "leap of joy".
- The festival also includes playing the traditional gumott (percussion instrument), a boat festival, servings of feni, and a place of pride for new sons-in-law.
- This festival is marked by young men jumping into wells to retrieve the gifts thrown in by the villagers.



Historical Background

- The Sao Joao festival in Goa 2022 is dedicated to St. John the Baptist, who, according to Christian scriptures, leapt with joy at his mother, Elizabeth's womb, when she was told of the birth of Christ.
- John, the Baptist, later went on to baptise Jesus in the river Jordan.
- The well is considered to be a representation of Elizabeth's womb and a jump into it a sign of joy for the birth of Christ.

The feast of Catholic priest Saint John the Baptist is celebrated six months before Christmas, that is December 25, which is marked as the birthday of Jesus Christ.

- Catholics in Goa celebrate various religious festivals at the Roman Catholic Church. One of these is the feast of St. John the Baptist, which is celebrated on June 24.
- John the Baptist baptised Jesus Christ on the river Jordan.

GOA TO HOST 3-DAY INTERNATIONAL SHIVA FESTIVAL NEXT YEAR

◎ CONTEXT:

The Goa Tourism Development Board (GTDC) has planned to host a three-day 'International Shiv Festival' during Mahashivratri next year at the famous Tambdi Surla temple in Mollem.

About:

- Every year, spirited celebration takes place at the 12th Century Shiva temple on Mahashivratri.
 - Mahashivratri is celebrated with great devotion and religious fervor all over India by Hindus, in honor of Lord Shiva.
 - It is celebrated on the 14th day of the **Maagha or Phalguna month of the Hindu calendar**.
- The proposed festival will be a cultural event to showcase the Shiv mudra dance, and performers excelling in the art would be expected to participate.



Tambdi Surla temple:

- The Mahadev Temple at **Tambdi Surla in Mollem** is the most ancient temple in Goa.
- **Built in:** 12th century.
- **Temple style:** Jain style
- **Deity:** The perfectly proportioned **black basalt temple** is dedicated to Lord Shiva.
 - **Lord Shiva, Sri Vishnu and Lord Brahma**, with their consorts appear on panels at the sides of the temple.
- There is a **Shiva Linga** mounted on a pedestal inside the inner sanctum and a **headless Nandi** (bull, Shiva's vehicle) in the centre of the mandap, surrounded by four matching columns.
- It is the **only monument of Kadamba-Yadava architecture**.
 - Kadamba dynasty was ruling during the time when this temple was constructed.



Kadamba architecture

- Kadamba architecture was a style of temple architecture founded by Mayurasharma in the 4th century AD in Karnataka.
- Kadambas created new style of architecture which was the basis of the **Hoysalas style of architecture**, developed original school of sculpture, was the forerunner of series of South Indian sculptors.
- Many temples at **Aihole, Badami and Hampi** are built in **Kadamba architectural style**.

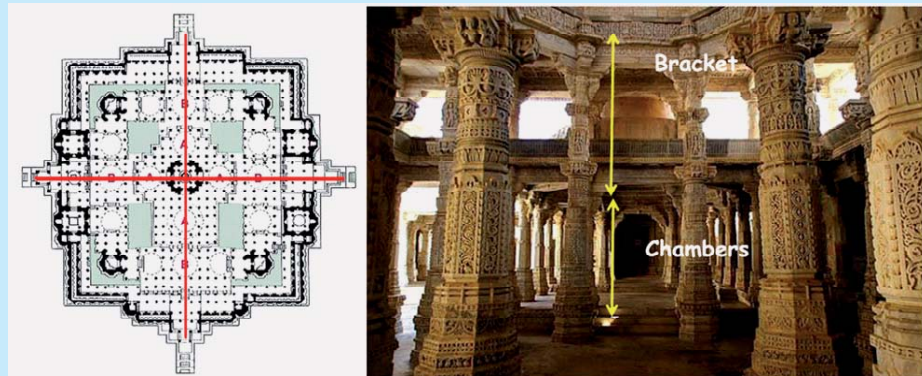
- The temple faces east so that the rays of the rising sun fall on the deity at the crack of dawn.
- The river **Surla** flows nearby and can be reached via a flight of stone steps.

Jain temple Style

- **Initial years:** At the beginning, Jain architecture was merely an offshoot of Hindu and Buddhist styles.
- **Later years:** In later years, Jains started building temple cities hills based on the concept of "mountains of immortality."

Elements of Jain Architecture

- **Squares:** In terms of elements in architecture, most Jain temples have **numerous pillars**. They have a well-designed structure, forming squares.
- **Chambers:** The squares thus formed create **chambers**, used as small chapels and contains the image of a deity.
- **Brackets:** From these pillars, there are richly carved **brackets** that emerge at about two thirds of their height.



- **Pointy domes:** The roofs of these temples have **pointy domes** and wherever there is a dome, the pillars are omitted as if to create an **octagonal space** within the temple.
- **Charmukh design:** The only variation in architecture specific to Jain temples is the frequently seen **four-faced or chaumukh design**.
 - In these four faced temples, the image of a **Tirthankar** faces all four sides or images of four Tirthankar are placed back to back to face four cardinal directions.
 - Entry into these temples is also from four doors that face the cardinal directions.
- **Sthambas:** Another element of Jain architecture are towers of **Sthambas** which were meant to commemorate victories in war.

Important Examples

- The great Jain temples and sculptured monuments of Karnataka, Maharashtra and Rajasthan are world-renowned.
- The most spectacular of all Jain temples are found at Ranakpur and Mount Abu in Rajasthan.
- **Deogarh (Lalitpur, Uttar Pradesh), Ellora, Badami and Aihole** also have some of the important specimens of Jain Art.

SNAKE ISLAND

◎ CONTEXT:

Ukraine has said it has caused “significant losses” to the Russian military in airstrikes on Zmiinyi Island, also known as Snake Island, in the Black Sea.

About Zmiinyi Island

- Zmiinyi Island is also known as Snake or Serpent Island.
- It is a small piece of rock less than 700 metres from end to end, that has been described as being “X-shaped”.
- It is located 35 km from the coast in the Black Sea, to the east of the mouth of the Danube and roughly southwest of the port city of Odessa.



Black Sea:

- The Black Sea is one of the marginal seas of the Atlantic and the ocean’s 13th largest sea.
- It is bordered by
 - Ukraine to the north
 - Russia to the northeast
 - Georgia to the east
 - Turkey to the south
 - Bulgaria and Romania to the west



- The island, which has been known since ancient times and is marked on the map by the tiny village of Bile that is located on it, belongs to Ukraine.

ECO-SENSITIVE ZONE AND KERALA

◎ CONTEXT:

Farmers in Kerala continue to protest across several high ranges of the state against the Supreme Court's recent order to establish 1-km Eco-Sensitive Zones around all protected areas, wildlife sanctuaries and national parks.

What are Eco-Sensitive Zone?

- As per the **National Wildlife Action Plan (2002-2016)**, issued by the Union Ministry of Environment, Forest and Climate Change, **land within 10 km of the boundaries of national parks and wildlife sanctuaries is to be notified as eco-fragile zones or Eco-Sensitive Zones (ESZ).**
 - While the 10-km rule is implemented as a general principle, the extent of its application can vary.
 - Areas beyond 10-km can also be notified by the Union government as ESZs, if they hold larger ecologically important "sensitive corridors."
- The Eco Sensitive Zones are envisaged as a **cushion or shock absorbers** for 'protected areas'.

Protected areas are those in which human occupation or at least the exploitation of resources is limited.

- They are supposed to act as the **transition zones** from areas of high protection to less protection.
- They are like **an ecotone**- the transition between two biological communities or ecosystems, and it is crucial for the protection of protected areas like wildlife sanctuaries and forests.
- Objective:** to **reduce the impact of human intervention in the core protected area.**

Who notifies them?

- They are **notified by the Ministry of Environment, Forests and Climate Change**, Government of India around Protected Areas, National Parks and Wildlife Sanctuaries.

ESZ Guidelines classify activities under three categories:

- Prohibited:** Commercial Mining, Setting of Saw Mill, Setting of industries causing pollution, establishment of major hydroelectric projects etc.
- Regulated:** Felling of Trees, Establishment of hotels and resorts, erection of electrical cables, drastic change of agricultural systems etc.
- Permitted:** Ongoing agriculture and horticulture practices by local communities, rain water harvesting, organic farming etc.

Why are people protesting against it?

- High density of human population near the notified protected areas.
- Likely impact the livelihoods of farmers
 - The total extent of the wildlife sanctuaries in Kerala is eight lakh acres. If one-km of ESZ is demarcated from their boundaries, around 4 lakh acres of human settlements, including farmlands, would come within that purview.

THE HIGH COURT CITES MUSLIM PERSONAL LAW

- © **CONTEXT:** The Punjab and Haryana high court held that a Muslim girl above 15 years of age is competent to enter in a marriage contract with 'a person of her choice'.

Age to marry according to different religion

Personal laws that govern marriage and other personal practices for communities prescribe certain criteria for marriage, including age of the **bride and groom**.

- **Hindu:** Section 5(iii) of **The Hindu Marriage Act, 1955**, sets a minimum age of 18 for the bride and 21 for the groom.
- **Christian:** This is the same for Christians under the Indian Christian Marriage Act, 1872 and the Special Marriage Act.
- **Muslim:** For Muslims, the criteria are attaining puberty, which is assumed when the bride or groom **turns 15**.

Laws governing the age of marriage in India

- Under the law, child marriages, although illegal, are not void but "voidable." A child marriage can be declared null and void by a court when either party to the marriage files a petition under **Article 3(4) of the 2006 Prohibition of Child Marriage Act**.
- In Islam, the marriage of a minor who has attained puberty is considered valid.
- **The Special Marriage Act, 1954** and the **Prohibition of Child Marriage Act, 2006** also prescribe 18 and 21 years as the minimum age of consent for marriage for women and men respectively.

