

Monthly



# Current Affairs Notes

March 2023



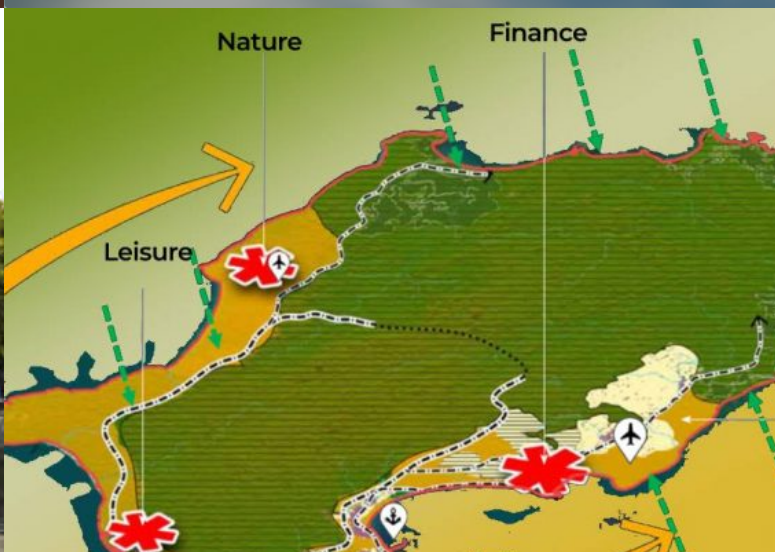
Disqualification of MPs



NISAR Satellite



Silicon Valley Bank Episode



The Great Nicobar Project: Economic Opportunity or Ecological Ignorance

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## GENERAL STUDIES 1

### Phasing Out The Line, 'Math Is Not For A Girl'

Priority: **Medium**

Primary Source: The Hindu

**Prepp Prelims Booster:** Women in STEM

**Prepp Mains Booster:** - Role of women and women's organizations, their problems and remedies; Government policies and interventions for development in various sectors

#### Context:

- In this article, written by Karan Singhal, a doctoral student at the University of Luxembourg a Luxembourg Institute of Socioeconomic Research (LISER) and Upasak Das, a Presidential Fellow at the Global Development Institute at the University of Manchester **addressed specific biases and perceptions that can help to protect female education, career choices, and job opportunities in Science, Technology, Engineering, and Mathematics (STEM).**

#### What is STEM?

- Science, technology, engineering, and mathematics (STEM) is an umbrella term for the distinct but related technical disciplines of science, technology, engineering, and mathematics.
- The term is most commonly used in the context of educational policy or curriculum choices in schools. It has implications for workforce development, national security concerns and immigration policy.

#### Female Representation in STEM

- There was an informal discussion with school students in a village in Bihar's Samastipur district a few months ago.
- Students who expressed their wishes were among the best performers. This has been a consistent pattern, with boys being more likely than girls to express a preference for mathematics and science.
- Even among girls who expressed an interest in science, the preference was for life sciences over physical sciences.
- Female representation in Science, Technology, Engineering, and Mathematics (STEM) or other math-intensive fields and careers is far from 'fair' or desirable.
- Girls are still rare in an engineering or math-intensive undergraduate degree program.
- This underrepresentation is found not only in developing countries like India, but also in the developed world.



#### Findings

- In a recent research paper, this issue was examined using child-level test scores in math and reading ability from the Annual Survey of Education Report (ASER) conducted across rural India.
- In the findings, boys outperform girls in mathematics significantly, which has been persistent over time. The difference in reading scores, on the other hand, is insignificant.
- While **boys outperform girls significantly in the north Indian states of Uttar Pradesh, Bihar, and Madhya Pradesh,**

- girls outperform boys in mathematics in south India.**

#### Performance Disparity

- Despite a plethora of contradictory evidence, a sizable portion of the population is eager to attribute these disparities to differences in 'ability,' failing to recognize the impact of social and cultural norms.
- Girls are found to perform better in some southern states, implying that this difference is not due to any inherent ability.
- There is widespread systematic devaluation of girls based on their mathematical aptitude in the classroom, at home, and in society as a whole.
- The oft-repeated phrase "**science and math are for boys, and arts and humanities are for girls**" reflects the kind of stereotyping promoted by parents, relatives/neighbors, and even schoolteachers.

#### Recognizing Gender-Related Gaps in Education

- Many state and federal policies** and campaigns demonstrate that public policy recognizes the discrimination and biases that girls face when enrolling and continuing in school.
- The National Education Policy 2020 (NEP)** recognizes the need to address several gender-related gaps in education. It specifically acknowledges the existence of ongoing disparities across all social groups and the need for developing interventions to improve girls' attendance and academic performance.
- It emphasizes the importance of implementing gender-sensitive teacher training as well as establishing a 'Gender-Inclusive Fund' for states to use in implementing community-based interventions.
- The National Curriculum Framework for Early Childhood Care and Education (ECCE)** developed by the National Council of Educational Research and Training (NCERT) also recognizes these gender disparities.

#### Way Forward

- Gender stereotyping of "math is not for girls" can be reduced through targeted behavioral interventions at the household, societal, and school levels.
- Other simple tweaks worth trying and likely to be beneficial include references to female mathematicians in textbooks, female names and characters in word problems, and providing exposure to female role models in STEM fields in the course curriculum.
- There is an urgent need to address this issue in order to prevent further harm to female education, career options, and job market opportunities.

### In Politics And Bureaucracy, Women Are Severely Under-Represented: Global Gender Gap Index, 2022

Priority: **Medium**

Primary Source: Indian Express

**Prepp Prelims Booster:** Global gender Gap Index

**Prepp Mains Booster:** Role of women and women's organization, Salient features of Indian society

#### Context:

- Recently, India was ranked 135th in the Global Gender Gap Index, 2022 which assessed 146 countries.
- Women's participation in politics, bureaucracy and industry has been very low in India due to social, economic and structural causes which could be countered through effective policy decisions and awareness building.

#### Women's Representation in Politics

- The percentage of female voters in India has increased significantly over the years since Independence.
- Seven out of the eight elections held to state legislatures in 2022 experienced a rise in female voter turnout.
- However, this **increase in women voters has not resulted in a corresponding increase in women electoral candidates** in local, state and general elections.

- According to the **Inter-Parliamentary Union (IPU) women make up only 14.44% of the membership of the Lok Sabha.**
- Election Commission data has revealed that as of October 2021, women represented 10.5% of all Members of Parliament.
- **The average female membership in legislative assemblies across the states was around 9%.**
- In comparison, India's neighbours Pakistan, Bangladesh and Nepal had women representation of about 20%, 21%, and 34% respectively.
- Women's representation in the Lok Sabha has not increased since Independence.



### Women in Bureaucracy

- The low proportion of women in Central and State public service has prompted the government to adopt various measures such as free applications for female candidates.
- According to the Indian Administrative Services data and the results of the Central Employment Census, 2011 **less than 11% of the total employees were women, which had risen to just 13% by 2020.**
- Only 14% of the IAS officers holding a Secretary level post were women while just 3 of the Chief Secretaries of the States and Union Territories were women.
- India has never had a woman as the Cabinet Secretary or as the Secretary of critical ministries such as the Ministry of Home, Finance, Defence and Personnel.
- An analysis of UPSC enrollment data has revealed that there was a large difference in the participation of men and women while women candidates were also more likely to choose voluntary retirement. In 2019, only 1,534 women qualified in the UPSC civil services exam out of the 1,77,611 that appeared in comparison to the 10,311 men that qualified from the 3,90,671 that appeared.
- The primary reasons for this gender gap in the bureaucracy were:
  - **Structural impediments:** Educational and training requirements have limited the opportunities available to females.
  - **Social factors:** Posting in remote areas, patriarchal norms and familial responsibilities were among the social factors influencing women's employment in bureaucracy.
  - **Prejudice:** There was a prevalent notion that women were better suited for "soft" posts at the Ministries of Social Welfare, Culture and Women and Child Development which involved less burden of responsibility as compared to other ministries like Home and Finance which has deterred women from seeking public employment.

### In industry

- Female participation in the industrial sector was also much lower than expected given India's demography.
- **Women-owned MSMEs amounted to 20.37% of the total number while only 10% of start-ups were founded by women.**
- Labour force participation rate data has indicated that only **23.3% of women were members of the workforce.**
- However, measurements of the labour force participation rate in India have been inaccurate due to the assessment criteria excluding the unpaid work done by women.
- **India was ranked 135th out of 148 countries in the World Economic Forum's Global Gender Gap Index, 2022.**

- The percentage of women of working age who participated in paid employment in India has **dropped from 30.7% in 2006 to 19.2% in 2021 according to the World Bank.**

### Reasons for low female labour participation

- The major reasons for the low percentage of women labour in India included:
  - **Education:** Women were often denied education and skilling opportunities on par with males which has resulted in them not being eligible for numerous opportunities. Additionally, the recent increase in female enrollment has removed a number of women from the labour force.
  - **Marriage:** The relatively early marriage of girls as well as the higher fertility rates of the population were another important factor.
  - **Urbanization:** Urbanization fuelled migration and better living conditions could have eliminated the economic incentive for women to seek employment. migration has also meant that the traditional forms of labour are not available to them anymore.
  - **Unpaid work:** Indian women are mostly responsible for the household and caregiving due to social biases and taboos. As a result, they have faced difficulties in juggling work and home responsibilities.
  - **Covid19:** The pandemic had played a major role in the lowered female participation as the number of opportunities and available wages reduced while the fear of contracting the disease led to many staying at home and not seeking any gainful employment.

### What can be done to increase their participation?

- **Work from home:** According to data from the International Labour Organisation (ILO), 34% of rural women and 2% of urban women were willing to work remotely. The government can encourage the creation of employment opportunities which do not require advanced technical knowledge and allow women to balance household responsibilities as well.
- **Incentives:** Tax incentives can be provided to companies that have gender-equal hiring and salary structures.
- **Education:** Education and industry linkages should be established in order to produce industry-ready job seekers which would boost their chances of employment.
- **Social security:** Increased public investment in the social sector especially by raising the health and education budgets would contribute to a rise in female employment.
- **Awareness:** Gender sensitisation and awareness campaigns must be regularly conducted in order to eliminate the social taboos that hinder women from obtaining gainful employment.

### Conclusion

- There was a need to raise awareness among women about the importance of financial and academic literacy while also providing opportunities to support them in obtaining financial independence.

### A Sustainable Model For Women's Leadership

Priority: **Medium**



Primary Source: The Hindu

**Prepp Prelims Booster:** Gender Equality

**Prepp Mains Booster:** Role of women and women's organization, Issues relating to development and management of Social Sector/Services relating to Human Resources

### Context:

- Recently, India has taken up numerous initiatives across education, financial inclusion, health, and other sectors to help achieve SDG 5, gender equality by 2030.
- Women must be included at all levels of the ICT, bodily autonomy, household responsibility and decision-making processes in order to unleash the potential of the country's gender dividend.

### Why is a sustainable model for women's leadership required?

- According to the **United Nations, nearly half of the world's 1.8 billion young population, around 50% or 900 million were adolescent girls**

and young women who would form an integral part of the future workforce.

- The equipment of these young women with modern skills, resources and opportunities would enable them to become leaders, entrepreneurs, changemakers and innovators.
- According to the **Inter-Parliamentary Union, only 14.44% of the membership of the Lok Sabha were women**, while **less than 11 % of Central government employees were women**.
- Only **20.37% of the total number of MSMEs in India were led by women** while in the **case of startups, only 10% had women founders**.
- A sustainable model that allows adolescent girls to develop necessary skills and qualities was necessary as this section of the population faced a number of socio-economic barriers such as familial and social restrictions, poor health and nutritional conditions, etc which prevented them from achieving their potential.
- India, which was home to the largest number of adolescent girls and young women has already adopted initiatives across sectors such as health, economy, education and training which target the **achievement of gender equality by 2030 as proposed by the Sustainable Development Goal 5**.
- Women at all levels of society must have access to ICT, bodily autonomy, decision making and shared household responsibilities.
- This would result in an enabling environment for the unleashing of the gender dividend and the flourishing of female leadership.



### Role of EdTech

- Digital technology has become an opportunity as well as a service provider for the millions of adolescents and youth in the country.
- Women could be provided with **tools that would help bridge the accessibility gap in education through EdTech in the form of hybrid learning models** even when social norms restricted girls from seeking education.
- EdTech solutions tailored to the linguistic and cultural identities and internet accessibility of various communities would help increase the digital inclusion and educational participation of young women.

### Women in STEM

- According to the **World Bank, 43% of the STEM (Science, Technology, Engineering and Maths) graduates in India were women** but the proportion of women in the workforce (14%) and executive positions was much lower.
- Gender norms based on patriarchal stereotypes have been one of the most important factors behind the lower participation of women in the workforce.
- **Household responsibility:** A disproportionate burden of caregiving and household responsibilities is on women which leaves them unable to seek gainful work.
- **Cultural perception:** Men have been represented as leaders in the public perception through culture and media
- **Institutional mechanisms:** The lack of adequate childcare facilities, inadequate maternity leaves and inflexible working models have discouraged women from seeking employment.
- These stereotypes can be countered through the addition of appropriate STEM, financial and entrepreneurial content in syllabi from an early age.

- Exposure to Olympiads, innovation labs, boot camps, etc would expose young girls to the practical applications and innovation in STEM fields and inspire them to innovate.
- The **Atal Tinkering Labs initiative** of the Union Government was based on a similar concept and sought to inspire and encourage creativity in children.

### On Safety and Skills

- Women have to be empowered in bodily autonomy and made aware of the importance of consent in sexual relations, the use of contraceptives and following appropriate health advice.
- Women must be ensured of their safety from all forms of violence and harassment and enabled to become independent in their personal and professional lives.
- Female participation in sports can be a viable route for the development of skills such as leadership, self-sufficiency, self-confidence and teamwork.
- The National Sports Policy and the targeted inclusion schemes for children of various communities have helped produce remarkable improvements in female leadership.

### Care Work

- Traditionally, women were expected by society to be the backbone of the family and responsible for **domestic chores and caregiving**.
- This gender disparity was highlighted and worsened by the pandemic where women were relegated to unpaid labour due to socio-cultural norms.
- Caregiving and domestic work, which are unpaid, must be recognized, reduced and redistributed in a manner that reduces the gender disparity and allows women to seek out gainful employment similar to men.
- The economic empowerment of women, which in turn would lead to the economic development of the community, can be accelerated by policies that provide services, development of social protection and basic infrastructure, redistribution of household responsibilities and develop more paid jobs in the care economy.

### Benefits of increased women's participation and leadership

- **Rights and Freedoms:** The inclusion of women in leadership positions would help increase their access to and control of their rights, freedoms and autonomy at all levels.
- **Workforce:** At present, only 29% of the labour force in India were women which has huge potential to improve and subsequently grow the economy and raise standards of living.
- **Governance:** The inclusion of women in political and bureaucratic positions of power would help in the development of more gender-equal policies and strengthen governance.
- **Business:** Industrial trends have shown that women in positions of leadership have increased the efficiency of businesses and enabled sustainable growth.
- **Society:** Increased participation of women has been linked with multiple social benefits such as increased access to nutrition, improved education for children, healthcare benefits and social empowerment.

### Conclusion

- Nurturing the abilities of young girls would quicken the collapse of social norms and gender barriers that have restricted gender-equal growth and women-led progress.
- A multi-pronged approach that promotes employability, leadership development, bodily autonomy and digital inclusion among women would lead to a gender-equal society.

### A Move From Within To Close The Gender Gap In Physics

Priority: **Medium**

Primary Source: The Hindu

Prepp Prelims Booster: Indian Society



**Prepp Mains Booster:** Role of women and women's organizations, their problems and remedies; Government policies and interventions for development in various sectors

#### Context:

- Recently, as of International Women's Day this year, **over 500 physics practitioners and students have endorsed the Hyderabad Charter to address and resolve gender gaps in physics education and research in India.**

#### Background

- Women in India face numerous challenges in moving up the academic and administrative ladders as a result of systemic and structural factors.
- Gender equality in scientific laboratories and higher education institutions is about more than just numbers; it is also about a variety of micro and macro level institutional factors.
- There are various policies and enabling environments in various institutions in India, but a common approach or guiding principles to bridge the gender gap is still lacking.
- It is difficult to assess and evaluate the merit of existing processes/procedures in the science and technology sectors through a gender lens. This clearly demonstrates the need for multi-stakeholder interventions.
- While gender equality in science is an important consideration, it is also in the larger interests of scientific progress and society.

#### About Hyderabad Charter

- The Hyderabad Charter was developed by the Indian Physics Association's Gender in Physics Working Group in 2019, during a national interdisciplinary conference at the University of Hyderabad attended by physicists, sociologists, policymakers, educators, and government officials.
- The charter includes ten guiding principles and 29 recommendations for physics departments, institutes, physics teachers, conference organizers, and national agencies.

#### Proportion of Women in Science

- The endorsements mark a major shift because it shows that physicists of all genders are finally acknowledging that the barriers to gender equity are within physics itself, so it's needed to stop fixing the women and dismantle the systemic structural barriers instead.
- Despite winning half of the INSPIRE fellowships for physics, the charter notes that the proportion of women with PhDs in physics employed in tertiary education in the country is only 20%, far less than in biology. In elite research institutions, leadership positions, and honors lists, that fraction falls to 10% or lower.
- According to Bias Watch India, an initiative was launched to track the percentage of women in various fields; **only 13% of physics faculty members in India are currently female.**

#### Initiatives to Promote Women in Science

- The Vigyan Jyoti Program:** It was established to address the country's underrepresentation of women in various fields of Science, Technology, Engineering, and Mathematics (STEM).
- KIRAN Scheme:** It was launched in 2014-15 to help women scientists advance academically and administratively.
- The DST (Department of Science and Technology)** has also established Artificial Intelligence (AI) labs in women's universities with the goal of fostering AI innovations and preparing skilled labor for AI-based jobs in the future.
- Women scientists can work in research labs in the United States as part of the Indo-US Fellowship for Women in STEM (WISTEMM) program.
- The **Consolidation of University Research for Innovation and Excellence in Women Universities (CURIE)** program aims to improve R&D infrastructure and establish cutting-edge research facilities in order to foster S&T excellence in women's universities.

- Gender Advancement for Transforming Institutions (GATI):** The program was established to create a comprehensive Charter and framework for assessing Gender Equality in STEM.

#### Conclusion

The Hyderabad Charter is an excellent and thorough roadmap for us to follow and implement in order to create a level playing field for all. The recommendations include transparent merit criteria, equality education at all levels, and self-declaration of professional misconduct investigations.

### Migrant Fears In Tamil Nadu: Migration Is A Constitutional Right, A Symbol Of Hope And Prosperity

Priority: Medium



Primary Source: The Hindu

**Prepp Prelims Booster:** Migration

**Prepp Mains Booster:** Population and associated issues, Poverty and developmental issues; Government policies and interventions for development in various sectors and issues arising out of their design and implementation

#### Context:

- The authors, S Iridata Rajan and Kuldeepsingh Rajput, from the Indian Institute of Migration and Development, have discussed the migration situation in India and the problems faced by migrant labourers in the article titled "The worker, the outsider" published in the Indian Express on 13th March 2023.
- Migrant labour forms a critical segment of the Indian economy without which industries will struggle as witnessed recently in Tamil Nadu.



#### What is migration?

- Migration refers to the movement of people from one region to another on a permanent, temporary or daily basis.
- It affects the demographic profile of both the origin and destination and is motivated by many factors such as employment, food security, disasters, education, culture, war etc.
- According to the **2011 Census, interstate migration in India grew 55% between 1951 and 2001 and 33% between 2001 and 2011.**
- Around **45.58 crore Indians were identified as migrants under the 2011 Census** with marriage and employment being the major causes of migration.

To know more about [migration](#), click the link.

#### What are the problems faced by migrants?

- Despite being critical elements of the economies of the destination states, migrants have been treated with **suspicion and animosity due to their migrant identity.**
- Migrants have been victimised by the politicisation of migration and employment opportunities, social stigma and prejudices and the power dynamics of the labour market.

- Migrants are often **treated with hostility due to their acceptance of employment rejected by locals, their superior skills in certain areas, flexibility in employment terms and lower wage demands.**
- The wage differential between local and immigrant labourers especially in the southern states of Kerala and Tamil Nadu has meant that employers preferred to appoint migrant labourers, which contributed to fresh hostility against migrants.
- The spread of the “**sons of the soil**” politics and a fear of loss of cultural and ethnic identity has resulted in an increase in conflicts between those viewed as insiders and outsiders.
- Migrants are a **heavily scapegoated community in order to please nativist groups** and build popular support against migrants who are portrayed as outsiders stealing local jobs.
- During the pandemic, the struggle faced by migrants due to the failure of the urban governance and healthcare infrastructure led to them being treated as carriers of the infection and a burden on the host cities.
- No major steps were taken for their welfare or to strengthen the social security framework even after the pandemic as the suffering of the migrants was normalized.
- Migrants were the victims of not just physical violence but also **structural violence which was embedded in the socioeconomic and political framework** of the country which has made them extremely vulnerable and isolated from the rest of the population.
- The politicisation of the migrant issue, the stigmatisation of migrant identities, and the exacerbated risk of vulnerability and marginalization have led to the systemic oppression of a vulnerable population.
- The constant fear of violence under which migrant communities have to survive has had an **adverse effect on the mental health of migrants** in the absence of family, care groups and social security mechanisms.

#### How can migrants be protected?

- The **unionisation of migrants** would help them seek better work opportunities and negotiate higher wages as well as social security coverage.
- The **development of cultural groups** would help build solidarity and reduce the mental anguish, stress and depression faced by migrants due to having to live under constant fear.
- **Portability of entitlements** especially foodgrains through the PDS scheme would assist in attaining food security through the **One India One Ration Card Scheme.**
- **Social Security provisions** in the form of health insurance and wage guarantees would reduce the conditions of poverty and malnutrition experienced by the population.

#### Way Forward

- Adequate steps to build awareness about the legal and civic rights of migrants should be taken by the governments of both the home states and the destination states by providing **legal aid and counseling services free of cost.**
- Urban centers should be made **migrant-friendly through inclusive, adaptive and resilient policies.**
- **Regular migration surveys** similar to those conducted in Tamil Nadu and Kerala should be conducted in all the states, whether a net provider or receiver of migrants so that governments can adopt relevant policy decisions and implement initiatives to benefit migrant labourers.
- These surveys would also help the origin states better understand the causes of migration as well as the contribution made by the migrants to their local community and economy.
- Inclusive and comprehensive action on the part of the states to enforce the constitutional right to migrate would help migrants enjoy better lives and avoid the nativist policies that threaten their livelihoods.

**Prepp Mains Booster:** History of the world will include events from the 18th century such as industrial revolution, world wars, redrawing of national boundaries, colonization, decolonization, political philosophies like communism, capitalism, socialism etc.— their forms and effect on society.

#### Context:

- In this article, written by Shashi Tharoor, a third-term Member of Parliament (Congress) from Thiruvananthapuram and the author of 24 books, including the Sahitya Akademi award-winning *An Era of Darkness: The British Empire in India*, discusses how the colonial past is still relevant.
- It stated that Colonialism must not be overlooked in understanding today's problems and threats.

#### What is Colonialism?

- Colonialism implies dominance over people's lives and cultures. The primary goal of colonialism is to extract economic benefits from the colony.
- Colonialism results in control over natives' lives in political, economic, cultural, and social spheres.
- Thus, colonialism refers to a set of unequal relationships between the colonial power and the colony, and frequently between the colonists and the indigenous population; relationships in which the colonists gain benefits (disproportionately) at the expense of the indigenous population.

#### Residual Problems from Colonial Power

- The dramatic events in East Timor in 1999.
- Neither Afghanistan nor Myanmar can be attributed to colonialism.
- Sight in Western Sahara, Jammu and Kashmir, or the old standbys of Cyprus and Palestine.
- India-Pak, Indo-China Border Issues.
- The Horn of Africa, between Ethiopia and Eritrea, where war broke out over a colonial border that the Italians of an earlier era of occupation had failed to define precisely enough.
- More recently, between the Ethiopian government and its Tigrayan minority.

#### Implications of Colonial Legacy

- **Crisis of Governance:** State failure in the aftermath of colonialism is another obvious source of conflict, as a result of an unprepared newly independent state's inability to govern. The governance crisis in many African countries is a real and ongoing source of concern in world affairs today.
- **Underdevelopment in post-colonial societies:** The uneven development of infrastructure in a poor country, as a result of priorities skewed for the benefit of colonialists, can lead to uneven resource distribution, which in turn leads to growing schisms in a society between those from "neglected regions" and those who are better served by roads, railways, power plants, telecommunications, bridges, and canals.

#### Danger from a Mixed History

- When a state has more than one colonial past, its future is jeopardised.
- Ethnicity or language do not appear to be a factor in the secessions of Eritrea from Ethiopia and the "Republic of Somaliland" from Somalia. It was different colonial experiences (Italian rule in Eritrea and British rule in Somaliland) that triggered them.
- Former Yugoslavia: Parts of the country that had been under Austro-Hungarian rule for 800 years had been united with parts that had been under Ottoman suzerainty for nearly as long.
- The war in 1991 pitted parts of Yugoslavia ruled by German-speaking empires against those that had not.
- Boundaries drawn during colonial times continue to cause enormous problems with national unity, particularly in Africa.
- Civil conflict along ethnic or regional lines occurs when the challenge of nation-building within colonially defined boundaries becomes insurmountable.

### The Colonial Past Is Still Relevant

Priority: **Medium**



Primary Source: The Hindu

Prepp Prelims Booster: World History

- Older tribal and clan loyalties in Africa were shattered by the boundaries drawn in distant cities like Berlin for colonially-created states whose post-independence leaders had to invent new traditions and national identities from scratch.

### Results of Colonialism

- The Belgian classification of Hutus and Tutsis in Rwanda and Burundi, which reified a distinction that did not previously exist, continues to haunt the African Great Lakes region.
- The British invented "martial races" in India, which skewed recruitment into the armed forces and burdened some communities (Punjabi Muslims, for instance)
- The old colonial administrative practise of "divide and rule" (By British policy in the subcontinent after 1857).
- Promoting political divisions between Hindus and Muslims, which inexorably led to the tragedy of Partition. Unequal distribution of state resources within colonial society.
- Belgian colonialists favoured Tutsis, leading to Hutu rejection of them as alien intruders.
- Sinhalese resentment of Tamil privileges during the colonial era in Sri Lanka prompted discriminatory policies after independence, fueling the Tamil revolt.

### Conclusion

Colonial rule is now a distant collective memory. Despite the fact that many of its icons have been removed or replaced, its imprint on governance remains.