Child marriages in India

- According to the **Global Childhood Report** released by UK-based NGO Save the Children, in India even today **child marriage prevalence is higher in rural areas** as compared to urban areas as these figures are 14.1% and 6.9% for rural and urban areas respectively for age group **15-19 years**.

Prohibition of Child Marriage Act, 2006 (PCMA 2006) defines a 'child marriage' as one where either of the two parties is a child. A "child" is defined as a woman below 18 years of age, and a man below 21. This law renders a "child marriage" voidable by a party who petitions court.

HASINA OPENS PADMA MULTIPURPOSE BRIDGE

- © **CONTEXT:** Bangladesh Prime Minister Sheikh Hasina inaugurated the country's new landmark multipurpose 'Padma Bridge' recently.

About:

- This is the longest bridge in Bangladesh that will significantly reduce the distance between the **capital city of Dhaka to the Mongla sea port**, which is important for regional and international trade.

- The project was **initially expected to be funded by a consortium led by the World Bank**.
 - In 2012, it cancelled the proposed credit saying it had “credible evidence” of high-level corruption among Bangladeshi officials.
 - Bangladesh has all through denied these allegations and preferred not to approach the international global lender for funding.
- The construction was actually delayed due to the false and conspiratorial allegation of corruption brought by the World Bank which was the main financier of the project along with the **Asian Development Bank (ADB), Islamic Development Bank (IDB), and Japan**.
- It is a mega project of Bangladesh completely financed by the Government of Bangladesh.
- The **Benapole land port and Payra seaport** will also be benefited due to the construction of the Padma Bridge.
- The main bridge is 6.15 kilometres long, while the railway viaduct is 0.532 kilometres long.
- The bridge stretches for a total of 10.642 kilometres with 41 spans attached to 42 pillars.



WHAT IS A BLACK SWAN EVENT?

◎ CONTEXT

A study by the Reserve Bank of India (RBI) has spoken about the possibility of capital outflows of about \$100 billion from India in case of a major global risk scenario called as “black swan” event.

Background

- The black swan theory was put forward by author and investor **Nassim Nicholas Taleb** in 2001.
- The term originated in lieu of sighting a rare **black swan** in Australia. Earlier to which Europeans believe that only white swans exists in the world.
- Thus this event is named so, as a remark of an **unprecedented event**.
- The First time it had noticed in 2008 as **global financial crisis** – a black swan event triggered by a sudden crash in the booming housing market in the US.
- **The fall of the Soviet Union**, the terrorist attack in the US on September 11, 2001, also is considered as a Black swan event.

About Black swan event

- A black swan is a **rare, unpredictable** event that comes as a surprise and has a significant impact on society or the world.
- These events are said to have three distinguishing characteristics – they are extremely rare and outside the realm of regular expectations.
- They have a severe impact after they hit and they seem probable in hindsight when plausible explanations appear.

Criteria to call an event as a 'Black swan'

- Unpredictability of the event
- Loss at global level or a regional level at a whole
- Its effects can be seen

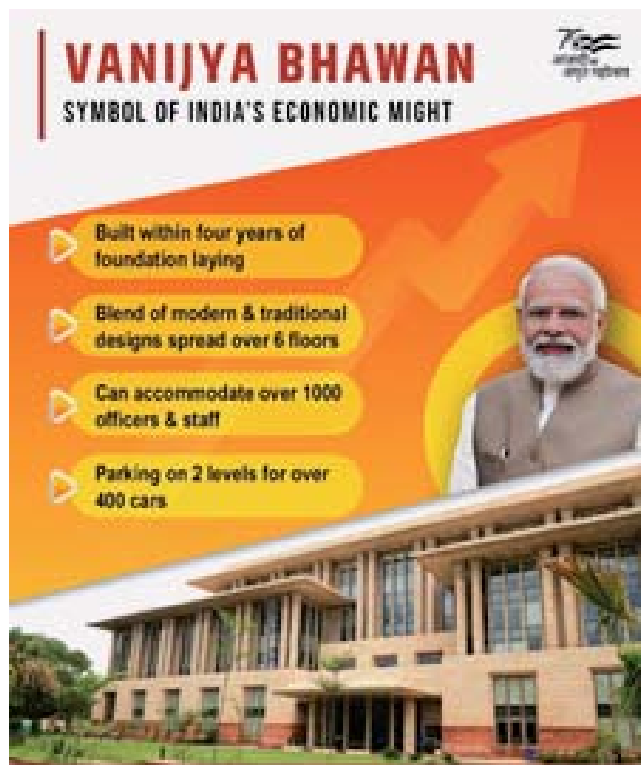
PM INAUGURATES 'VANIJYA BHAWAN' AND LAUNCHES NIRYAT PORTAL

◎ CONTEXT

The Prime Minister recently inaugurated 'Vanijya Bhawan' and launched the 'NIRYAT portal'.

About Vanijya Bhawan

- Vanijya Bhawan is designed as a **smart building** that incorporates the principles of sustainable architecture with a special focus on energy saving.
- It is constructed near the India Gate.
- Vanijya Bhawan will secure as an integrated and modern office complex that will be used by the two departments under the Ministry i.e.
 - Department of Commerce
 - Department for Promotion of Industry and Internal Trade (DPIIT)



NIRYAT Portal

- NIRYAT - National Import-Export for Yearly Analysis of Trade portal aims to help in breaking silos by providing real time data to all stakeholders.
- From this portal, important information related to more than 30 commodity groups exported to more than 200 countries of the world will be available.

- In the coming time, information related to district-wise exports will also be available on this. This will also strengthen the efforts to develop the districts as important centres of exports.



NATIONAL CONFERENCE ON MILLETS ON THE THEME 'THE FUTURE SUPER FOOD FOR INDIA'

© CONTEXT

ASSOCHAM organized a "National Conference on Millets: The Future Super Food for India" recently.

What are Millets?

In India, millets have been mentioned in some of the oldest **Yajurveda** texts, thus indicating that millet consumption was very common, pre-dating to the **Indian Bronze Age (4,500BC)**.

- Millets are a group of **highly variable small-seeded grasses**, widely grown around the world as cereal crops or grains for human food and as fodder.
- It is grown in 131 countries. Millets traditional food for 59 crore people in Asia & Africa.

- Millets are a rich source of protein, fibre, minerals, iron, calcium and have a low glycemic index.
- They are grown as **grain crops**, primarily on marginal land in **dry areas of temperate, sub-tropical and tropical regions**.

Millets production in India

- Millets are grown in about 21 states in the country including **Karnataka, Andhra Pradesh, Tamil Nadu, Kerala, Telangana, Uttarakhand, Jharkhand, Madhya Pradesh, and Haryana**.
- India is now the **5th largest exporter of millets globally**.
 - Nearly 41% of total global production was met by India in 2020. In 2020-21, it exported millets worth US \$26.97 million.

Top 5 States	Millet Crops
Rajasthan	Bajra/Sorghum
Karnataka	Jowar/Ragi
Maharashtra	Ragi/Jowar
Uttar Pradesh	Bajra
Haryana	Bajra



Importance

- **Resistance:** Due to its **high resistance against harsh conditions**, millets are sustainable to the environment, to the farmer growing it, and provide cheap and high nutrient options for all.
- **Fibrous:** Millet is fibrous in content, has magnesium, Niacin (Vitamin B3), is gluten-free and has **high protein content**.

- **Anti-diabetes quality:** Millets can also help tackle health challenges such as obesity, diabetes and lifestyle problems as they are gluten free, have a low glycemic index and are high in dietary fibre and antioxidants.
 - Millet ingestion helps in a slower release of glucose over a longer period of time; thus, due to low glycaemic index (GI), their habitual intake reduces the risk of diabetes mellitus.
- **More sustainable:** Besides, millets help in reducing the atmospheric CO₂ and thus contribute in mitigating the climate change.

Steps taken for promoting millets since 2018:

- **National Year for Millets 2018**
- **"Sub Mission on Millets"** under National Food Security Mission since 2018.
- Several State launched mission on Millets.
- Millets included under **POSHAN MISSION Abhiyan** by Ministry of Women & Child Development.
- ICAR released one variety **Quinoa (Him Shakti)**.
 - Quinoa – A new crop: ICAR has been referred to suggest for declaring Nutri-cereals.
- 200 Start-ups **supported through IIMR**, Hyderabad.
- 67 **Value added Technologies** developed at Centre of Excellences.
- **Export of Millets** increased from \$ 24 million (2017) to \$ 26 million (2020).
- Release of **13 High Yielding varieties including 4 bio-fortified varieties of millets**.

International Year of Millets (IYoM)-2023:

- **Government of India** had proposed to United Nations for **declaring 2023 as International Year of Millets (IYOM)**.
- The proposal of India was supported by 72 countries and United Nation's General Assembly (UNGA) declared 2023 as International Year of Millets in March, 2021.
- Now, Government of India has decided to celebrate IYOM, 2023 to make it peoples' movement so that the Indian millets, recipes, value added products are accepted globally.

FOUR NEW CORALS RECORDED FROM INDIAN WATERS

◎ CONTEXT:

Scientists have recorded four species of **azooxanthellate corals** for the first time from Indian waters.

What are azooxanthellate corals?

- **Azooxanthellate corals** are a group of corals that do not contain zooxanthellae and derive nutrition not from the sun but by capturing various forms of plankton.
- They belong to the genus **Truncatophlebellum** (belong to the same family Flabellidae) from Indian waters.
- However, the zooxanthellate corals are restricted to shallow water only unlike azooxanthellate.