## Government Will Attempt To Open Corridor To Sharda Peeth In PoK For Devotees: Amit Shah

Priority: **Medium**



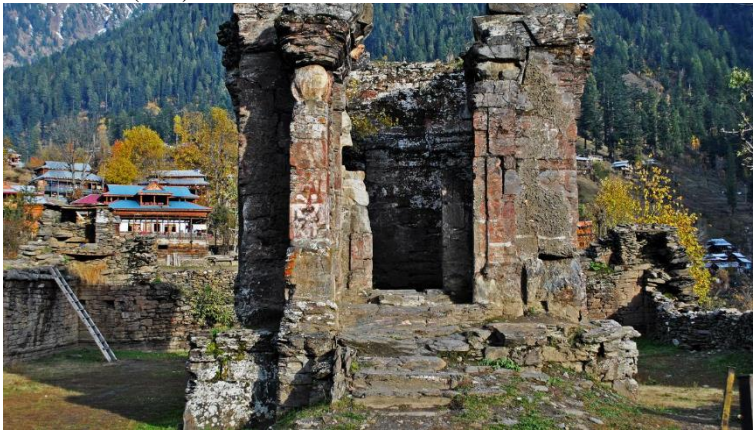
Primary Source: The Hindu

**Prepp Prelims Booster:** Sharda Peeth

**Prepp Mains Booster:** Indian Heritage and Culture, Art Forms, literature and Architecture from ancient to modern times GS 2 - India and Its Neighbourhood relations

### Context:

- Home Minister, Amit Shah said that the government will move forward to open Sharda Peeth on the lines of the Kartarpur corridor.
- Sharda Peeth, a revered site for the Hindu community, is located in Neelum Valley in Pakistan Occupied Kashmir (PoK) across Teetwal village in Kupwara district of Jammu and Kashmir, along the Line of Control (LoC).



### Sharda Peeth Corridor

- The Minister said the site has been a historical center of India's cultural, religious and educational heritage and the government will move forward to open Sharda Peeth for devotees on the lines of **Kartarpur corridor**.
- The Kartarpur corridor inaugurated in 2019, links two important Sikh shrines — Dera Baba Nanak in Gurdaspur district of Punjab and

Gurudwara Darbar Sahib in Kartarpur, Pakistan and allows pilgrims to travel visa-free.

- The home minister e-inaugurated the Maa Sharda Devi Temple at Kupwara.
- The architecture and reconstruction of the temple have been done according to mythological scriptures under the aegis of Sharda Peeth.
- The idol of Sharda Maa was donated by the Sringeri Math.

### Steps taken by Government for cultural rejuvenation of the region

- According to the minister revocation of Article 370 is helped in returning to old traditions, civilization and Ganga-Jamuni tehzeeb of the Kashmir Valley and Jammu
- The government has taken efforts for **cultural rejuvenation of the region**, and systematic **restoration and repair work** was going on at 123 places, including many temples and Sufi places.
- 35 places were **renovated in the first phase** at the cost of ₹65 crores.
- 31 mega-cultural programs have been organised by identifying 75 places of religious and Sufi saints and 20 cultural festivals have also been organised in every district, helping revive old heritage.

### Significance

- The reconstruction of the temple is an important step in the **direction of the discovery of Sharda-civilisation and the promotion of Sharda-script**.
- Sharda is the original script of Kashmir. It evolved from the Western branch of Brahmi nearly 1200 years ago, when the language of Kashmir was developing into Kashmiri.
- Sharda script was much in use in Kashmir, but also in North Western India (Gilgit etc.), the Punjab and Himachal Pradesh and even in Central Asia. Almost all the ancient Sanskrit literature of Kashmir is written in this script.

### Sharada Peeth

- Sharada Peeth temple university was once one of the most important centers of learning in ancient India until the 12th century with scholars such as **Adi Shankara, Kalhana, and Virotsana**.
- It was responsible for the development and popularisation of the **Sharada script**.
- Many major Sanskrit manuscripts were written here, and it was a significant location for Sanskrit academics.
- Sharda Peeth, or the Seat of Sharda, is thought to be an ancient center of learning established in Neelum Valley in 273 BC, even before the Takshila and Nalanda universities.
- It is named after the goddess of wisdom Saraswati.
- It was founded in 237 BC during the reign of Ashoka.
- According to one account of the temple's construction, it was built during the reign of the Kushans (early 1st century).
- Many accounts also claim that Buddhists were heavily involved in the Sharada region until Adi Shankaracharya took over.
- While the university has always been popular, the annual pilgrimage to the temple thrived during the reigns of Maharaja Pratap Singh and Ranbir Singh.
- Before the partition of India and Pakistan, Sharada Peeth was one of the three major shrines in the region, along with the Martand Sun Temple and the Amarnath Temple.
- This temple university educated many famous scholars from India and neighboring countries. Few of them are:
  - **Kalhana**, a historian and author of Rajtarangini, a history book on Kashmir in Sanskrit;
  - **Adi Shankara**, a philosopher who consolidated the doctrine of Advaita Vedanta;
  - **Vairotsana**, a Tibetan translator;
  - **Kumarajiva**, a Buddhist scholar and translator; and
  - **Thonmi Sambhota**, a Tibetan scholar who invented the Tibetan script.

- Sharada Peeth is one of the 51 Shaktipeeths; Sati's right hand fell here when Bhagwan Vishnu cut her dead body into 51 pieces that fell in 51 different places.
- Sharada is the "kuldevi" (principal deity) of Kashmiri Pandits. Many people refer to her as Kashmira Puravasini (resident of Kashmir).
- The shrine was abandoned after the two countries' 1947-48 war over Jammu and Kashmir, as it fell into PoK.

### Conclusion

- The Corridor may help in promoting people-to-people contact and reduce the trust deficit between India and Pakistan which in turn, might open avenues to resolve disputes.

## India And The Korean War

Priority: **Medium**



Primary Source: Indian Express

**Prepp Prelims Booster:** Events of International Importance

**Prepp Mains Booster:** World History; Effect of policies and politics of developed and developing countries on India's interests

### Why in the news?

- In its G20 presidency year, India recalled its diplomatic role in the Korean War seven decades ago.
- India has stated that it will be the voice of the "Global South's" for peace.



### Outbreak of the Korean War

- North Korea began an assault on South Korea on June 25, 1950, supported by the USSR, and occupied the majority of the nation.
- In reaction, the United Nations army commanded by the United States retaliated.
- In 1951, US troops commanded by Douglas MacArthur passed the 38th parallel, prompting China to intervene in support of North Korea.
- Peace negotiations started later in 1951 to avoid further escalation.
- The Korean Armistice Agreement was made on July 27, 1953, between the United Nations Command, the Korean People's Army, and the Chinese People's Volunteer Army.

### India's diplomatic role in the war

- As the 1950 Korean War placed Cold War adversaries against each other, Prime Minister Jawaharlal Nehru made a massive diplomatic effort to prevent the conflict from escalating into another global war and for the parties to reach a quick truce.
- The efforts were only partly effective. Nonetheless, India is one of the nations that helped put the war to an end.
- In the months following the armistice, Delhi played a crucial part as head of a commission to return prisoners of war.
- In 2013, British scholar Robert Barnes chronicled Nehru's and his envoys' efforts to bring the conflict to a "swift conclusion, prevent the UN from adopting a policy that might lead to its escalation, and reconcile the divergent positions of the two superpower blocs."

### India at the UN

- India was one of the UN Security Council's six non-permanent members at the time of the war.
- During its rotating presidency, the US advanced three resolutions on the conflict in rapid sequence. For example, asking for the withdrawal of North troops from South land, etc.
- The pressing issue of what to do with the captives of war was assigned to K. Krishna Menon, India's Permanent Representative to the United Nations and a member of the UN's Special Political Committee.
- A Neutral Nations Repatriation Committee was formed, and India was chosen to head it.

### Conclusion

- As the world struggles to find a solution to Ukraine's conflict, President Volodymyr Zelenskyy's offer to President Xi Jinping to visit his country has fueled conjecture that Beijing, having completed the Saudi-Iran peace agreement, is preparing for a more visible peacemaking role.
- Brazil's President Luiz Inácio Lula da Silva stated his desire to establish a "peace club" of nations, including China and India, to collaborate in finding a solution in Ukraine.
- Any role India might want to play is likely to be informed by its experience in attempting to end another conflict.

## GENERAL STUDIES 2

### Abolition Is The Way: On The Higher Judiciary's Move On The Death Penalty

Priority: **Medium**



Primary Source: The Hindu

**Prepp Prelims Booster:** Death Penalty

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

### Context:

- Recently, after ruling that hanging criminals is neither inhumane or barbaric, **the Supreme Court of India has decided to investigate whether there is a more dignified and less painful manner of carrying out death penalties.**
- The concept of devising a less painful and less cruel method of execution has been discussed as part of the larger debate about whether the death penalty should be abolished.
- Both the concept of death punishment and the practice of hanging have received support from the judiciary and the administrative community.



### Background

- The Bench has sought more data to support the idea that a more compassionate method of execution may be discovered.
- There are two leading decisions on the issue:
  - **Bachan Singh vs State of Punjab (1980)**, which upheld the death penalty but limited it to the "rarest of rare cases," and

- **Deena Dayal vs Union of India And Others (1983)**, which upheld the method by ruling that hanging is "as painless as possible" and "causes no greater pain than any other known method."
- The Law Commission's 35th Report (1967) stated that while electrocution, use of a gas chamber, and fatal injection to be less painful, it was unable to reach a judgment.

### What is Death Penalty?

- A capital punishment, commonly known as the death penalty, is the execution of an offender condemned to death after being convicted of a criminal offense by a court of law.
- It is the worst sentence that may be imposed on an accused.
- In India, capital punishment has been reserved for the most heinous of crimes, such as Section 121 (arming against the state) and Section 302 (murder) of the Indian Penal Code 1860.
- The death sentence is seen as the most appropriate punishment and most effective deterrence for the most heinous offenses.

### Supreme Court Justification

- Even while the Supreme Court has not supported abolition, it has evolved a strong and compassionate jurisprudence that has made it difficult for the administration to carry out death judgments.
- It has limited its use to the "**rarest of rare cases**," enforced a balance of aggravating and mitigating factors before sending someone to the gallows, and authorized a post-appeal review hearing in open court.
- It has developed clemency jurisprudence that makes decisions on mercy petitions justiciable and penalizes excessive delay in disposing of mercy pleas by reducing death sentences to life.
- The current matter before the Court presents another chance to humanize its approach.
- Empirical research demonstrates that hanging does not have to result in an early or painful death, whereas electrocution and fatal injection also have their own types of cruelty.
- The Union administration believes that hanging should be kept not just because it is not cruel or inhumane, but also because it results in the fewest number of mishandled executions.

#### What are the rarest of the rare cases?

- When a murder is conducted in such a violent, absurd, devilish, repugnant, or despicable manner that it arouses strong and severe wrath in the society.
- When murder is motivated by absolute depravity and brutality.

### Arguments in Favor of Abolition of Death Penalty

- **Degree of Subjectivity:** Death sentences are susceptible to a high degree of subjectivity because judges struggle to balance mitigating and aggravating elements.
- **Mental Anxiety:** In many circumstances, criminals must serve a lengthy sentence before being executed. The findings of Project 39A's study 'Deathworthy' reveal that the isolated, alienated, and stigmatized experiences of being on death row for a prolonged period of time result in mental illness.
- **Irreversible in nature:** Courts frequently award compensation to persons who have been wrongfully convicted and have spent significant time in jail as a result of a State error. However, if a person is wrongfully hung, no amount of compensation may bring the victim back or ameliorate the error.
- **Inhumane:** Human rights and dignity are incompatible with the death sentence. The death penalty is a breach of the most fundamental of all human rights, the right to life.

### Status of Death Penalty in India

- Prior to the Criminal Procedure (Amendment) Act (Cr PC) of 1955, the death sentence was the norm in India, with life imprisonment the exception.
- Following the 1955 modification, courts could award either death or life imprisonment.
- Section 354 (3) of the CrPC, 1973 requires courts to provide reasons in writing for granting the maximum sentence.

- In capital cases, the situation has been flipped, with life sentences being the norm and the death penalty being the uncommon.
- Capital punishment must be confirmed by the jurisdictional High Court ("confirming court") after it is pronounced by the court of sessions ("sentencing court").
- No death sentence given by a trial court may be carried out unless it is also upheld by the High Court.

### Anti-Defection Law Applies Even If A Party Faction Splits

Priority: **Medium**



Primary Source: The Hindu

**Prepp Prelims Booster:** Anti-Defection Law

**Prepp Mains Booster:** Parliament and State legislatures—structure, functioning, the conduct of business, powers & privileges and issues arising out of these; Salient features of the Representation of People's Act

#### Context:

- Recently, the Constitution Bench hearing a political dispute between former Maharashtra Chief Minister Uddhav Thackeray and incumbent Eknath Shinde said that the anti-defection law applies even if a faction splits from a political party and manages to cobble up a majority within the party itself.



### Supreme court's Verdict

- The court in its judgment said that the [Tenth Schedule](#) applies to a group of persons who claim to belong to the same party, whether they are a minority or a majority. The law doesn't differentiate between the two.
- Chief Justice Chandrachud pointed out the Supreme Court's intervention on June 27, which gave Mr. Shinde and his camp of MLAs 12 days to respond to the notice on the disqualification petitions against them by the then Deputy Speaker Narhari Zariwal.
- During a hearing, Chief Justice Chandrachud raised a hypothetical scenario in which the Supreme Court had not passed an interim order on June 27, effectively staying the hand of the Speaker to proceed with the disqualification of Mr. Shinde's faction of MLAs.
- In that case, the Chief Justice questioned whether the Governor would still have been justified in calling for a trust vote if the disqualified MLAs had ceased to be members of the House.
- He suggested that the situation would have been very different if the court had not intervened and the Speaker had gone ahead with the disqualification.
- The Chief Justice is suggesting that if the court had not intervened and the Speaker had disqualified Mr. Shinde's faction of MLAs, then the Governor would have called for a trust vote with Mr. Shinde not being considered for the position of Chief Minister.
- In that scenario, the BJP may have been called upon to form the government instead of Mr. Thackeray's Shiv Sena.
- **Nabam Rebia case:** During the hearing, Mr. Kaul argued that the Speaker's hands were tied due to the Supreme Court's previous judgment in **Nabam Rebia case**.