Key-highlights of the findings

- The four species found are:
 - Truncatoflabellum crassum
 - T. incrustatum
 - T. Irregular
 - T. Krasum
- They are **non-reef building, solitary corals**.
- These groups of corals are deep-sea representatives, with the majority of species reporting from between 200 m to 1000 m.
- Their occurrences are also reported from shallow coastal waters.

Why does the location matter?

- These findings were made in the waters of **Andaman and Nicobar Islands**.
- About 570 species of hard corals are found in India and about 90% of them are found in the waters around Andaman and Nicobar Islands.
- Andaman and Nicobar are one of the ancient and oldest ecosystems of corals that share less than 1% of the Earth's surface but they provide a home for about 25% of marine life.



What are the ideal environmental conditions for corals to grow?

- Shallow water
- Semi-hard or hard surface
- Clear water
- Saline-filled waters
- Rich supply of nutrients

Corals in India

- India is recorded to have around 7,517 km of coastline but only 6,100 km represents the mainland coastline. The three major types of coral reefs found in India are **fringing, barrier and atolls**.
- Coral reefs in India are found in a lot of areas including the **Gulf of Kutch, Gulf of Mannar, Palk Bay, Andaman & Nicobar and Lakshadweep Islands**. The Gulf of Kutch in the northwest has some of the most northerly reefs in the world.
- Patches of coral reefs are also found in Ratnagiri, Malvan and Redi, south Bombay and at the Gaveshani Bank located in the west of Mangalore.

Types of coral reefs in India

India has three major prevailing types of coral reefs:

- **Fringing reefs:** Fringing reefs evolve and develop near the continent and remain close to the coastline. These reefs are separated from the coastline by small, shallow lagoons. They are the most commonly found reefs in the world.
- **Barrier reefs:** Barrier reefs are found offshore on the continental shelf. They usually run parallel to the coastline at some distance. A deep and wide lagoon is located between the coastline and the barrier reef.
- **Atolls:** Atolls are formed on mid-oceanic ridges. They are shaped circularly or elliptically and are surrounded by seas on all four sides and have shallow waters in the center called a lagoon.

G-7 LAUNCHES CLIMATE CLUB TO TRY AND AVOID GREEN TRADE WARS

◎ **CONTEXT:**

Leaders of the world's most advanced economies have agreed to start a **Climate Club** where members agree on joint rules and standards in the fight against global warming with the hope that it will avoid spats over green tariffs.

What is a climate club?

Nobel-prizewinning economist **William Nordhaus** proposed the **climate-club idea** in 2015.

- The Climate Club is an intergovernmental forum of high ambition.
- It will be inclusive in nature and open to countries that are committed to the full implementation of the Paris Agreement and the decisions thereunder, in particular the Glasgow Climate Pact, and to accelerate their action to this end.

United Nations climate agreements such as the **1997 Kyoto Protocol** and the **2015 Paris Agreement** are voluntary.

What are the major pillars?

The Climate Club is to be built on three pillars:

- **Advancing ambitious and transparent climate mitigation policies** to reduce emissions intensities of participating economies
- **Transforming industries** jointly to accelerate decarbonisation and expanding markets for green industrial products.
- **Boosting international ambition** through partnerships and cooperation to encourage and facilitate climate action

Aligned interests:

- The Organisation for Economic Co-operation and Development, the International Monetary Fund and the World Bank are supportive of the effort.

- Currently, the members of the club only include the G-7, leaving out major polluters including China, India, Indonesia and South Africa.

Key Terms:

- **Carbon price:** A cost applied to greenhouse gases produced as a result of human activity. It aims to reduce emissions by penalizing polluting activities. It can be a tax, or a requirement to purchase emission permits.
- **Carbon leakage:** When producers offshore the production of carbon-intensive goods to nations with lower carbon taxes to save costs, then import the products from there.
- **Carbon border adjustment:** A tariff on imported goods based on the amount of greenhouse gases emitted during their manufacture. Aims to reduce and prevent carbon leakage. The size of this tariff would be equivalent to explicit or implicit domestic carbon prices, such as carbon taxes and environmental regulations.

UNDERSTANDING BIRD STRIKES AND AVIATION SAFETY

◎ CONTEXT:

Two planes in India — a Spice jet and an Indigo flight — were struck by bird hits and had to be grounded.

- As per International Civil Aviation Organization data, airlines face an average of 34 such strikes in a day, amounting to a loss of around \$1 billion annually.

What is a bird strike?

- The event of an airborne animal (usually a bird or a bat) hitting an airplane in flight is referred to as a bird strike.
- Bird strikes also happen to other man-made objects on land, such as cars, power lines, and wind turbines, which usually result in death for the birds.



Bird Strikes Surge

GoFigure!



Aircraft collisions with large birds have surged since the 1990s and the Federal Aviation Administration is working with the Department of Agriculture and the Air Force to reduce the dangerous collisions.



Credit: USDA

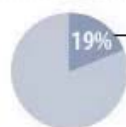
More than 100,000
wildlife strikes between
1990 and 2008
(Civil and USAF)

23 fatalities
attributed to wildlife
strikes with U.S. civil
aircraft since 1990

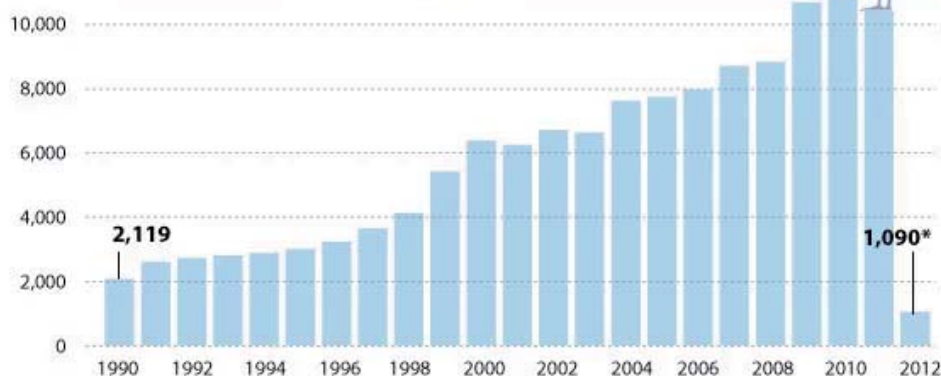
\$650 million
estimated costs per year
from wildlife strikes

Bird Strikes

Birds-aircraft collisions
in the U.S.



Gulls are the most common type
of bird to strike aircraft. They
account for **19 percent** of the
birds identified in bird strikes.



* through March 31

SOURCES: USATODAY, FEDERAL AVIATION ADMINISTRATION

R. TORO / © LiveScience.com

When are Bird strikes dangerous?

Bird strikes occur almost every day, but some are more dangerous than others.

- **Jet engine ingestion:** Arguably the most dangerous form of bird strike is one in which a bird is ingested into the aircraft's engine; this event is referred to as a **jet engine ingestion**.
 - The danger in such situations increases further if a larger flock of multiple birds is involved.
- **Airplane's exterior:** Another instance when bird strikes can be dangerous is when they hit the **airplane's exterior**, which can cause significant cosmetic damage to the plane's exterior.
 - This can sometimes cause aircraft to be temporarily withdrawn from service.

How to avoid Bird strikes?

Techniques and devices which can be used are;

- Predatory bird sound recordings,
- cartridge scarers — which produce loud bangs and
- flashes of light —
- mechanical falcons, trained falcons and drones have all been used

Human-Wildlife conflict

- This incidence of bird strikes can be seen as an event of human-wildlife conflict. As Open areas of grass and water, shrubs, and trees provide food and roosting sites for birds.
- For this reason, airports tend to cut down trees with nests, reduce rainwater pooling, and substitute cattle grazing for grain crops.

HERBS DOMINATE FLOWERING PLANTS IN NEW ASSAM NATIONAL PARK

◎ CONTEXT:

Herbs dominate the flowering plants in western Assam's Raimona National Park, one of two newly-upgraded protected areas in the State.

About

- A team of botanists from Bodoland University and experts from the Wildlife Trust of India (WTI) also found 33 endangered species in the first systematic flowering plants diversity assessment in the 422 sq. km park under the Bodoland Territorial Region.
- Herbs comprise 33.61% of the recorded flowering plants followed by:
 - 25.88% of trees
 - 20.87% of shrubs
 - 11.06% of climbers
 - 3.75% of epiphytes
 - 2.71% of scandent shrubs
 - 1.46% of parasitic plants

- 0.63% of lianas
- **Lianas are plants with long, flexible, climbing stems that are rooted in the ground and usually have long dangling branches.**
- A total of 24 species of flowering plants were recognised as invasive.
 - The five dominant families are Poaceae, Phyllanthaceae, Orchidaceae, Malvaceae and Rubiaceae.
- Of the 33 species that were put in the RET (rare, endangered and threatened) category:
 - 15 were found to be endangered,
 - five vulnerable and
 - one rare — *Flacourtia jangomas*
 - A total of 12 species were placed in the "least concern" category.



Raimona National Park:

- Raimona, known earlier as Ripu Reserve Forest, was notified in June 2021 as the sixth national park of Assam.
- Kaziranga National Park and Manas National Park, two of the five notified before it, are World Heritage Sites designated by the UNESCO.
- Raimona adjoins the Buxa Tiger Reserve in West Bengal to its west, Phipsoo Wildlife Sanctuary in Bhutan in the north, and Manas National Park to the east.
- It forms the boundary with the Sankosh River.
- **Fauna:**
 - Golden Langur is endemic to the park.
 - The other major animals are Asian elephant, Royal Bengal tiger, Clouded leopard, Indian gaur, Wild water buffalo, Spotted deer, Hornbill.