- Mr. Zariwal, the then Deputy Speaker who had issued the notice for disqualification against Mr. Shinde and his camp of MLAs, himself was facing disqualification proceedings.
- According to the Rebia judgment, **he had to clear his name before proceeding** with the disqualification process against the Shinde camp.
- This prevented the **Speaker from taking any action on the disqualification petitions.**
- The Chief Justice pointed out that Mr. Shinde was sworn in as Chief Minister and given an opportunity to prove his majority on the floor of the House only because the Speaker could not disqualify him. The CJI also agreed that the Speaker had acted hastily in dealing with the disqualification process.
- The Supreme Court had intervened on June 27 based on a petition by Mr. Shinde that he was given only 48 hours to respond to the disqualification notice, while the law allowed him seven days.

Recently, Chief Justice of India D.Y. Chandrachud stated that **allowing an MP or MLA who is facing disqualification under the anti-defection law to participate in a floor test** due to his own actions would defeat the purpose of the **Tenth Schedule.**

### ‘What Is the Lily Thomas SC verdict, which affects Rahul Gandhi’s Disqualification Case

Priority: **High**



Primary Source: Indian Express

Prepp Prelims Booster: Indian Polity

Prepp Mains Booster: Parliament and State legislatures; Judiciary

#### Context:

- Recently, **Surat court sentenced Congress leader Rahul Gandhi to two years in prison in a 2019 defamation case over his remarks about the "Modi surname."**



#### Background

- In 2005, a PIL was brought before the Supreme Court by a Kerala-based lawyer Lily Thomas and the NGO Lok Prahari challenging Section 8(4) of the **Representation of People Act (RPA)** as "ultra vires" to the Constitution, which shields guilty lawmakers from removal due to cases waiting before higher tribunals.
- The Section explains that it gave convicted legislators a three-month period to appeal to a higher court and gain a stay on their conviction and sentence.
- This petition attempted to cleanse Indian politics of criminal characters by prohibiting condemned lawmakers from running for office or holding public office.
- **It drew attention to Articles 102(1) and 191(1) of the Constitution.**
- **Article 102(1)** defines the disqualifications for membership in either House of Parliament, and
- **Article 191(1)** defines the disqualifications for membership in the state's Legislative Assembly or Legislative Council.

- The petition claimed that these provisions give the Centre the authority to introduce more disqualifications.

#### Representation of People Act

- According to Section 8(3) of the Representation of the People Act of 1951, a legislator who is convicted of an offense that carries a two-year penalty or more is disqualified from serving in the House.
- According to Section 8(4) of the RPA, the disqualification takes effect only "three months after the date of conviction." During that time, the guilty legislator could have submitted an appeal against the punishment with a higher court.
- However, in the landmark 2013 decision in 'Lily Thomas v Union of India,' the Supreme Court knocked down this clause as "unconstitutional."

#### MP/MLAs can face disqualification under 3 scenarios:

- **Article 102(1) and 191(1)** for holding office of profit, being of unsound mind or insolvent or not having valid citizenship
- **10th Schedule** - Disqualification on the grounds of Defection
- **Representation of Peoples Act(RPA) 1951** - Section 9, section10, Section 11, Section 8 (1), (2), (3), (4)

#### What is the Lily Thomas Case?

- The Supreme court of India, in its judgement dated 10 July 2013 while disposing the **Lily Thomas vs union of India** (along with Lok prahari vs UoI) ruled that any MP, MLA, or MLC who is convicted of a crime and sentenced to a minimum of two years in jail loses their membership in the house immediately.
- In Lily Thomas v. Union of India (2013), the Supreme Court declared Section 8(4) of the Representation of the People Act 1951 invalid, which gave convicted legislators a three-month period to appeal to a higher court and gain a stay on their conviction and sentence.
- According to the ruling, all elected and non-elected MPs and MLAs will be disqualified with immediate effect.

#### What was the decision of the Supreme Court

- On July 10, 2013, a panel of Justices ruled that Parliament had no power to enact sub-section (4) of Section 8 of the Act, and thus sub-section (4) of Section 8 of the Act is ultra vires the Constitution.
- The Court also ruled that if any sitting member of Parliament or State Legislature is guilty of any crime under sub-sections (1), (2), or (3) of Section 8, RPA, they will be disqualified "by virtue of such conviction and/or sentence."
- The court stated that a convicted parliamentarian or legislator's participation will no longer be safeguarded under Section 8 (4), as was previously the case.
- Following an investigation of other sections in the Constitution dealing with disqualifying of a legislator, the Court concluded that the Constitution expressly prohibits Parliament from deferring the date from which a disqualification would take effect.

#### Conclusion

Every political party in our multi-party democracy has the capacity to be the governing party. As a result, every political leader risks being charged with slander and being barred from running for office for years. Hence, different debated sections of the constitution and laws linked to disqualifying a legislator must be revisited.

### What Is Rule 357 Of The Rules And Procedure And Conduct Of Business In Lok Sabha

Priority: **Medium**



Primary Source: Indian Express

Prepp Prelims Booster: Indian Polity

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

#### Context:

- Recently, Rahul Gandhi cited Rule 357 of the Rules and Procedure and Conduct of Business in Lok Sabha while requesting permission to speak from the Speaker.
- The Rule was related to personal explanations that could be made with the permission of the Speaker.



### What are the Rules of Procedure and Conduct of Business in Lok Sabha?

- The **Constituent Assembly (Legislative) Rules of Procedure and Conduct of Business** that were in force before the commencement of the Constitution of India were **modified and adopted by the Speaker of Lok Sabha by exercising the powers conferred on the Speaker under Article 118(2) of the Constitution.**
- It was then published under the title “**Rules of Procedure and Conduct of Business in the House of the People**” in the Gazette of India Extraordinary dated the 17th of April, 1952.
- Article **118(1) of the Constitution of India has empowered each House to create rules to govern the procedure and conduct of its business.**
- Subsequently, the Rules have been modified by the Speaker from time to time on the basis of the recommendations of the **Rules Committee.**
- The Rules cover various topics of Business in the House of the People such as the Election and Removal of Speaker and Deputy Speaker, bills and motions, committees and procedures.

### What is Rule 357?

- **Rule 357** of the Rules of Procedure and Conduct of Business in the Lok Sabha is related to **personal explanations by Members.**
- The Rule falls under the Section that deals with the rules to be observed by Members.
- According to the Rule, a member may with the permission of the Speaker make a personal explanation although there was no question before the House.
- The Rule has further stated that no debatable matter may be brought forward under the rule and that no debate may arise out of it.
- The rule was an extension of the principle of **Natural Justice.**

### Has the Rule been invoked before?

- In 2015, former Union Minister, Ravi Shankar Prasad, had invoked Rule 357 to respond to a comment made against him in Parliament by former opposition leader Jyotiraditya Scindia.
- In 2023, Rahul Gandhi had approached the Speaker seeking permission to respond under the provisions of the Rules to respond to the allegations of anti-India statements at the University of Cambridge.

## Appointment Of An Election Commissioner With Tenure Less Than Six Years Is A Clear Breach Of Law: Supreme Court

Priority: High



Primary Source: The Hindu

**Prepp Prelims Booster:** Indian Polity

**Prepp Mains Booster:** Appointment to various Constitutional posts, powers, functions and responsibilities of various Constitutional Bodies; Important aspects of governance, transparency and accountability

**Context:**

- Recently, the **Supreme Court ruled that appointing an Election Commissioner for a tenure less than six years is a "clear violation" of the law.**
- The court made the observation while discussing the appointment of Arun Goel as an Election Commissioner.
- Mr. Goel's appointment, which occurred in less than 24 hours on November 18, last year, has a term of slightly more than five years.



### What is the current issue?

- Mr. Arun Goel's appointment, which occurred in less than 24 hours on November 18, last year, has a term of little over five years.
- The court emphasized that Mr. Goel's appointment came just one day after the Constitution Bench began hearings on the petitions challenging the government's monopoly on Election Commission appointments.
- All the procedures commencing with the proposal, processing of the same at the hands of the Minister for Law, the further recommendations of the concerned officers, the recommendation of the Prime Minister, the acceptance of the application of the appointee seeking voluntary retirement, waiving the three months period and the appointment by the President under Article 324(2), which came to be notified, took place in a single day.

### About Election Commission

- The Election commission of India is a permanent, autonomous, quasi-judicial and constitutional body created under Article 324 in part 15 of the constitution.
- It is the supreme body vested with powers of supervision, control and direction over all aspects of electoral governance in the country.
- The Election Commission was established in 1950 with the primary goal of managing and controlling and responsible for conducting free and fair elections of parliament, state legislature, the office of president of India and the office of vice-president of India.
- **Section 4(1) of the Election Commission (Conditions of Service of Election Commissioners and Transaction of Business) Act, 1991** mandates that Chief Election Commissioners and Election Commissioners serve separate terms of six years in office.

### Structure and Term of Election Commission

- The commission consists of one chief election commissioner and two election commissioners appointed by the President.
- Tenure six years or up to the age of 65 years whichever is earlier.
- The Constitution does not prescribe terms of members of the election commission.
- The chief election commissioner and two other election commissioners have equal powers and receive equal salaries, allowances and other perks similar to those of a judge of the supreme court.
- The secretariat of the commission is located in New Delhi.

### Observations made by the Supreme Court

- The philosophy behind giving a reasonably long stint to the appointee to the post of Election Commissioner or the Chief Election Commissioner is

that it would enable the officer to have enough time to gear himself to the needs of the office and to be able to assert his independence.

- An assured term would inspire and motivate the appointee to implement any reforms or changes, as well as to give his all.
- A brief stint may sap much-needed desire, according to a ruling that invalidated the government's exclusive control over appointments to the Election Commission of India.
- The court clarified that its observations were not intended to be an "individualized assessment" of Mr. Goel.
- It noted his excellent academic qualifications, but added that "academic excellence which members of the civil service may possess cannot be a substitute for values such as independence and freedom from bias from political affiliation".

#### What is the recent judgment?

- **In a landmark decision on March 2**, the Supreme Court's Constitution Bench directed that the **Chief Election Commissioner (CEC) and Election Commissioners (ECs) be appointed by the President based on the advice of a committee comprised of the Prime Minister, the Leader of the Opposition (LoP) in the Lok Sabha or the leader of the single largest party in opposition, and the Chief Justice of India (CJI)**.
- The court stated that the high-powered committee would continue to advise the President on the appointment until Parliament passed a law governing the appointment of Election Commissioners.
- So far, Chief Election Commissioners and Election Commissioners have been appointed by the President on the advice of the Prime Minister.

#### Removal Procedure

- CECs and apex court judges can only be removed by an order of the President issued following an address in each House of Parliament supported by a majority of the total membership of that House as well as a majority of not less than two-thirds of members present and voting, and presented to the President in the same session. **The grounds of removal are limited to "proved misbehaviour or incapacity"**.
- The judge stated that Election Commissioners' terms of service should not be "varieties to their disadvantage" after their appointment. These instructions state that the tenures of the Election Commissioners should not be disturbed in any way.
- The Election Commission (Conditions of Service of Election Commissioners and Transaction of Business) Act of 1991 mandates that the CEC and Election Commissioners serve for a period of six years.

#### Conclusion

It was stated that the Election Commission of India requires "honest, independent" commissioners who could distinguish right from wrong, those who can "ordinarily and unrelentingly take on the high and mighty and persevere in the righteous path". People rely on an honest Election Commissioner, endowed with extraordinary powers, to protect the integrity of the electoral process. The people of the country look up to the Election Commissioners, hence a person who is weak in the face of the powers that be cannot be appointed as an Election Commissioner.

### Amid Protests, Rajasthan Becomes First State To Pass Right To Health Bill

Priority: **Medium**



Primary Source: The Hindu

**Prepp Prelims Booster:** Right to Health

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

#### Context:

- Recently, the Rajasthan Assembly passed the Right to Health Bill with the provision for mandatory free-of-cost emergency treatment for every

resident of the State at both the government hospitals and the privately-run institutions amid a strong protest by the agitating private doctors.

- With this, Rajasthan has become the first and the only State in the country to legislate the right to health.



#### Legal Provisions

- It gives every resident of the state the right to avail free Out Patient (OPD) services and In Patient Department (IPD) services at all public health facilities and similar healthcare services will be provided free of cost at select private facilities.
- According to the Bill, all public health institutions and some private facilities will offer **free healthcare services**, including consultations, medications, diagnostics, emergency transport, procedures, and emergency care, subject to the terms laid out in the rules, which are currently being formulated.
- Also, all residents of the state will have the **right to receive emergency care and treatment for accidental emergencies** without having to pay any upfront fees or charges.
- Importantly, in a case of **medico-legal nature**, no public or private hospital **can delay treatment** merely on the grounds of receiving police clearance.
- The law further states that the healthcare provider "must be entitled to obtain requisite fee and charges or adequate **compensation from the state government**" if the patient does not pay the required fees after receiving emergency care, stabilisation, and transfer.
- As per the government, the Bill intends "to provide protection and fulfilment of rights and equity in health and well-being under **Article 47** (Duty of the state to raise the level of nutrition and the standard of living and to improve public health) of Constitution of India and to secure the Right to Health as per the expanded definition of **Article 21** (Protection of life and personal liberty).

#### Concerns

- Private hospital and nursing home doctors and paramedical personnel have been protesting the Bill because they believe its "draconian provisions" will **stifle the private health sector**.
- The doctors claimed that the Bill had made it essential to provide free treatment **without defining an emergency** and that the amendments they suggested to the Select Committee were not implemented.
- The Jan Swasthya Abhiyan (JSA)-Rajasthan welcomed the Bill's passage in the Assembly, but it expressed concern over some "serious gaps" in the law.

#### Conclusion

Despite many concerns the right to health legislation will ensure that access to timely health care to the needed, will help in reducing the out of pocket expenditure and will help in fulfilment of rights and equity in health and well-being of the residents.