National parks in Assam

- Total national parks in Assam: **Seven**
 - Kaziranga, Nameri, Orang, Manas and Dibru-Saikhowa. With Raimona and Dehing Patkai.
- Assam now is the state with the second highest number of national parks in the country, after Madhya Pradesh's 11.
- The Union Territory of Andaman and Nicobar have nine national parks.

FIRST PATIENT OF ANIMAL HOSPICE IN WAYANAD SANCTUARY CONVALESCING

◎ CONTEXT:

An injured tiger, the first animal which was admitted to the animal hospice and palliative care unit for big cats in the Wayanad Wildlife Sanctuary (WWS), is recovering.

About:

- The animal had an injury on the joint of its right forelimb which it apparently sustained after a fight with another big cat.
- The life expectancy of a tiger in its habitat is nearly 12 years, an age the animal has already reached. If the tiger is released into the wild, the chance of conflict with another tiger for territory is very high.

Animal hospice and palliative care unit for big cats in the Wayanad Wildlife Sanctuary (WWS):

- The Hospice unit has been set up on the premises of Vanalakshmi, an abandoned pepper plantation of the Forest Department near Pachadi in the Kurichad forest range, at a cost of ₹1.12 crore.
- The unit functions as a rehabilitation centre for major carnivores such as tigers and leopards with a facility to hold four animals at a time.
- A trench is also dug around the unit as a part of protection measures.

About Wayanad Wildlife Sanctuary

- **This wildlife sanctuary is located in Wayanad, Kerala.**
- **Wayanad Wildlife Sanctuary (WWS)** is an integral part of the **Nilgiri Biosphere Reserve**.
 - **Nilgiri Biosphere Reserve was the first from India** to be included in the **UNESCO designated World Network of Biosphere Reserves (designated in 2012).**
- **Established in: 1973**
- **It is the second largest wildlife sanctuary in Kerala.**
- **This wildlife sanctuary is bounded by the protected area network of Nagarhole National Park and Bandipur National Park in Karnataka** in the northeast, and on the southeast by **Mudumalai National Park in Tamil Nadu.**
- **Kabini river (a tributary of the Cauvery river)** flows through the sanctuary.
- **It is part of the Deccan Plateau and Western Ghats.**
 - **The forest types include** South Indian Moist Deciduous forests, West coast semi-evergreen forests and plantations of teak, eucalyptus and Grewelia.
- **It comes under Protect Elephant.**

- Elephant, Gaur, Tiger, Panther, Sambar, Spotted deer, Wild boar, Sloth bear, Nilgiri langur, Bonnet macaque, Common langur, Malabar giant squirrel etc are the major mammals.
- This protection area is inhabited by Paniyas, Kurubas, Adiyans, Kurichiyas, Ooralis and Kattunaikkans scheduled tribes.



KERALA TO HAVE ITS OWN REGIONAL RED LIST OF BIRDS

◎ CONTEXT:

Kerala will soon have its own red list of birds. The Kerala Bird Monitoring Collective led by Kerala Agricultural University and the Bird Count India will conduct the regional red list assessment.

About

- Kerala will be the first State to have a region-specific red list of birds.
- Assessment will be done on the basis of the International Union for Conservation of Nature (IUCN) guidelines.

- The IUCN guidelines for preparing the red list have five main criteria:
 - The population size reduction measured over 10 years or three generations is one of the major guidelines.
 - Geographic range on the basis of extent of occurrence or area of occupancy is another.
 - Small population size and decline;
 - Very small or restricted population; and
 - Quantitative analysis indicating the probability of extinction in the wild is the other criteria.

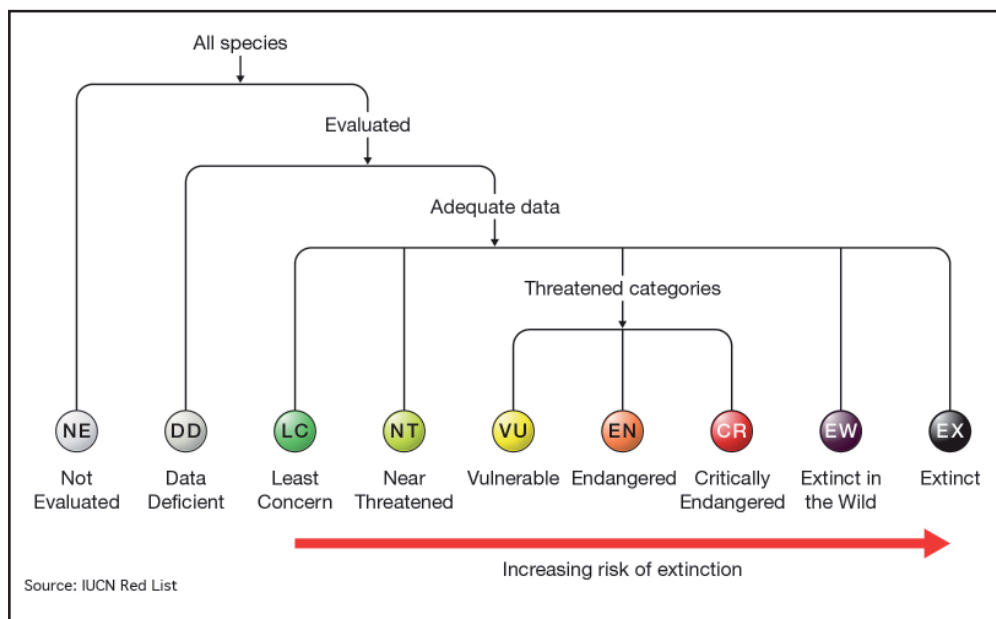
Limitations for the global assessment:

- Global assessment is a process prepared in a global context. A species seen common at the global level may be a threatened species at the regional level.

IUCN Red List

Following are the 9 categories in the IUCN red list:

- **Extinct (EX)** – No known individuals remaining.
- **Extinct in the wild (EW)** – Known only to survive in captivity, or as a naturalized population outside its historic range.
- **Critically endangered (CR)** – Extremely high risk of extinction in the wild.
 - Reduction in population size (>90% over the last 10 years),
 - Population size (number less than 50 mature individuals)
 - Quantitative analysis showing the probability of extinction in wild in atleast 50% in their 10 years)
 - It is therefore considered to be facing an extremely high risk of extinction in the world.
- **Endangered (EN)** – High risk of extinction in the wild.
 - Reduction in population size (70% over the last 10 years),
 - Population size (estimated to number fewer than 250 mature individuals)
 - Quantitative analysis showing the probability of extinction in wild in atleast 20% in their 20 years
 - It is therefore considered to be facing a very high risk of extinction in the wild.
- **Vulnerable (VU)** – High risk of endangerment in the wild.
 - Reduction in population size (>50% over the last 10 years),
 - Population size (estimated to number fewer than 10,000 mature individuals)
 - Quantitative analysis showing the probability of extinction in wild in atleast 10% within 100 years)
 - It is therefore considered to be facing a high risk of extinction in the world.
- **Near threatened (NT)** – Likely to become endangered in the near future.
- **Least concern (LC)** – Lowest risk. It does not qualify for a more at-risk category. Widespread and abundant taxa are included in this category.
- **Data deficient (DD)** – Not enough data to assess its risk of extinction.
- **Not evaluated (NE)** – Has not yet been evaluated against the criteria



Kerala and IUCN list:

- According to the global IUCN red list, Kerala has 64 threatened species of birds.
- In that, Red-headed vulture and White-rumped vulture are critically endangered.
- Steppe Eagle, Banasura Chilappan and Nilgiri Chilappan are endangered and
- 11 species are vulnerable

UDAIPUR'S 'BIRD VILLAGE' TO BE DECLARED WETLAND

◎ **CONTEXT:** Menar in Udaipur district is set to be notified as Rajasthan's new wetland.

About

- The two lakes in the village – the **Brahma and Dhandh** – play host to a large number of migratory birds in the winter season every year.
- The State government's Forest Department has initiated the process for notification of Menar as a wetland, which will recognise its role in the storage of sediment and nutrients and enable the local authorities to maintain the Brahma and Dhandh lakes.
 - With the status of wetland, the two lakes will be strengthened for increasing vegetation of aquatic plants and protecting biodiversity.
- Observed Species:
 - More than 150 species of local and migratory birds inhabit the two lakes in the winter season.
 - They include Greater Flamingo, White-tailed Lapwing, Pelican, Marsh Harrier, Bar-headed Goose, Common Teal, Greenshank, Pintail, Wagtail, Green Sandpiper and Red-wattled Lapwing.
 - Bird lovers and tourists flock to the village after the arrival of migratory birds from as far as Central Asia, Europe and Mongolia.

■ Other Ramsar Sites in Rajasthan:

At present, Rajasthan has two wetlands recognised as Ramsar sites –

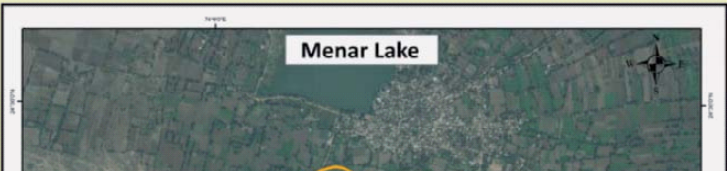
- Keoladeo Ghana in Bharatpur district
- Sambhar Salt Lake in Jaipur district.

MENAR LAKE

IBA Site Code	: IN-RJ-30	Area	: 60 ha
State	: Rajasthan	Altitude	: 480 msl
District	: Udaipur	Rainfall	: 650 mm
Coordinates	: 24° 35' 16" N, 74° 06' 43"	Temperature	: 4 °C to 42 °C
Ownership	: Gram Panchayat (village council)	Biogeographic Zone	: Semi-arid
		Habitats	: Fresh water lake

IBA CRITERIA: A1 (Threatened species)

PROTECTION STATUS: Protected by local public.



About Wetlands

- Wetlands are **land areas that are saturated or flooded with water either permanently or seasonally.**
- **Inland wetlands include marshes, ponds, lakes, fens, rivers, floodplains, and swamps.**
- **Coastal wetlands** include saltwater marshes, estuaries, mangroves, lagoons, and even coral reefs. Fishponds, rice paddies, and salt pans are human-made wetlands.

■ Ramsar Convention

- The Ramsar Convention is an international agreement promoting the conservation of wetlands.
- The Convention was adopted at Ramsar in Iran in 1971 and came into force in 1975. Almost 90% of the UN member states are part of the Convention.

WORLD'S BIGGEST BACTERIUM FOUND IN CARIBBEAN MANGROVE SWAMP

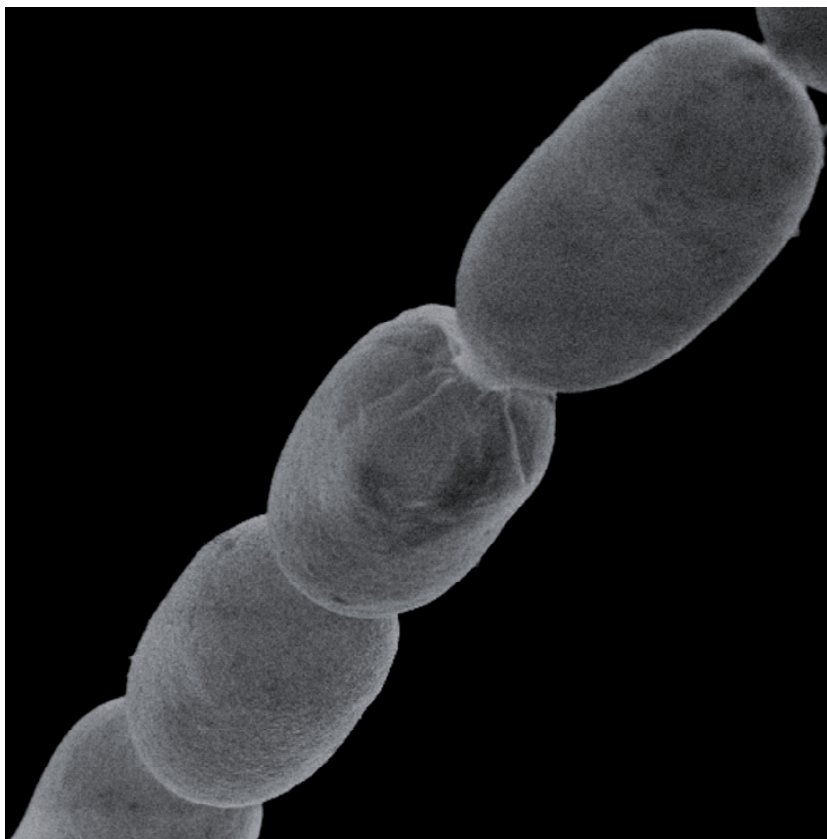
◎ CONTEXT:

Scientists have discovered the world's largest bacterium in a Caribbean mangrove swamp.

About the bacteria:

- The bacterium — named **Thiomargarita magnifica**, or "magnificent sulfur pearl" — clinging to sunken mangrove leaves in the archipelago of Guadeloupe in 2009.
- The bacterium is roughly the shape and size of an eyelash.

- The bacteria appeared as long translucent centimeter-long strings on decaying leaf matter in the water.
- Most bacteria are microscopic, but this one is so big it can be seen with the naked eye.
- The bacterium also has a complex membrane organization and a predictable life cycle.

**Different from other bacteria's:**

- Bacteria are commonly thought to be “bags of enzymes,” where there is no nucleus or Golgi apparatus or any other organelles, and DNA simply floats freely through the cell.
 - However, *T. magnifica* not only contains DNA within a membrane, but also ribosomes—which create proteins—cohabitating with the genome.
- The cell has a structure that's unusual for bacteria.
- One key difference: It has a large central compartment, or vacuole, that allows some cell functions to happen in that controlled environment instead of throughout the cell.

Guadeloupe archipelago in the French Caribbean:

- Guadeloupe, the French Caribbean tropical islands in the Lesser Antilles in the Eastern Caribbean is situated just north of Dominica and southeast of Puerto Rico.
- Caribbean mangrove swamps are packed with organic matter, with microbes in the sediment degrading this matter and producing high concentrations of sulfur.
- The sulfur-rich environment offers an energy source for bacteria like *Thiomargarita magnifica*.
- The researchers named its DNA-bearing organelles “pepins” after a French word for small seeds inside fruits.



NEW SPIDER FROM THAR DESERT NAMED AFTER MALAYALI ARACHNOLOGIST

◎ CONTEXT:

A new species of spider discovered from the Thar Desert of Rajasthan has been named after a Malayalee arachnologist.

About

- The new species of **jumping spider**, **Pseudomogrus sudhii**, has been named after **Sudhikumar A.V.**, in recognition of his contributions to the field of Indian arachnology.
 - He is also founder of the **Centre for Animal Taxonomy and Ecology (CATE)**.
- This species inhabits dry grass blades of the desert.
- It is **the first report of this genus from India**.
 - So far **35 species of spiders** of this genus have been **discovered worldwide**.
- The spider is **only 4-mm long**.
- **Dark brown coloured head** of male is covered with small **white hairs** and has **black eye region**.
- There is a **dark mid-longitudinal band** traversing the **pale-yellow coloured abdomen**.
- **Head of the female is yellow** with black eyes. There are white spots on its light-yellow abdomen.



MEET THE STRIPED HYENA

20% of the world's hyena population is found in India.



Striped Hyena (*Hyaena hyaena*) is native to the Indian subcontinent, Central Asia, the Middle East, and North & East Africa.

The estimated population of the striped hyena is under

10,000

and they are classified as 'Near Threatened' in the IUCN Red List.

Hyenas have extremely

POWERFUL JAWS AND STRONG TEETH

which is quite useful in crushing bones as they mostly feed on carrion.

THE LION KING

From time immemorial, hyenas have been widely misrepresented as malicious and evil in culture, folklore and even in movies.

Threats to hyenas— man-animal conflict, poisoning, habitat destruction, hunting and poaching for body parts.



Compared to the males, female hyenas grow up to be larger in size. They are dominant over the males and often aggressive towards other females.

Striped hyenas are known to live in

MONOGAMOUS

pairs and the males play an

EQUAL ROLE

in rearing and nurturing of the cubs.

Their average lifespan in the wild is approximately 12 years but in captivity they can live upto 20-25 years.



They are nature's

PEST CONTROL

and help in maintaining a healthy, disease free ecosystem.



INDIA'S STRIPED HYENAS

◎ CONTEXT:

A nocturnal animal, Indian Striped Hyena is capable of hunting even during the no moon days.

About

- Striped hyenas can be seen over an extensive range in the north and northeast Africa, from the Middle East to southern Siberia as well as the Indian subcontinent.
- Hyenas are carnivorous beasts found chiefly in Africa and are known for being scavengers.
- With only four living members of their genus existing in the present times, they are among the smallest family of mammals alive, the fifth smallest to be exact.
- Scientific Classification:
 - **Kingdom:** Animalia
 - **Phylum:** Chordata
 - **Class:** Mammalia
 - **Order:** Carnivora



Physical Description and Appearance:

- **Size:** Length: 2.3 – 5.4 ft (70.1 – 164.2 cm)
- **Weight:** 17.6 – 190 lb (8 – 86 kg)
- **Teeth:** Their teeth are strong, providing more biting power to the jaws.

A RARE DRAGONFLY SPOTTED IN KERALA

◎ CONTEXT:

A species of Spiny Horntail- Dragonfly is seen in Kottiyoor forests of Kannur district of Kerala.

About

- This species is endemic to Western Ghats, earlier found in Maharashtra this year.
- In India, they are found in three types of species in genus *Burmagomphus*.
 - **cauvericus** – restricted to certain areas of Western Ghats
 - **pyramidalis**- Western Ghats as well as in Peninsular India.
 - **laidlawi**- Found in whole of Western Ghats
- Other than these species all species of the genus are found in the **Western and Eastern Himalayas**.

- The new species is separated from its congeners by the markings on the lateral thorax and peculiar shape of anal appendages.

Dragonfly

- Dragonflies are predatory insects from the order Odonata (an order of flying insects that includes the dragonflies and damselflies) and characterized by;
 - ▶ large eyes
 - ▶ transparent wings
 - ▶ Most colourful patches in body
- Dragonflies are day flying species and have some common features like butterflies.

**Other major species in India**

- Ditch jewel dragonfly
- Diplacodes trivialis (ground skimmer): Most abundant species.
- Red Groundling
- Potamarcha congener- Common chaser

WHO CONSIDERS DECLARING MONKEY POX A GLOBAL HEALTH EMERGENCY

◎ CONTEXT:

The World Health Organization (WHO) held an emergency meeting recently over the worldwide spread of monkeypox.

Monkey Pox:

- Monkeypox virus is an **orthopoxvirus** that causes a disease with **symptoms similar, but less severe, to smallpox**.
- While **smallpox was eradicated in 1980**, monkeypox continues to occur in countries of **Central and West Africa**.

- **Two distinct clade** are identified: the West African clade and the Congo Basin clade, also known as the Central African clade.
- Monkeypox is a **zoonosis**, a disease that is **transmitted from animals to humans**.
- Cases are often found close to **tropical rainforests** where there are animals that carry the virus.
- Evidence of monkeypox virus infection has been found in animals including **squirrels, Gambian poached rats, dormice, different species of monkeys and others**.
- **Detection of viral DNA by polymerase chain reaction (PCR)** is the preferred laboratory test for monkeypox.
 - The best diagnostic specimens are directly from the rash – skin, fluid or crusts, or biopsy where feasible.
 - Antigen and antibody detection methods may not be useful as they do not distinguish between orthopoxviruses.
- **Symptoms:** Monkeypox presents with fever, an extensive characteristic rash and usually swollen lymph nodes.
- It is important to distinguish monkeypox from other illnesses such as chickenpox, measles, bacterial skin infections, scabies, syphilis and medication-associated allergies.