#### Constitutional provisions regarding Right to Health

- The Indian Constitution does not explicitly talk about a right to health.
- A "right to health", in theory, is derived from the right to life and liberty as guaranteed under Article 21 of the Constitution.



- Previously, courts have highlighted the State's obligation to protect and promote the health of citizens, pointing to Constitutional provisions such as Article 38 (promoting the welfare of people) and Article 42 directs the State to just and humane conditions of work and maternity relief
- Article 47 directs the government to meet the nutrition and health requirements of the population.

### On Reservation For Women In Politics



Priority: **Medium**

Primary Source: The Hindu

**Prepp Prelims Booster:** Reservation for Women

**Prepp Mains Booster:** Government policies and interventions for development in various sectors and issues arising out of their design and implementation; Indian Constitutional Amendments; Issues relating to development and management of Social Sector/Services

#### Context:

- Recently, **Bharat Rashtra Samithi (BRS) leader launched a six-hour hunger strike seeking early passage of the long-delayed Women's Reservation Bill.**
- With the historic adoption of the **73rd and 74th amendments to the Constitution**, which require all state governments to reserve one-third of the seats in Panchayati Raj Institutions for women, **the campaign for a Women's Reservation Bill in Parliament continues.**

#### What is the history behind the Women's Reservation Bill?

- The issue of women's political reservations can be traced back to the Indian national movement.
- **In 1931**, leaders Begum Shah Nawaz and Sarojini Naidu raised a voice for universal demand of Indian women for absolute equality of political status.
- The issue of women's reservation came up in Constituent Assembly debates as well, but it was rejected as unnecessary. It was assumed that a democracy would provide representation to all groups.
- **In 1947**, freedom fighter Renuka Ray raised voice for the rights and liberties of women to be guaranteed.
- The Committee on the Status of Women in India, established in 1971, commented on the declining political representation of women in India.

#### Recommendations of National Perspective Plan for Women

- In 1988, the National Perspective Plan for Women recommended that women be granted reservation from the panchayat level up to the level of Parliament.
- **These recommendations paved the way for the historic adoption of the 73rd and 74th amendments to the Constitution**, which require all State governments to reserve one-third of the seats in Panchayati Raj Institutions and one-third of the offices of the chairperson at all levels of Panchayati Raj Institutions and in urban local bodies, respectively.
- **One-third of these seats are reserved for women from Scheduled Castes and Tribes.**
- Many states, including Maharashtra, Andhra Pradesh, Bihar, Chhattisgarh, Jharkhand, and Kerala, have made legal provisions to ensure 50% reservation for women in local bodies.

#### What is the Women's Reservation Bill?

- The Women's Reservation Bill proposes to reserve 33% of seats in the Lok Sabha and State Legislative Assemblies for women.
- The Deve Gowda-led United Front government introduced it in the Lok Sabha as the 81st Amendment Bill in September 1996.
- The Bill was not approved by the House and was referred to a joint parliamentary committee, which submitted its report to the Lok Sabha in December 1996.
- However, the Bill expired with the dissolution of the Lok Sabha.

#### Reintroduction of the Bill

- The Bill was reintroduced in 1999, 2002, and 2003.

- The Bill was introduced in the Rajya Sabha by the Manmohan Singh government in 2008, and it was passed on March 9, 2010.
- However, the Bill was never brought up for debate in the Lok Sabha and died with the dissolution of the 15th Lok Sabha.
- The RJD, the JD(U), and the SP were its most vocal opponents at the time. They demanded 33% reservation for backward groups within the 33% quota for women.
- In its manifesto in 2014, the BJP promised 33% reservation for women, which it repeated in its 2019 agenda. However, there has been no movement from the government in this regard.

#### Importance of the Women's Reservation Bill

- **Development of Nation:** Women should have a greater presence in politics if India is to develop on par with other nations.
- **Better implementation:** According to the American Economic Association, countries with a higher proportion of women in national parliaments are more likely to pass and implement gender-sensitive legislation.
- **Increased female participation:** According to a 2010 Harvard Kennedy School study, female representation in village councils increased female participation and responsiveness to issues such as drinking water, infrastructure, sanitation, and roads.

#### What is the status of women in Parliament?

- Women make up only about 14% of Indian Parliament members, the highest proportion so far.
- According to the Inter-Parliamentary Union, India has a lower percentage of women in the lower House than its neighbours Nepal, Pakistan, Sri Lanka, and Bangladesh — a dismal record.
- India ranks 144th out of 193 countries in terms of female parliamentary representation, according to the latest Inter-Parliamentary Union report.

#### What are the arguments against the bill?

- Opponents of women's reservations argue that the concept contradicts the Constitution's principle of equality.
  - If women are not allowed to compete on merit, their social status will suffer.
- Unlike a caste group, women are not a homogenous community. As a result, the same arguments used to justify caste-based reservation cannot be used to justify reservation for women.
- Women's interests cannot be separated from other social, economic, and political groups.
- Reserving seats in Parliament will limit voters' options to female candidates.
- As men hold primary power as well as key positions in politics, some have even argued that bringing women into politics could destroy the "ideal family".

#### What is the way forward?

- Reservation for women in legislative bodies is seen as a natural progression from the 72nd and 73rd constitutional amendments.
- The demand for reservation for women in legislative bodies never achieves consensus, owing to divergent viewpoints.
- There is a gender imbalance in political decision-making, and women leaders must be more visible in order to have an impact on position decisions and to encourage young girls to help build their country.
- India urgently needs to feminize politics in order to increase the number of women representatives.
- It would entail women's participation in decision-making, power sharing, running political parties, holding political office, and formulating policies at all levels of government.

### On Regulating Online Sale Of Drugs In India



Priority: **Medium**

Primary Source: The Hindu

**Prepp Prelims Booster:** e-Pharmacies

**Prepp Mains Booster:** Issues relating to development and management of Social Sector/Services relating to Health, Education, Human Resources; Science and Technology- developments and their applications and effects in everyday life

#### Context:

- Recently, the **Union Ministry of Health** issued show-cause notices to more than twenty companies selling medicines online over concerns expressed by pharmacist bodies.
- The pandemic and the subsequent lockdowns had resulted in a significant increase in the **virtual sale of pharmaceuticals**.



#### What are e-pharmacies?

- E-pharmacies are enterprises involved in the sale and purchase of pharmaceuticals and other medical equipment through the internet or other electronic modes.**
- These are online platforms which offer customers the advantage of not having to visit the brick-and-mortar store.
- Customers can also avail of better discounts when purchasing their medicines through these platforms.

#### Government Regulation

- The Ministry of Health has adopted a 'blow hot blow cold' approach towards e-pharmacies.
- In early February 2023, a show-cause notice was issued by the Ministry to platforms such as Tata-1mg, Flipkart, Apollo, PharmEasy, Amazon and Reliance Netmeds.
- The Ministry had previously allowed these firms to operate during the Covid pandemic which saw around **8.8 million households use home delivery services during the lockdown**.
- According to senior Health officials, a total ban on e-pharmacies would be counterproductive.
- The demand for e-pharmacies had increased exponentially. A ban on the services could send the services underground and outside of government regulation.
- The Ministry of Health had floated the draft e-pharmacy rules in 2018 which were intended to regulate the sector but were dropped after being referred to a Group of Ministers including Home Minister Amit Shah and defence Minister Rajnath Singh on account of it being a sensitive issue affecting a substantial vote bank of offline pharmacists.
- The **172nd Parliamentary Standing Committee** report of June 2022 had criticized the government for not notifying the e-pharmacy rules despite four years having passed since the rules were introduced.
- Multiple court orders from the Bombay, Patna, Madras and Delhi High Courts have also recommended the regulation of e-pharmacies.
- In 2019, the **Competition Commission** had recommended encouraging e-pharmacies as unreasonable trade margins imposed by traders' associations had driven up prices and muted competition.

#### E-pharmacies vs mom-and-pop shops

- E-pharmacies entered the Indian market in 2015 supported by billions of dollars of private equity money while offering discounts in order to garner market share.

- E-pharmacies have described themselves as **facilitators of doorstep delivery** and claimed to have tied up with retail vendors to set up vending machines.
- However, profit margins in the sector are limited to 15-16% which has meant that all players have struggled to stay afloat.
- In order to circumvent retail chemists, e-pharmacies like PharmEasy have begun to build a supply chain from the ground level by **buying out large and small wholesale drug distributors**.
- However, this aggressive growth model has resulted in these companies recording year-on-year losses since 2015.
- E-pharmacies have now begun to open their own **capital-intensive brick-and-mortar stores** while mom-and-pop chemists have introduced **store apps and Whatsapp-based purchases**.

#### Opposition to e-pharmacies

- Trade associations of retail chemists have been the biggest opponents of e-pharmacies arguing that their livelihoods were under threat.
- Concerns have also been raised regarding the **sale of sub-standard and counterfeit drugs** which would affect the general health of the population.
- There is also a potential for increased **drug abuse** due to the easier availability of drugs through e-pharmacies.
- People may begin to increasingly self-medicate which could lead to **antimicrobial resistance** in a significant section of the population.
- A threat is also posed to the **privacy of the patients** as their medical history could be leaked by cybersecurity attackers.

#### Way Forward

- Drug delivery has to evolve to reflect consumer sentiments, and both e-pharmacies and retail chemists have realized the futility of sticking to one particular mode of business.
- In the past eight years, the market penetration of e-pharmacies has seen only **single-digit growth from 3-5%** with it providing an alternate option for consumers purchasing chronic care drugs for diabetes, high blood pressure, cardiac issues, etc while relying on retail stores for emergencies and acute care.

### India Rejects J&J Attempt To Extend Patent On TB Drug

Priority: **Medium**

Primary Source: The Hindu

**Prepp Prelims Booster:** IPR

**Prepp Mains Booster:** Government policies and interventions; Issues relating to development and management of Social Sector/Services relating to Health; Issues relating to Intellectual Property Rights

#### Context:

- Recently, in a victory for patients battling for more access to the crucial anti-tuberculosis medicine Bedaquiline, the **Indian Patent Office rejected Johnson & Johnson's (J&J) effort to prolong its monopoly on producing the drug in India beyond July 2023**.

#### Background

- J&J's key patents on Bedaquiline expire in July, allowing generic medication producers such as Lupin and Macleods, among others, to supply the drug, providing cheaper and wider access to the treatment.
- Bedaquiline pills are priced at \$400 for a six-month therapy term.

#### What is Bedaquiline?

- Bedaquiline is a drug used to treat active TB.
- It is specifically used to treat multi-drug-resistant tuberculosis (MDR-TB) in conjunction with other tuberculosis drugs.
- Bedaquiline is an important medicine in the treatment of multi-drug resistant tuberculosis patients whose first-line pharmacological therapy with isoniazid, rifampicin, pyrazinamide, and ethambutol has failed.

**Tuberculosis (TB)**

- It is an infectious illness caused by bacteria (*Mycobacterium tuberculosis*) that mostly affects the lungs. Tuberculosis is transmitted from person to person through the air.
- About one-third of the world's population has latent tuberculosis, which implies they have been infected by TB germs but are not ill and cannot spread the disease.

### The Evergreening Attempts of J&J

- Since 2007, J&J had indulged in 'evergreening' — a strategy to extend the life of patents about to expire in order to retain revenues from them — by making multiple claims in its applications for patent extensions.
- J&J had sought a patent extension on the basis of its claim that it had invented the method for making a derivative of quinoline in its salt form.
- In 2019, over 55,000 patients who had developed multi-drug resistant TB could have benefited from access to Bedaquiline. Only about 10,000 of these patients had received the medication as of March 2020.

## Vital intervention

Bedaquiline, manufactured by J&J, is a crucial anti-TB drug



- India has rejected J&J's appeal to extend its patent beyond July 2023

- Currently priced at

around \$400 for a six-month treatment regimen, the prices are likely to fall

- After July, generic producers like Lupin and Macleods are likely to manufacture the drug

- Over 55,000 patients, in whom other drugs have stopped working, may benefit from Bedaquiline access

- Till March 2020, only a little over 10,000 patients received the drug

### The Indian Patent Regime

- Indian patents are governed by the Indian Patent Act of 1970.
- It became a party to the Trade-Related Aspects of Intellectual Property Rights (TRIPS)
- Agreement following its membership to the World Trade Organisation on January 1, 1995.
- India is also a signatory to several IPR related conventions:
  - the Berne Convention, which governs copyright
  - the Budapest Treaty
  - the Paris Convention for the Protection of Industrial Property
  - the Patent Cooperation Treaty (PCT)
- An interesting point is that the original Indian Patents Act did not grant patent protection to pharmaceutical products to ensure that medicines were available at a low price.
- Patent protection of pharmaceuticals were re-introduced after the 2005 amendment to comply with TRIPS.

- Section 3** deals with what does not qualify as an invention under the Act "the mere discovery of a new form of a known substance which does not result in the enhancement of the known efficacy of that substance or the mere discovery of any new property or new use for a known substance or of the mere use of a known process, machine or apparatus unless such known process results in a new product or employs at least one new reactant" from being eligible for protection under patent law.

### National Strategic Plan (2017-2025) for TB

- It is designed to complement existing health-care plans and worldwide efforts, including as the proposed National Health Policy 2015, the WHO's End TB Strategy, and the Sustainable Development Goals.
- It aims to eliminate tuberculosis by 2025. TB goals for the plan period are:

- 80% decrease in TB incidence (i.e. reduction from 211 per lakh to 43 per lakh)
- 90% decrease in TB mortality (i.e. reduction from 32 per lakh to 3 per lakh)
- 0% patient having catastrophic expenditure due to TB.
- TB eradication has been included into the four strategy pillars of "Detect - Treat - Prevent - Build."
- It has also linked a bank account, AADHAR, and NIKSHAY for direct monetary rewards to sufferers.