Outbreaks:

- Human monkeypox was **first identified in humans in 1970** in the Democratic Republic of the **Congo** (then known as Zaire) in a 9-year-old boy in a region where smallpox had been eliminated in 1968.
- Since then, most cases have been reported from rural, rainforest regions of the Congo Basin, particularly in the Democratic Republic of the Congo, where it is considered to be endemic.

Key Points:

- The WHO **did not activate its highest alert level** in response to the global monkeypox outbreak, called a public health emergency of international concern.
- Currently, only Covid-19 and polio are considered global health emergencies.
- There are at least 3,000 monkeypox cases across more than 50 countries.
- The WHO said the current outbreak raises serious concerns and it is monitoring the situation closely.
- WHO Director General Tedros Adhanom Ghebreyesus described monkeypox as **an evolving health threat**, however, and urged governments around the world to step up surveillance, contact tracing, testing and to make sure that people at high risk have access to vaccines and antiviral treatments.

ISKANDER-M MISSILE SYSTEM

◎ CONTEXT:

Russia is planning to send nuclear capable short-range missile systems to its ally Belarus in the coming months.

Iskander-M system:

- The Iskander-M is a mobile guided missile system code-named **"SS-26 Stone"** by NATO, which replaced the **Soviet "Scud."**
- Russia defines Iskander-M System as both the **transporter-erector launch system and the short-range ballistic missile (SRBM) it fires.**
- The system can **also fire ground-launched cruise missiles (GLCMs)** – the SSC-7 and the SSC-8.
- The **Iskander-M system has been exclusively used by the Russian military**, whereas **Iskander-E is the one meant for export.**
- The Iskander missiles are designed to confuse missile defences by flying on a low trajectory and manoeuvring in flight to strike targets within 2 to 5 metres accuracy.

Missile's capability and range:

- **Range:** The Iskander-M missile has a **range of 500 km** and it can carry a payload of up to **700 kg.**
- **Weapon:** It is capable of **carrying both conventional and nuclear warheads.**
- The conventional warheads can be equipped with include cluster bombs, electromagnetic pulse (EMP) warheads and bunker-buster munitions.
- The export variant, Iskander-E, has a range of 280 km with a reduced 480 kg payload.

Introduction and usage:

- Iskander system was **inducted by Russia in 2006.**
- Its development picked pace in the late 1980s after the **"Oka" SRBM or the OTR-23 was banned under the Intermediate Nuclear Forces Treaty.**
- The Oka was Russia's first attempt to replace the Soviet Scud missiles.
 - Iskander was the second.
 - Russia first used the Iskander in combat in Georgia in 2008.

Warning to the west:

- Russia has used the Iskander system to **project power against Europe**, more so because of its ability to be fitted with tactical nuclear warheads.
- In 2012, Moscow said that the weapon could be used to target Europe's missile defences.
- The Iskander system has already been **deployed in Kaliningrad**, a Russian exclave, from where it **can be fired to target NATO forces in Poland, the Baltic States, and Sweden**.

TYPHOID: S. TYPHI IS MORE DRUG-RESISTANT

◎ CONTEXT:

According to a study, the bacteria causing typhoid fever is becoming increasingly resistant to some of the most important antibiotics for human health.

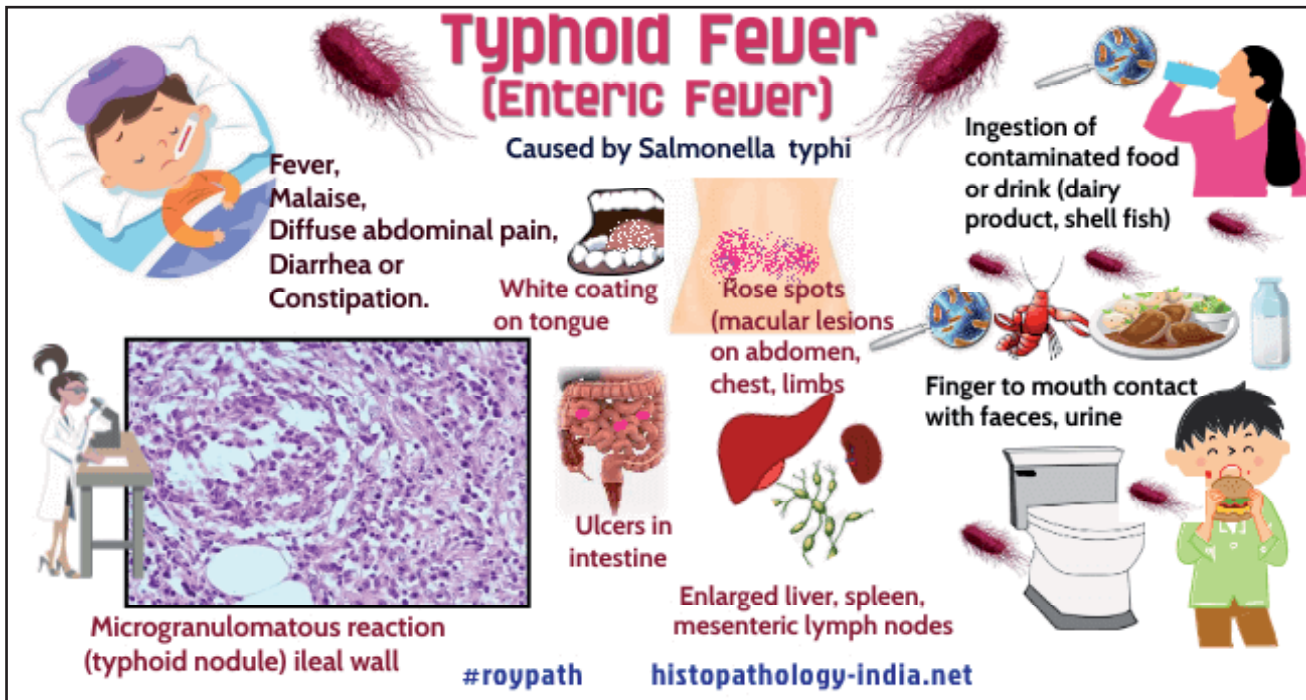
Key findings of the study:

- The largest genome analysis of **Salmonella Typhi (S. Typhi)** shows that resistant strains, almost all originating in South Asia have **spread to other countries nearly 200 times** since 1990.
- The researchers noted that typhoid fever is a global public health concern, causing 11 million infections and more than 1,00,000 deaths per year.
- It is most prevalent in **South Asia, which accounts for 70%** of the global disease burden.
 - It also has significant impacts in sub-Saharan Africa, Southeast Asia, and Oceania, highlighting the need for a global response.
- **Antibiotics** can be used to successfully treat typhoid fever infections, but **their effectiveness is threatened by the emergence of resistant S. Typhi strains**.

About Typhoid fever:

- Typhoid fever is caused by **Salmonella typhi bacteria**.
- Typhoid fever is rare in developed countries.
 - It is still a **serious health threat in the developing world**, especially for children.
- **Contaminated food and water** or close contact with an infected person cause typhoid fever.
- **Signs and symptoms** usually include:
 - High fever
 - Headache
 - Stomach pain
 - Constipation or diarrhea
- **Causes**
 - Typhoid fever is caused by dangerous bacteria called Salmonella typhi.

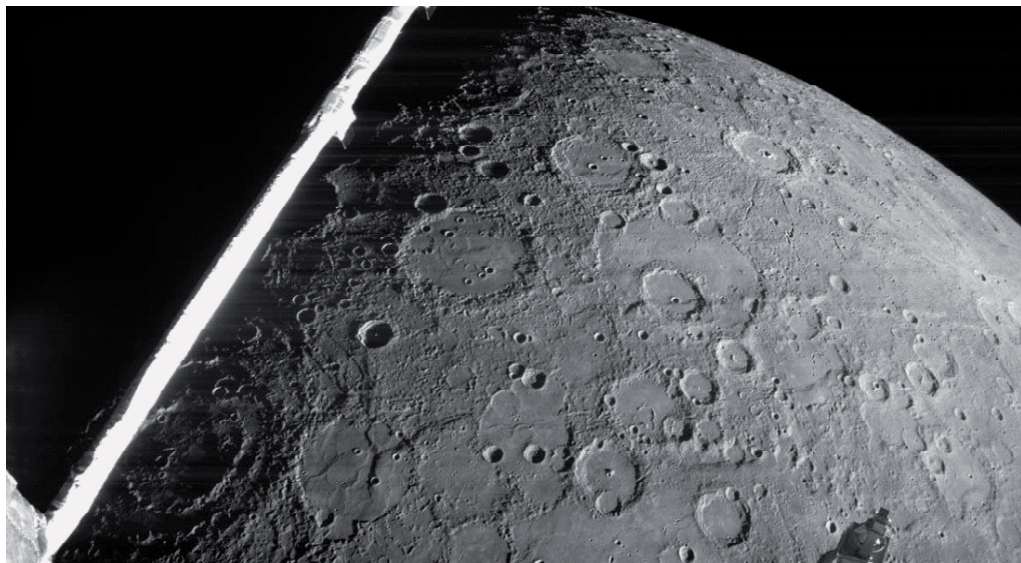
Salmonella typhi is a **multiorgan pathogen** characterized to inhabit the lymphatic tissues of the small intestine, liver, spleen, and bloodstream of infected humans.