### The Widespread Disparities In Human Development

Priority: **Medium**

Primary Source: The Hindu

**Prepp Prelims Booster:** Human Development Index

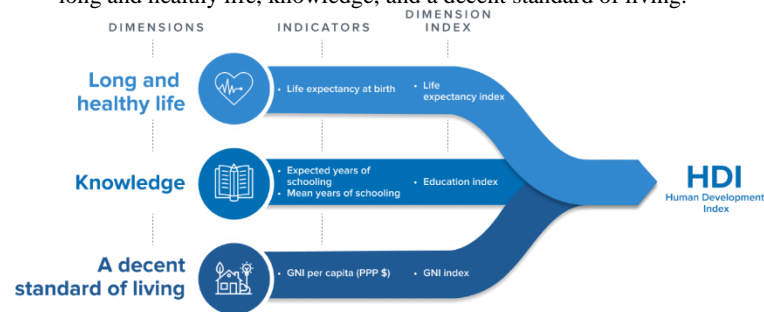
**Prepp Mains Booster:** Issues relating to the development and management of Social Sector/Services relating to Health, Education, and Human Resources. Issues relating to poverty and hunger. Inclusive growth and issues arising from it.

#### Context:

- According to the Human Development Report of 2021-22, India ranks 132 out of 191 countries, behind Bangladesh (129) and Sri Lanka (73). It shows that though India is one of the fastest-growing economies globally. However, this growth has not resulted in a corresponding increase in its Human Development Index (HDI).
- The [Human Development Index \(HDI\)](#) is a summary measure of average achievement in key dimensions of human development: a long and healthy life, being knowledgeable and having a decent standard of living. The HDI is the geometric mean of normalized indices for each of the three dimensions.

#### What is HDI?

- The HDI is a composite statistical measure created by the United Nations Development Programme to evaluate and compare the level of human development in different regions around the world.
- It was introduced in 1990 as an alternative to conventional economic measures such as Gross Domestic Product (GDP), which do not consider the broader aspects of human development.
- The HDI assesses a country's average accomplishment in three aspects: a long and healthy life, knowledge, and a decent standard of living.



#### Calculation

- Human Development Index is calculated using four indicators:
  - life expectancy at birth,
  - mean years of schooling,
  - expected years of schooling, and
  - Gross National Income (GNI) per capita.
- The methodology involves calculating the geometric mean of the normalised indices for the three dimensions of human development while applying the maximum and minimum values recommended by the UNDP and NSO.
- HDI scores range from 0 to 1, with higher values indicating higher levels of human development.

#### Source of data

- Estimates of life expectancy are derived from the Sample Registration System, and data on the average and expected schooling years are gathered from the National Family Health Survey-5.

- Gross state domestic product (GSDP) per capita is used as a stand-in indicator to measure living standards because estimates for GNI per capita are not available at the subnational level.
- The Handbook of Statistics on Indian States published by the Reserve Bank of India serves as the source for GSDP (PPP at constant prices 2011–12).
- The population prediction published by the office of the Registrar General of India is used to calculate GSDP per capita.

### Statewise HDI

- The subnational HDI demonstrates that while some States have made considerable progress, others continue to struggle.
- **Delhi occupies the top spot and Bihar occupies the bottom spot.**
- Nonetheless, it is worth noting that Bihar, unlike the previous HDI reports, is no longer considered a low human development State.
- **Top states:** Delhi, Goa, Kerala, Sikkim, and Chandigarh are the five States with the highest HDI scores.
- Delhi and Goa both have HDI scores above 0.799, placing them on par with **Eastern European nations** with the highest levels of human development.
- 19 States, including Kerala, Maharashtra, Tamil Nadu, Haryana, Punjab, Telangana, Gujarat, and Andhra Pradesh, are categorised as having high human development and have scores between 0.7 and 0.799.
- **Bottom states:** The five States with the lowest levels of human development are Bihar, Uttar Pradesh, Madhya Pradesh, Jharkhand, and Assam. This category also includes States such as Odisha, Rajasthan, and West Bengal, which have HDI scores below the national average.
- The scores of these low-performing States resemble those of African countries such as **Congo, Kenya, Ghana, and Namibia.**
- However, the impact of COVID-19 on subnational HDI is not captured here. The full impact of COVID-19 on human development will be known when post-pandemic estimates are available.

### Reasons for discrepancies

- **The disparity in the distribution of wealth:** The top 10% of the Indian population holds over 77% of the wealth resulting in significant disparities in access to basic amenities, healthcare, and education.
- **Quality of service:** The quality of these services is still a concern even though India has made considerable strides in decreasing poverty and expanding access to healthcare and education. For instance, despite almost universal primary enrollment in the nation, the quality of education is still poor.
- Gujarat and Haryana rank 21 and 10 respectively despite having the highest SGDP per capita among larger States due to their inability to convert this advantage into human development.
- Kerala, on the other hand, stands out with continuously high HDI values across time, which can be attributed to its high literacy rates, strong healthcare system, and relatively high income levels.
- However, among the States, Bihar has always had the lowest HDI score due to its high levels of poverty, low literacy rate, and subpar healthcare infrastructure.

### Way forward

- In order to make sure that the advantages of growth are dispersed more equitably, governments must prioritize **both economic growth and human development.**
- This calls for a **multifaceted strategy** that tackles issues like income and gender inequality, broadens access to high-quality social services, tackles environmental problems, and allocates more funding for social infrastructure like healthcare, education, and basic household amenities like access to clean water, better sanitation, clean fuel, electricity, and the internet in underdeveloped States.
- India has to prioritize investments in job creation and human development, especially for its young people in order to realize its demographic dividend.

## Govt Putting In Place Protocols To Tackle Threat Of Spy Balloons

Priority: **Medium**



Primary Source: Indian Express

Prepp Prelims Booster: Spy Balloons

Prepp Mains Booster: Effect of policies and politics of developed and developing countries on India's interests

### Context:

- Recently, the **Indian military has drafted a set of basic protocols to deal with newer threats like surveillance balloons or other unidentified objects in the sky.**
- It came into consideration after a similar entity was spotted a year ago over the strategic Andaman and Nicobar Islands.



### Background

- Last month, the US shot down a massive Chinese balloon which is accused of spying on vital military sites with an AIM-9X Sidewinder missile fired from an F-22 fighter jet.
- China denied the allegations, claiming it was a civilian aircraft used to study weather-related issues.
- Days later, the US shot down a cylindrical-shaped object over Canada and another unidentified aerial object in its own airspace.
- India's protocols were drafted after an aerial object was spotted over the Andamans, even though its origin could not be determined at the time.
- According to Bloomberg, the object had drifted away over the ocean before military authorities could decide what action to take.

### What are spy balloons?

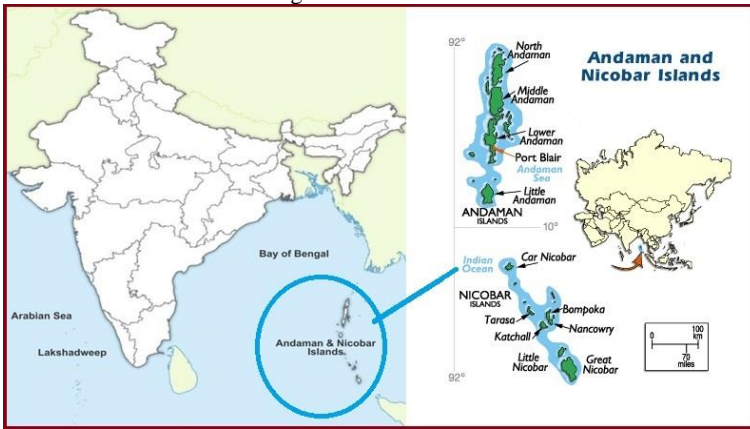
- Spy balloons are high-altitude surveillance equipment used to acquire intelligence and complete other military objectives.
- They typically fly at 80,000–120,000 feet, much above the cruising altitude of commercial aircraft.
- A spy balloon typically has cameras and image equipment dangling beneath the gas-filled white object to record important events.
- Balloons are economically feasible, in contrast to satellites.
- They are able to scan a large area from close range and take more detailed, high-resolution pictures of the target because of their proximity to Earth's surface.
- **Drawback:** According to research by the Air Force's Air Power Research Institute, the drawback is that these cannot be directly steered but can be loosely guided by adjusting height to capture different wind currents. They are also a relatively easy target.

### Protocols to combat newer threats

- **Describe the sequence of events:** The protocols spell out what to do if an unidentified slow-moving aerial object is spotted. This includes detection, positive identification, verification, and targeting using a suitable platform and weapon system. These steps will be followed by

detailed photography of the target, a comprehensive report on it, and analysis of any recovered remnants.

- **Photographing the process:** The entire operation, from weapon system launch to target destruction, will be photographed and recorded in detail.
- **Comprehensive report:** A detailed report, including the sighting time, target size, and description recorded on ground radars, will be prepared and communicated through the chain of command.



### What are the challenges?

- The primary challenge in such a sighting is detecting and identifying the object. Because balloons are slow moving, satellites and radars cannot detect them.
- Several radars at key military sites in India are being upgraded to detect such aerial objects.
- Even the United States, which possesses the most sophisticated military equipment, had previously failed to detect the slow-moving Chinese balloons.

### Significance of Andaman and Nicobar Islands

- The Andaman and Nicobar Islands (ANI) are a group of 572 islands in the Indian Ocean, located in the south-eastern part of the Bay of Bengal.
- The tri-service Andaman and Nicobar military command is based on the Andaman and Nicobar Islands.
- The proximity of these islands to the Indo-Pacific as well as major choke-points or **sea lines of communication (SLOC)** in the Bay of Bengal — the Malacca Strait, Sunda Strait, Lombok Strait, and the Ombai-Wetar straits — makes them strategically important. The majority of global shipping traffic passes through these choke points.
- The islands have the potential to help India increase its influence in the Indian Ocean region and support its military operations there.
- The strategic location of the Andaman and Nicobar Islands is acknowledged by India's key maritime partners, including the United States, Japan, Australia, and France.
- These islands not only provide India with important maritime space, but they also have significant strategic and military implications for the Indian Ocean region.

### A Chance For India To Shape A Data Governance Regime

Priority: **Medium**

Primary Source: The Hindu

**Prepp Prelims Booster:** Data Governance

**Prepp Mains Booster:** - Government policies and interventions for development in various sectors and issues arising out of their design and implementation; Important aspects of governance, transparency and accountability, E- Governance

### Context:

- The article titled "A chance for India to shape a digital governance regime" published in the Hindu on 14th March 2023 has discussed the data governance regime in India and the benefits and concerns associated with it.



### What is data governance?

- Data governance refers to the **management of data usage, data security, data availability and data integrity.**
- Data governance aims to ensure that there is greater awareness among citizens of the importance of data and increase participation and engagement.
- India has advanced its digital strategies and data governance policies over the years with different digitalisation becoming a critical driver of socio-economic growth.

### What is DEPA?

- India's **Data Empowerment and Protection Architecture** was introduced as a consent management tool.
- DEPA will improve **data protection and privacy** by giving citizens greater control over the use and sharing of their personal data.
- This was also expected to **build public trust in data governance and digital technology.**
- However, DEPA also has certain privacy and security risks which could result in the misuse of personal information if the system was not properly managed.
- Some experts have expressed concern that the implementation of DEPA could differ across sectors and jurisdictions.
- This inconsistency could lead to a drop in its effectiveness and create confusion among the public.
- DEPA will have to be implemented in a **transparent, consistent and secure manner through close collaboration between the government, civil society, the private sector and other stakeholders** so as to minimize risks and enjoy the benefits of the system.

### Digital technology in other sectors

- The success of the UPI initiative in financial inclusion has indicated the potential for the use of digital technologies in governance.
- Technology can be employed to enhance access to healthcare services, particularly in rural and remote areas while it can also be used to empower farmers and raise incomes in the agricultural sector.
- However, **concerns related to security, privacy, infrastructure, connectivity, risks of misuse and the lack of a skilled workforce** have affected implementation.
- Eg: Sensitive medical information could be exploited for commercial purposes while market data could be manipulated in the agricultural sector to favor certain stakeholders
- The state would have to resolve questions such as the **ownership of the data, as well as the rights and duties of the data providers** in order to formulate a policy that is responsible, balanced and based on fundamental rights.
- Robust data protection requirements, ethical and responsible governance practices and accountable oversight mechanisms.

### What is Data sovereignty?

- "**Data sovereignty**" refers to the principle that a nation has the right to control the collection, storage and usage of data within its borders and also to the informational self-determination of citizens over their data.

- The **India Data Management Office (IDMO)** was established to oversee and coordinate the country's digital strategies and data governance framework.
- The IDMO was also responsible for ensuring that all data governance mechanisms were in line with the country's values and norms.
- The IDMO would also work towards ensuring that underlying data architectures are treated as a social good by promoting the development and adoption of open-source solutions.
- **Open source and open innovation models** could be developed as an alternative to the proprietary solutions controlled by big fintech companies which are expensive and inaccessible.
- One solution suggested was to open data silos that would capture the potential wealth of data sharing between public offices, corporations and citizens.

### Way Forward

- The government will have to find a middle **path between restrictive data sovereignty and limitless data flow** by defining which data can be shared and by whom and for what purpose.
- Such an approach would require a robust data protection law to balance the fundamental right to privacy and ensure that the interests of all stakeholders including the government, citizens, civil society and industry are satisfied.
- The government should formulate data governance policies that are clear, accountable and transparent while encouraging investment in digital infrastructure and skills.
- This would ensure that data is collected, stored and used in a responsible, secure and accountable manner and a resilient data governance model is put in place.
- The challenges of digital infrastructure, privacy protection, and responsible governance will have to be tackled before the advancements made through the use of technology in financial inclusion can be replicated across other sectors in the **India Stack**.
- Digital Governance in India and the adoption of technology should be in line with the country's larger developmental goals and values to ensure an egalitarian, secure and trustworthy future for all citizens.