STUNNING CLOSE-UP OF MERCURY CAPTURED BY EUROPEAN-JAPANESE BEPICOLOMBO

◎ CONTEXT:

The BepiColombo mission, collaboration between the European Space Agency (ESA) and Japan Aerospace Exploration Agency (JAXA) captured this beautiful image of Mercury's crater-marked surface as the spacecraft flew close to the planet for a gravity assist manoeuvre.



About BepiColombo mission:

- BepiColombo is Europe's **first mission to Mercury**. It was **launched in October 2018**.

- **Status:** En route to Mercury
- **Objective:** One of ESA's cornerstone missions, it will study and understand the composition, geophysics, atmosphere, magnetosphere and history of Mercury, the least explored planet in the inner Solar System.
- **Mission:** BepiColombo will provide the best understanding of Mercury to date. It consists of two individual orbiters: the Mercury Planetary Orbiter (MPO) to map the planet, and the Mercury Magnetospheric Orbiter (MMO) to investigate its magnetosphere.
- **Spacecraft:** The BepiColombo mission is based on two scientific spacecraft and one transfer module:
 - Mercury Planetary Orbiter (MPO)
 - Mercury Magnetospheric Orbiter (MMO)
 - Mercury Transfer Module (MTM)
- Among several investigations, BepiColombo will make a complete map of Mercury at different wavelengths.
- It will chart the planet's mineralogy and elemental composition, determine whether the interior of the planet is molten or not, and investigate the extent and origin of Mercury's magnetic field.
- **Partnership:** BepiColombo is a joint mission between ESA and the Japan Aerospace Exploration Agency (JAXA), executed under ESA leadership.

MISSION FACTS

The mission is named in honour of the Italian mathematician and engineer **Giuseppe Colombo** (1920-1984)

Over **35** companies in Europe, along with teams in the US and Japan, have contributed to the construction of the mission.

BepiColombo is the

- 2nd** mission to enter orbit
- 3rd** mission to visit Mercury

The first was NASA's Mariner 10, which flew past three times between 1974 and 1975; the second was NASA's Messenger, which orbited the planet from 2011-2015.

2 science orbiters

BepiColombo comprises two science orbiters: the Mercury Planetary Orbiter and the Mercury Magnetospheric Orbiter. They will travel together to Mercury, attached to the Mercury Transfer Module.

Despite travelling towards the Sun, the transfer module requires a large solar array. Because of the high temperatures, they cannot directly face the Sun for long periods without becoming degraded, so they have to be inclined towards the Sun, and thus require a greater area to achieve the same power requirements.

MERCURY FACTS

- 2** Mercury rotates about its own axis three times in every two orbits of the Sun.
- 1 day** • 58 Earth days to turn once on its axis.
- 1 year** • 176 Earth days for the Sun to return to the same spot in the sky, as seen from a fixed point on the surface.
- 88 Earth days to orbit the Sun.

Even though Mercury is the closest planet to the Sun, it still has ice in its permanently shadowed craters.

Mercury is the most cratered planet in the Solar System.

The Sun's enormous gravity

presents a challenge in placing a spacecraft into a stable orbit around Mercury – even more energy is needed than sending a mission to Pluto.

-180°C to 430°C

Mercury has a lower average temperature than Venus, because it does not have an atmosphere to help regulate the temperature.

Credits: Mercury: NASA/Johns Hopkins University Applied Physics Laboratory/Carnegie Institution of Washington; spacecraft: ESA/JAXA mission

European Space Agency

NEW CLASS OF STELLAR SYSTEM CALLED 'BLUE BLOBS' FOUND: RESEARCH

◎ CONTEXT:

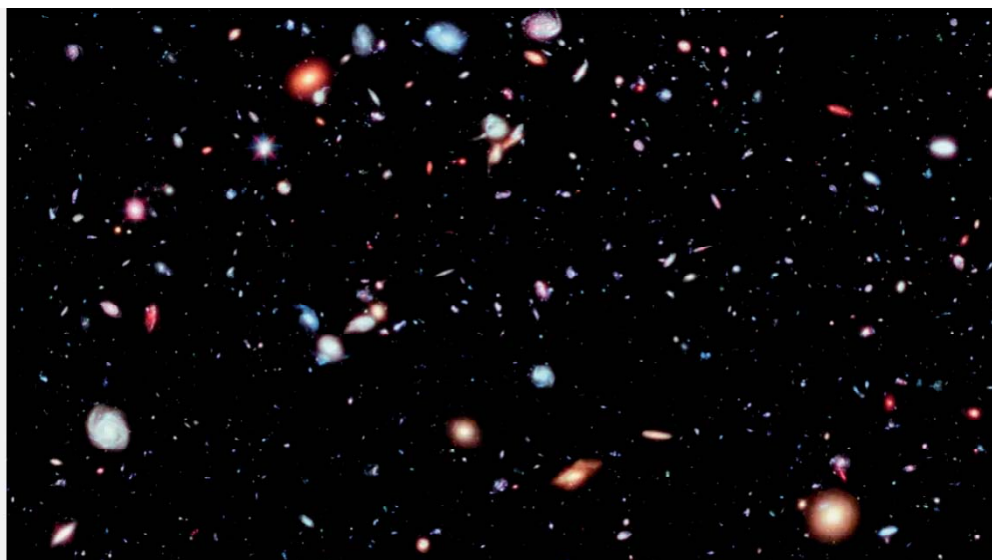
According to the researchers at University of Arizona, a new class of stellar systems has been identified- they're not quite galaxies and only exist in isolation.

Stellar Systems:

- The stellar systems -- which astronomers say appear through a telescope as "blue blobs" and are about the size of tiny dwarf galaxies.
- The new stellar systems **appear as "blue blobs" through a telescope.**
- The new stellar systems contain only young, blue stars, and are about the size of tiny dwarf galaxies.
- The blue stars are distributed in an irregular pattern and seem to exist in surprising isolation from any potential parent galaxy.

Where are the Stellar Systems Located?

- The stellar systems are located within the relatively **nearby Virgo galaxy cluster.**
- It is challenging to identify the origins of the five systems because they are separated from any potential parent galaxies by over 300,000 light years in some cases.



This image made available by the European Space Agency shows thousands of galaxies captured by the Hubble Space Telescope in observations from 2002–2009. The new stellar systems contain only young, blue stars, which are distributed in an irregular pattern. (AP)

Difference between Stars Born Red and Blue Stars

- Stars that are born red have lower mass and therefore live longer than blue stars, which burn fast and die young.
- Therefore, old red stars are usually the last ones left living. The blue stars are dead because they do not have any more gas with which to form new stars.
- The blue stars are like an oasis in the desert.

UDHAMPUR GETS EARTHQUAKE OBSERVATORY

◎ CONTEXT:

The government recently inaugurated a seismological observatory in Udhampur, Jammu and Kashmir.

About

- The National Centre for Seismology (NCS) in the Ministry of Earth Sciences (MoES) has initiated several new measures to upgrade and strengthen the infrastructural facilities.
- They aim to provide better scientific inputs required for improving disaster mitigation and preparedness measures.
- It has installed 152 permanent observatories throughout the country with and plans to install 100 more in the next five years.

Need for Earthquake Observatories:

- The occurrence of an earthquake is a natural process, beyond human power. Hence, **prevention** is the only way.
- Further, the Indian subcontinent is considered as one of the **world's most disaster-prone areas** in terms of **earthquakes, landslides, floods, cyclones, and tsunamis**.

Objective of the project

- It is part of an effort titled **Seismic Microzonation**, which aims to generate vital geotechnical and seismological parameters for developing earthquake risk resilient building design codes for structures and infrastructures.
- It has initiated actions for the setting up of an earthquake early warning system (EEWS) on a pilot basis for a small area in the Himalayas.
- It has a precise mandate of **collecting, collating and integrating various data** sets to provide site-specific risk maps as per user needs.

What are earthquake observatories?

- **eqServer** is an automatic data management, real-time display and earthquake notification system.

About the Earthquake management

- Forecasting a probable timing, location, magnitude and other important features of a forthcoming seismic event is called **earthquake prediction**.
- Various attempts have been made by seismologists and others to create effective systems for precise **earthquake predictions, including the VAN method**.
- Seismological instruments can generate large amounts of data.
- Systems for processing such data include:
 - CUSP (Caltech-USGS Seismic Processing)
 - RadExPro seismic software
 - SeisComP3

Significance of the region

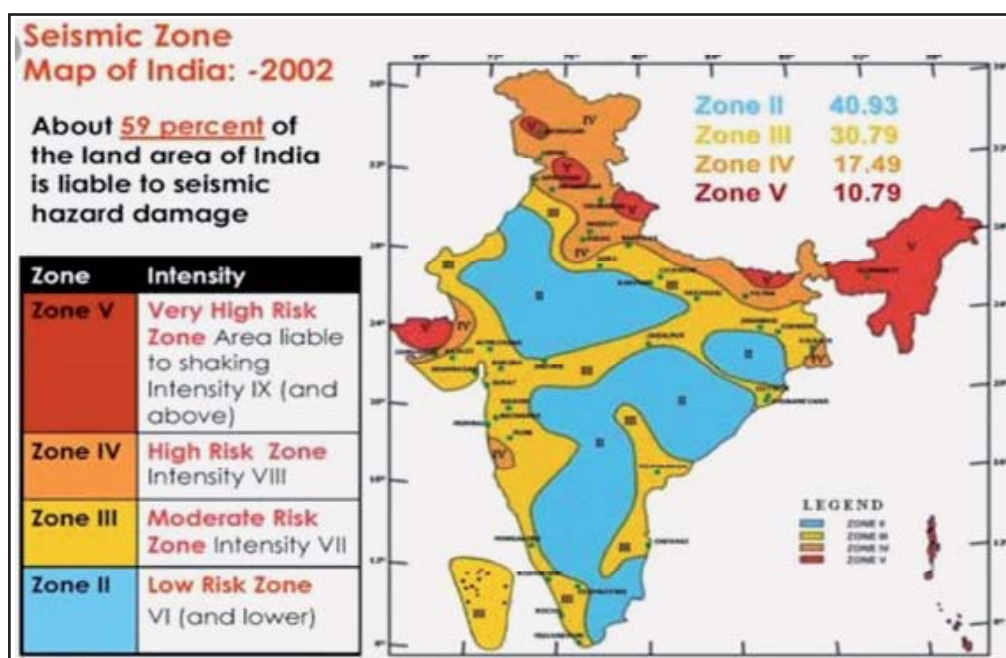
- Jammu and Kashmir is the westernmost extension of the Himalayas.
- Udhampur district lies between the two major **seismogenic faults**, namely **Main Frontal Thrust (MFT)** and **Main Boundary Thrust (MBT)**, which are among the potential factors for

generating earthquakes in the J&K region.