### India's DPIs, Catching The Next Wave

Priority: **Medium**

Primary Source: The Hindu

**Prepp Prelims Booster:** Digital public infrastructure

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

#### Context:

- This article is written by Srivatsa Krishna, an IAS officer. According to the author, India's digital public infrastructure (DPI), or the India Stack, shaped a unique partnership between governments (Union and States), regulators, the private sector, selfless volunteers, startups, and academia/think tanks.
- Digital public infrastructure (DPI) refers to platforms such as identification (ID), payment, and data exchange systems that help countries deliver vital services to their public.
- However, there is still much potential for the DPI to be leveraged to further increase the economic freedom of its citizens.

#### Digital Public Infrastructure

- The Aadhaar which was created by Nandan Nilekani and R.S Sharma in 2009 laid the foundation for Digital Public Infrastructure in India.
- Since then, it has become the foundation for several other initiatives that were built on its infrastructure and provide a range of benefits to citizens, businesses, and the government.
- The rebirth of Aadhaar happened in 2014 when Prime Minister Narendra Modi recognized its potential and has been leveraging it to drive good governance and promote digital inclusion.

- Today, over 1,700 Union and state government schemes are based on Aadhaar.
- In 2018 Supreme Court judgment recognized the right to privacy as a fundamental right, this led to slowing down the use of Aadhaar by private entities
- Aadhaar holders can voluntarily use their Aadhaar for private sector purposes, and private sector entities need not seek special permission for such usage.
- Aadhaar data may also be shared between government departments (both intra- and inter-State), but only with the prior informed consent of the citizen.
- Banks and other regulated institutions are permitted to hold Aadhaar numbers as long as they protect them using a vault or other equivalent security measures in accordance with security guidelines established by the Unique Identification Authority of India.
- The Unique Identification Authority of India is a statutory authority established under the provisions of the Aadhaar act 2016 by the Govt. of India under the Ministry of Electronics & Information Technology.
- The monthly average for Aadhaar authentications has risen to 2.2 billion, and over the past 12 years, the total has surpassed 100 billion. For instance, without an Aadhaar number and PAN database, the Goods and Service Tax Network (GSTN) and subsequent account aggregator would not have been possible.



#### DigiYatra

Consider the potential for innovative market solutions that could be created by building on the foundation of Aadhaar.

- The United States CLEAR program (an expedited airport security/airport identity verification process) costs \$369 per annum for a family of four is now active at 51 airports with about 15 million members
- In contrast, the DigiYatra is totally free of cost for the Indian traveler.
- DigiYatra is a Biometric Enabled Seamless Travel (BEST) experience based on a facial recognition system (FRS), built through a partnership between industry and government.
- It ensures seamless identification of passengers at key checkpoints such as airport entry, security check, and boarding gate clearance.
- Over two lakh passengers have successfully used this feature.

- In the financial year 2022, Air passenger traffic in India was estimated to be over 188 million, out of whom over 22 million were international passengers. Digi Yatra will have more second-order impacts and spur greater innovation as it reaches a third of them.

### DigiLocker

- DigiLocker is a flagship initiative of the Ministry of Electronics & IT (MeitY) under Digital India programme.
- DigiLocker aims at 'Digital Empowerment' of citizens by providing access to authentic digital documents to citizen's digital document wallet.
- DigiLocker is a secure cloud-based platform for storage, sharing and verification of documents & certificates.
- DigiLocker at present has 150 million users and six billion stored documents
- It was developed with a tiny budget of ₹50 crores over seven years.
- Significance: Any portable document format (PDF) uploads or notarized documents are no longer required when applying for a passport.
- All it takes is a simple authorization on the passport application form for it to retrieve the necessary information from DigiLocker.
- Without the DigiLocker APIs, many insurance and fintech companies like Zerodha, Upstox, RazorPay, Equal, and others would not exist today because Know Your Customer/Client is accomplished through them almost instantaneously.
- DigiLocker in Karnataka Police recruitment drive cut down the certificate verification process by about six months.

### UPI's impact

- Unified Payments Interface (UPI) is an instant payment system developed by the National Payments Corporation of India (NPCI), an RBI regulated entity.
- UPI is built over the IMPS infrastructure and allows you to instantly transfer money between any two parties' bank accounts.
- The Unified Payment Interface (UPI), which has set new performance benchmarks under the direction of the National Payments Corporation of India, is yet another impressive example.
- UPI accounts for a startling 65% of India's annual GDP with over eight billion transactions per month and a monthly transaction value of \$180 billion.

### Conclusion

- India's Digital Public Infrastructure, in essence, represents a big step towards economic freedom and has emerged as a new economic backbone that is driving India towards its objective of being a \$25 trillion economy by the 100th year of its political independence.
- The combination of ChatGPT and India Stack has enormous possibilities for additional innovation and revolution.

## Governors Cannot Precipitate The Fall Of Elected Governments: Supreme Court

Priority: **Medium**



Primary Source: The Hindu

**Prepp Prelims Booster:** Governor

**Prepp Mains Booster:** Indian Constitution, Issues and challenges pertaining to the federal structure, Structure, organization and functioning of the Executive; Separation of powers between various organs disputes redressal mechanisms and institutions; Appointment to various Constitutional posts, powers, functions, and responsibilities of various Constitutional Bodies

### Context:

- Recently, the Supreme Court said that **Governors** seriously undermine democracy if they use their constitutional office to call for a **trust vote**, citing dissension within a ruling political party, and precipitate the fall of a legitimately established and functioning government.
- A trust vote is a motion through which the government of the day seeks to know whether it still enjoys the confidence of parliament.

- The Bench was referring to then-Maharashtra Governor Bhagat Singh Koshiyari's call for a trust vote on the floor of the House, which eventually led to the fall of the Uddhav Thackeray government in 2022.

### Observations by the court

- The Constitution bench headed by Justice D.Y Chandrachud said that every governor who calls for a trust vote must be aware that doing so could result in the government losing its majority.
- A government might be overthrown only by calling for a trust vote. Governors cannot use their positions to help achieve a certain outcome.
- The Governor cannot enter any area by which his activity will hasten the fall of a government.
- The Governor's office's assertion that there was a significant difference of opinion between the Thackeray camp and the Eknath Shinde faction inside the Shiv Sena party was contested by the court.
- The CJI asked the counsel for the governor to show what convinced the governor that the government has lost confidence of the House.
- The CJI observed that it was told that there was corruption in government, discontent within the cadre of the party and that the alliance is against the core ideology of the party. None of this can be a ground for a trust vote.



### Role of Governor

- When there is political unrest in a state, the governor plays a critical role. Prior to 1994, governors would quickly dissolve a state government on the grounds that it lacked a majority in the state legislature and would advise imposing the president's administration.
- But with its decision in the **S R Bommai case in 1994**, the Supreme Court put an end to this practice.
- In this important judgement, the court determined that the legislature should be the place to determine whether a government has lost its majority.
- The Governor may dissolve the Assembly with the assistance and recommendation of the cabinet, according to Article 174(2)(b) of the Constitution.
- When the advice comes from a Chief Minister whose support may be in question, **the Governor can use his judgement.**
- If the governor feels that the suggestion comes from a council of ministers that lacks the support of the state legislature, he or she may decide not to dissolve the legislature.
- The Supreme Court confirmed the Speaker's authority to call for a floor test if it appears, at first glance, that the government has lost its majority in Shivraj Singh Chouhan & Ors v. Speaker, Madhya Pradesh Legislative Assembly & Ors in 2020.
- The Speaker is the one who has the authority to declare a floor test during a House session.
- However, the **Governor may call for a floor test when the Assembly is not in session thanks to his residuary powers under Article 163.**

### Major Constitutional Provisions related to the Governor

- **Art 153** says that there shall be one governor for a state. One person can also be appointed as governor of two states.

- **Art 154** states that the executive power of the state is vested in the Governor.
- **Art 155 and 156** describe the Appointment and Terms of Office of the Governor respectively.
- **Art 157** mentions the qualifications to be appointed as governor of a state.
- **Art 158** contains the conditions of the Office of the Governor.
- **Art 159** specifies the oath to be administered to the Governor on assuming office.
- **Art 160** declares the discharge of the functions of the Governor in contingencies.
- **Art 161** contains the power of the Governor to issue pardons and suspend, remit or commute sentences.
- **Art 163** states that there shall be a Council of ministers headed by the chief minister to aid and advise the Governor in the exercise of his duties except in certain circumstances where the Governor can use his discretion.
- **Art 176** - Special Address by the Governor
- **Art 200 and 201** are regarding the power of the Governor to assent reject or reserve bills passed by the Assembly for the consideration of the President
- **Art 213** - Power of Governor to promulgate ordinances
- **Art 356** mentions that the Union Government must receive a report from the Governor of the state to invoke President's Rule.

- It is a participatory scheme in which employees contribute to a pension corpus from their salaries, with a matching contribution from the government, and is market linked.
- According to a news report based on research from the early 2000s, India's pension debt has reached uncontrollable levels.
- The **Central Civil Services (Pension) Rules, 1972** were amended as a result of the introduction of NPS.
- The NPS allows subscribers (government employees) to choose where their money is invested by making regular contributions to a pension account throughout their careers.
- They can withdraw a part of their pension in a lump sum and the rest to buy an annuity to ensure a regular income after retirement.

### Difference between OPS and NPS

## Old vs New

A look at the difference between the old and the new pension schemes

Old Pension Scheme	National Pension Scheme
<ul style="list-style-type: none"> <li>■ The scheme guarantees a <b>life-long income, post-retirement</b></li> <li>■ <b>Government bears the expenditure</b> incurred on the pension</li> <li>■ Under the scheme, a monthly payment is assured, where the <b>amount is equivalent to 50% of the last drawn salary</b></li> </ul>	<ul style="list-style-type: none"> <li>■ It is a participatory scheme, where <b>employees contribute to their pension corpus from their salaries</b>, with matching contribution from the government</li> <li>■ The funds are invested in earmarked investment schemes through Pension Fund Managers</li> <li>■ <b>On retirement, 60% of the corpus, which is tax-free, is withdrawn</b> while the remaining 40% is invested in annuities, which is taxed</li> </ul>

### Who is eligible to opt for the Old Pension Scheme?

- The option is available to Central government employees enrolled in the NPS who joined the service on or after January 1, 2004, the day the NPS went into effect. The employees have until August 31, 2023 to opt for the OPS.
- The order will apply to Central Armed Police Force (CAPF) personnel and other Central government employees who joined the services in 2004 as the recruitment process was delayed due to administrative reasons.
- The employee's contribution to the NPS will be credited to the individual's **General Provident Fund (GPF)**.

### Why was the decision taken?

- The decision was made to address a wide range of litigations that the government was facing on the subject.
- Hundreds of lawsuits were filed in courts across the country, and the government did not win a single one.
- Individual officials were benefiting from court orders, so it was decided to issue general instructions for the benefit of all eligible officials.

### Conclusion

Pension plans provide financial security and stability after retirement. It is a company-sponsored insurance plan that provides financial coverage for your old age. The National Movement for Old Pension Scheme (NMOPS), an umbrella organization representing over 14 lakh central and state government employees, has welcomed the government's decision.

## Select Central Staff Can Opt For Old Pension Scheme

Priority: **Medium**



Primary Source: The Hindu

**Prepp Prelims Booster:** OPS and NPS

**Prepp Mains Booster:** Government Policies and Interventions; Welfare Schemes; Human Resources

### Context:

- Recently, the Government has decided to give a **one-time option to select Central Government Employees** to migrate to the **Old Pension Scheme (OPS)**.
- According to the Ministry of Personnel, employees who joined the central government services for positions advertised before December 22, 2003, the day the **National Pension System (NPS)** was notified, are eligible to join the old pension scheme under the **Central Civil Services (Pension) Rules, 1972 (now 2021)**.

### About the Old Pension Scheme (OPS)

- The OPS, or Defined Pension Benefit Scheme, guarantees life-long income after retirement. The government bears the cost of the pension.
- Under the Old Pension Scheme (OPS), employees receive a defined pension. An employee is entitled to a pension equal to 50% of his or her last drawn salary.
- The NDA government ended OPS on April 1, 2004 and replaced it with the NPS.

### What were the issues with OPS?

- The main issue was that the pension liability remained unfunded — that is, there was no pension corpus that would grow continuously and could be dipped into for payments.
- The Government of India budgeted for pensions every year, but there was no clear plan for how to pay them year after year in the future.
- The 'pay-as-you-go' scheme created intergenerational equity issues, requiring the current generation to bear the ever-increasing burden of pensioners.

### What is the National Pension System?

- With effect from January 2004, the Central Government introduced the National Pension System (NPS) (except for armed forces).
- The NPS was established as a means for the government to eliminate pension liabilities.



## World Water Day 2023 & Case Studies of Jal Jeevan Mission

Priority: Medium



Primary Source: Down to Earth

**Prepp Prelims Booster:** Jal Jeevan Mission

**Prepp Mains Booster:** Issues relating to development and management of Social Sector/Services relating to Health; Conservation

### Context:

- **World Water Day is an annual observance day held on March 22** that emphasizes the significance of clean water.
- **The Jal Jeevan Mission aims to deliver safe and enough drinking water to all rural Indian households by 2024** through individual household tap connections.
- The initiative will also make source sustainability measures essential, such as grey water management, water conservation, and rainwater collection.
- In this article, we will discuss several case studies related to water conservation.

## WORLD WATER DAY

22ND MARCH



### What is meant by World Water Day?

- The day intends to support the achievement of Sustainable Development GoalSDG 6: water and sanitation for all by 2030.
- The focus of **World Water Day 2023** is on the theme of ‘**Accelerating the change to solve the water and sanitation crisis,**’ underlining the vital importance of taking decisive action to address the global water crisis.
- According to the UN, there are billions of people, as well as numerous schools, businesses, healthcare centers, farms, and factories, who lack access to safe water and sanitation facilities. Therefore, it is imperative to move beyond the status quo and take swift measures to accelerate change and address this pressing issue.