- The new seismological observatory will help further strengthen the region's **earthquake monitoring**.

Earthquakes in India

- The earthquake is characterized by **severe shaking of the ground** and severe shaking of structures above the ground.
- According to the **National Disaster Management Authority**, this happens due to the release of the transmitted pressure of moving lithospheric or crustal plates.
- According to seismic zoning mapping, earthquake zones are divided on the basis of the estimation of the intensity of the earthquake.
- India is divided into 4 zones: Zone 2, Zone 3, Zone 4, and Zone 5.
- While Zone 2 is the least dangerous, Zone 5 is the most dangerous.
- Nearly, 59% of India's land area is under a moderate to severe seismic hazard warning, which means that India is prone to earthquakes of magnitude 7 and above.



Other earthquake observatories in India

- Currently, India has only **115 earthquake** observatories.
- Some of them are:
 - National Geophysical Research Institute (NGRI), Hyderabad
 - Wadia Institute of Himalayan Geology (WIHG), Dehradun
 - North East Institute of Science & Technology (NEIST), Jorhat

SECTION: C
(QUIK BYTE)

CURRENT AFFAIRS

WHAT IS ODISHA'S MO BUS, RECIPIENT OF THE UN'S PRESTIGIOUS PUBLIC SERVICE AWARD?

◎ CONTEXT:

Mo Bus, the bus service of Odisha's Capital Region Urban Transport (CRUT) authority, has been recognised by the United Nations as one of 10 global recipients of its annual Public Service Awards for 2022.

Mo Bus service:

- The Mo Bus service was launched in November, **2018** to ensure **"transformation of the urban public transport scenario in the city and its hinterland through use of smart technology, service benchmarking and customer satisfaction"**.
- The public transport service has been recognised for its role in promoting gender-responsive public services to achieve the SDGs.
- Mo Bus has incorporated **"real-time technologies** like live tracking, travel planner and e-ticketing".
 - An e-rickshaw system called **'Mo E-Ride'** has been introduced as a last-mile feeder service.
- The buses are designed to integrate smart technologies such as free on-board Wi-Fi service, digital announcements, surveillance cameras, and electronic ticketing.
- CRUT says that to **increase women's participation in the workforce**, and to make women riders feel safer, it is committed to ensuring that **50% of Mo Bus Guides (conductors) are women**.
- Air-conditioned Mo Bus fares start at Rs 5 and go up to Rs 70; non-AC fares are from Rs 5 to Rs 55.

Impact:

- 57 per cent of the city's commuters now use the Mo Bus.
- Mo E-Ride is estimated to reduce pollution by 30-50 per cent.
- 40 per cent of Mo Bus conductors are women.
- 100 percent of Mo E-Ride drivers are women, transgender people, and people from disadvantaged communities.

UN Public Service Award

- The UN describes its Public Service Awards as the **"most prestigious international recognition of excellence in public service"**.
- It is intended to reward "the creative achievements and contributions of public service institutions that lead to a more effective and responsive public administration in countries worldwide".
- Through an annual competition, the UN Public Service Awards promotes the role, professionalism and visibility of public service.
- The **UN Public Service Day** (celebrated on June 23) **celebrates the value and virtue of public service to the community, highlights its contribution in the development process, recognizes the work of public servants**, and encourages young people to pursue careers in the public sector.
 - The first Awards ceremony was **held in 2003**, and the UN has since received "an increasing number of submissions from all around the world".

Promoting gender-responsive public services to achieve the SDGs

5

How can we make transportation greener while providing inclusive employment?

The **Mo Bus initiative in India** increased public transportation in the city of Bhubaneswar to promote sustainable transportation solutions. It reorganized the public transit services in the city to provide an integrated, reliable, and inclusive public bus service system that incorporates real-time technologies like live tracking, travel planner, and e-ticketing. An e-Rickshaw system called Mo E-Ride was also introduced as a last-mile feeder service to Mo Bus with an estimated pollution reduction of 30 – 50 percent. 40 percent of Mo Bus conductors are women and 100 percent of Mo E-Ride drivers are women, transgender people, and people from disadvantaged communities.



How is your city promoting inclusive development?

PROTEST AGAINST MOVE TO 'SHIFT' PROPOSED HERITAGE PARK IN MANIPUR

© **CONTEXT:**

The Sangai Protection Forum along with local clubs and people of Keibul area took out a rally, demanding the construction of Heritage Park at Keibul Lamjao in Bishnupur district.

What's the matter?

- The State government had announced that a heritage park would come up near the Keibul Lamjao National Park in Bishnupur district.
- Villagers are protesting against plans to shift the site elsewhere near Kimi Keibul Lamjao National Park (KLNP) in Manipur, 53 km from Imphal in Bishnupur district.
- They argue that the people of the proposed site are not associated with the steps for the conservation of the endangered brow-antlered deer (Sangai).

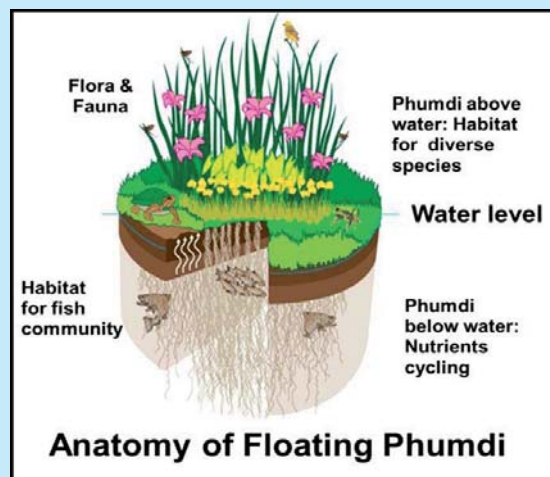


About Keibul Lamjao National Park

- The Keibul Lamjao National Park is located in the south western part of the Loktak lake.
- Keibul Lamjao National Park is the only floating park in the world.
- It is known for the patches and rings of biomass called **phumdis**, the park is a wetland ecosystem.

Phumdi

- A phumdi is a carpet of dead and decaying flora, which floats on the surface of the lake—about a fifth of it is above the surface.



- The **Keibul Lamjao National Park** is also the world's sole habitat for the sangai, or brow-antlered deer, in the wild.
 - The dancing deer is the state animal of Manipur.
- Other wildlife to be seen include: **Hog Deer, Otter, a host of waterfowl and migratory birds, the latter usually sighted during November to March.**



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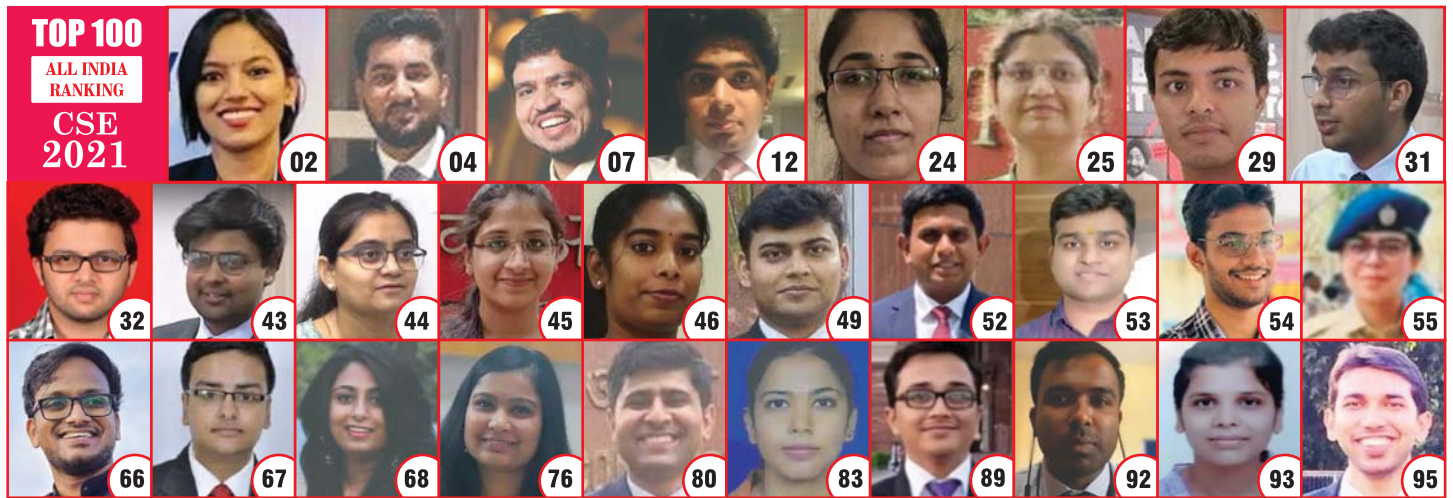
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