### About Jal Jeevan Mission (JJM)

- It is the Ministry of Jal Shakti's main programme, with the goal of connecting every rural family to tap water by 2024.
- The Prime Minister made the announcement in 2019.
- It will take a community-based approach to water, with comprehensive information, education, and communication as a fundamental component of the goal.
- Source sustainability measures, such as recharge and reuse through greywater management, water conservation, and rainfall collecting, will be obligatory parts of the programme.

### Works Under Jal Jeevan Mission

#### Nuapada District in Odisha switched to surface from ground sources

- Over-extraction of groundwater in western Odisha has resulted in increased concentrations of natural fluoride in groundwater. Nuapada district in western Odisha is also impacted.

- Nuapada shifted from ground to surface sources to address its quality and quantity issues.
- Following the commencement of the Jal Jeevan Mission in 2019, the district experienced a significant transformation in the rural water delivery sector. Under the mission, river water was tapped for drinking purposes.

#### Dharwad revived traditional ponds to replenish groundwater

- Groundwater is the primary source of drinking water in the villages of Karnataka's Dharwad district. Due to overexploitation, its levels are rapidly dropping to catastrophic levels.
- Karnataka has 34 talukas, and issues such as population pressure, wastewater discharge, and the addition of agricultural chemicals into soil have all led to the state's groundwater quality worsening and levels plummeting.
- Groundwater sources are recharged and supplemented by revitalized ponds that serve as village-level groundwater-recharge structures under the Jal Jeevan Mission.

#### The communities of Junagadh blend ground and surface supplies

- Junagadh is a district in Gujarat's Saurashtra region. The climate in the area is semi-arid, with harsh temperatures, sporadic rainfall, and a high rate of evaporation.
- Initially, the area was reliant on perennial streams that ran through the majority of its communities. Drinking water from streams exposed the community, particularly youngsters, to illnesses such as dysentery and jaundice.
- Surface and groundwater are utilised in ways that maintain ecological equilibrium.
- The Village Water and Sanitation Committee (VWSC), founded in 2019 as part of the Jal Jeevan Mission initiative, is responsible for the operation and maintenance of the village's water delivery infrastructure.

#### Ladana in Rajasthan solved its shortage problem by combining ground and surface sources

- During the peak summer months, Ladana hamlet (Phagi tehsil) in the semi-arid Jaipur district has high temperatures and evaporation loss. Fighting for a clean and consistent supply of water has been a part of life in this town for many years.
- Villagers here relied on a baori, or step well, near the local temple. They gathered water in earthen pots until the well became polluted owing to the accumulation of garbage or, on rare occasions, animal carcasses in the well-water.
- Until March 2022, just 40% of the village's 563 houses had working household taps connected to an overhead tank via well-laid pipelines under the Jal Jeevan Mission.
- The remaining households must still be linked. In the community, a 125,000-litre overhead tank has been built to store both groundwater and dam water.

#### Traditional devotion contributed to the preservation and utilization of North Sikkim's springs

- Sikkim's North district gets its drinking water from springs. Communities are forced to trundle through the mountainous terrain to gather water from distant sources.
- The Jal Jeevan Mission facilitated the installation of functioning home tap connections in almost 90% of the district's households

### United Nations Water Conference 2023

- This World Water Day coincides with the commencement of the UN Water Conference 2023.
- The meeting is a once-in-a-generation chance to bring the globe together to find answers to the water and sanitation crises.
- National governments and stakeholders from all levels of society will collaborate to establish voluntary pledges to accelerate progress toward SDG 6 and other globally agreed-upon water-related goals and targets.
- These voluntary pledges will create the Water Action Agenda, which will achieve quick, revolutionary change for the rest of this decade.
- The United Nations World Water Development Report (WWDR) is UN-Water's flagship report on water and sanitation challenges.

- Its 2023 edition, Partnerships and Cooperation for Water, will be released on World Water Day and will provide policy recommendations for decision-makers by giving best practices and in-depth research.
- UNESCO is publishing the study on behalf of UN-Water.

### UN Water Conference: Bottled water obscures the world's failure to provide safe water for all

- The rapidly expanding bottled water industry is contributing to the concealment of a devastating global issue: the failure of public systems to provide safe drinking water to all.
- A crucial Sustainable Development Goal (SDG) aim is the supply of safe drinking water. However, the growth of the bottled water business works against or slows progress toward it. Bottled water usage is on the rise as a result of decades of slow growth and several failures in municipal water supply systems.
- The analysis mapped and rated the **world's top 50 nations based on total and per capita bottled water sales** in both dollars and litres. Global bottled water sales are currently estimated at around \$270 billion and 350 billion litres.

### Congress Moves Privilege Motion Against PM

Priority: **Medium**



Primary Source: The Hindu

**Prepp Prelims Booster:** Privilege Motion

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

#### Context:

- Recently, Congress general secretary and Rajya Sabha member K.C. Venugopal wrote to Rajya Sabha Chairman Jagdeep Dhankhar seeking privilege under **Rule 188 of the Rules of Procedure and Conduct of Business** in Council of States (Rajya Sabha) proceedings against Prime Minister Narendra Modi over his remarks on why former Prime Minister Jawaharlal Nehru's family did not use his surname.

#### Background

- The move comes a day after reports that the BJP is considering the option of getting Mr. Gandhi "suspended" if he doesn't apologise for his "democracy under threat" remarks.
- The Prime Minister had made the remarks during his reply to the **Motion of Thanks** on the President's Address in the Rajya Sabha on February 9 during the first part of the Budget session.



#### What is Privilege Motion?

- The Parliament, its members, and committees are granted specific powers, privileges, and immunities under the Constitution. These powers and privileges are governed by laws made by the House.
- The opposition can bring a privilege motion against a minister if the minister has misled the House by supplying incorrect information.
- Privilege Motion is brought by a member when he believes that a minister has breached the House's or one or more of its members' privileges by withholding facts in a case or giving incorrect or distorted facts.
- Its goal is to censure the minister in question.
- It can be moved in both the Rajya Sabha and the Lok Sabha.
- A privilege motion can be brought against both members and non-members of the Parliament.

#### The motion of Thanks

- The motion of thanks is the motion of parliament after the first session after each general election and the first session of every fiscal year is addressed by the President.
- In this address, the president outlines the government's policies and programs for the previous and following years.
- This president's address, which corresponds to the 'speech from the Throne in Britain,' is debated in both Houses of Parliament on a motion known as the 'Motion of Thanks.'
- Article 87 mentions the President's special address.
- Clause (1) of that article states that the President shall address both Houses of Parliament assembled together and inform Parliament of the causes of its summons at the start of the first session following each general election to the House of the People and at the start of the first session of each year.
- This type of address is known as a 'special address,' and it is also a yearly feature.
- No other business is conducted until the President has addressed both Houses of Parliament.
- This Address must be delivered to both Houses of Parliament at the same time.

### Amid Din, Lok Sabha Passes Budget Demands For Grants Without Discussion

Priority: **Medium**



Primary Source: Indian Express

**Prepp Prelims Booster:** Indian Polity

**Prepp Mains Booster:** Indian Constitution; Parliament

#### Context:

- Recently, the **Lok Sabha passed the Demands for Grants for Budget 2023-24 and the Appropriation Bill by a voice note without any discussion.**
- The government is likely to push passage of the **Finance Bill even amid a din.**

#### News Summary

- The Lok Sabha recently passed Demands for Grants authorizing expenditure of about Rs.45 lakh crore for 2023-24 by voice vote amid protest by opposition members over their demand for a Joint Parliamentary Committee probe into the Adani issue.
- Speaker Om Birla applied for the Guillotine when the house met at 6 pm following two adjournments earlier.

#### Key Highlights

- As per the norms, the Union Budget must be ratified in both Houses of Parliament before the end of the fiscal year; that is before March 31.
- Following the adoption of the Demands for Grants, Finance Minister Nirmala Sitharaman tabled the **Appropriation Bill, 2023**, for discussion and passage, asking authorisation to take funds from the **Consolidated Fund of India**. This was also passed by voice vote.

- Even in the face of opposition, the administration is expected to press through with the Finance Bill.
- The Budget debate in Lok Sabha will conclude after the Finance Bill is enacted, and the debate will shift to Rajya Sabha.
- The **Demands for Grants** for the Union Territory of Jammu and Kashmir were passed without debate by the Lok Sabha two days ago.



### What is Demand for Grants?

- The demand for grants comprises provisions for revenue spending, capital expenditure, grants to state governments and union territory and loans and advances.
- Any proposal or estimate seeking money from the Consolidated Fund of India must be given to the Lok Sabha in the form of a demand for grants, according to **Article 113 of the Constitution**.
- Both charged and voted expenditures are included in the grant demand.
- Charged expenditures, like interest payments, are considered liabilities of the Indian government and are not subject to a vote in the Lok Sabha.
- Voted expenditure, on the other hand, includes income and capital expenditures that will be incurred on a government plan in the coming fiscal year.
- In general, one Demand for Grant is submitted for each Ministry or Department.
- However, depending on the nature of the spending, a Ministry or Department may propose more than one Demand. (Large ministries like Finance and Defence have multiple grant requests).
- A unique Demand is given for each Union Territory that does not have a legislature.
- Each Demand begins by summarising the overall amount of expenditure for which the Demand is provided.

### About Appropriation Bill

- The Appropriation Bill empowers the government to take funds from the Consolidated Fund of India to satisfy expenses throughout the fiscal year.
- According to Article 114 of the Constitution, the government can only withdraw funds from the **Consolidated Fund** with the agreement of Parliament.
- The money withdrawn is utilized to cover current expenses during the fiscal year.
- The Appropriation Bill is introduced in the Lok Sabha following discussion on Budget proposals and voting on Demand for Grants.

### About Consolidated Fund of India

- Consolidated Fund of India means the fund to which all revenues and payments are credited and debited. The Consolidated Fund of India was established under Article 266(1) of the Indian Constitution.
- The Indian Constitution mentions three types of central government funds:
  - the Consolidated Fund of India (Article 266),
  - the Contingency Fund of India (Article 267), and
  - the Public Accounts of India (Article 266).

### What is a Finance Bill?

- **Financial bills** are those bills that are concerned with financial problems but are not money bills, according to Article 117 of the Indian Constitution.
- The Speaker of the Lok Sabha has the authority to rule on whether or not the Bill is a Money Bill. In addition, the Speaker's decision will be considered final.
- It is also known as the "Act for Appropriation of Funds for Appropriations," is a bill that specifies the amount of money to be spent by the Government of India and how it is to be spent.
- Financial bills are those that address fiscal issues, such as revenue or spending.
- The Finance Bill is a component of the Union Budget that specifies all of the legal changes necessary for the proposed tax adjustments by the Finance Minister.

### Why is the Finance Bill Required?

- The Finance Bill proposes to change many current laws without enacting a new amendment bill for each of those Acts.
- For example, planned tax adjustments in the Union Budget may need revising different portions of the Income Tax Act, Stamp Act, Money Laundering Act, etc.
- Where necessary, the Finance Bill overrides and modifies existing legislation.

### Appropriation Bill vs. Finance Bill:

- While the Finance Bill provides rules for paying the government's expenditures, an Appropriation Bill defines the amount and purpose for withdrawing money.
- Both appropriation and finance bills are categorized as money bills, which do not require the Rajya Sabha's approval. The Rajya Sabha only discusses them and returns to the legislation.

### Stages of Budget in the Parliament:

- Budget presentation
- General Discussion
- Scrutiny by Departmental Committees
- Voting on Demands for Grants
- Adoption of Appropriation Bill
- Passing of Finance Bill

## Why Is The Tribal Panel Upset With Environment Ministry Over Forest Rights?

Priority: **Medium**



Primary Source: The Hindu

**Prepp Prelims Booster:** NCST

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

### Context:

- Recently, the **National Commission for Scheduled Tribes (NCST)** invoked its constitutional power to requisition detailed Forest Rights Act implementation reports from the Supreme Court.
- The ST Commission is at odds with the Union Environment Ministry over the latest **Forest Conservation Rules (FCR), 2022**.
- The dispute is over the potential violation of provisions enshrined in the **Scheduled Tribes and Other Forest Dwellers (Recognition of Forest Rights) Act, 2006**, also known as the **Forest Rights Act (FRA)**.

### About National Commission for Scheduled Tribes

- The National Commission for Scheduled Tribes is a constitutional body.
- It was established on February 19, 2004, by **revising Article 338 and introducing a new article 338A into the Constitution as part of the 89th Constitution Amendment Act, 2003**.
- **Article 338A** empowers the National Commission for Scheduled Tribes to monitor the execution of various protections afforded to STs by the Constitution or any other legislation in force at the time, or under any

other order to the Government, and to review the effectiveness of such safeguards.

- **Role of NCST:** To safeguard the interests of the scheduled tribes or under any other order to the Government and to evaluate the working of such safeguards.
- The Commission and its officers participate in formulation of policies and in the developmental programmes for Scheduled Tribes including Tribal Sub-Plan.



### Background

- In June 2022, the **Ministry of Environment, Forests, and Climate Change notified the Forest (Conservation) Rules, 2022**, which prescribed the mechanism for diverting forest land for non-forest purposes.
- These amended rules have removed a clause (present in the 2014 and 2017 Rules) that explicitly required any proposal to have the consent of local tribespeople and other traditional forest dwellers (OTFDs) of the area before proceeding with Stage 1 clearance.
- The **Forest Conservation Rules (FCR), 2022** has allowed applying entities to seek the consent of locals, represented by the Gram Sabha, after Stage 1 or even Stage 2 clearance.

### What are Forest Conservation Rules 2022?

- The FC Rules, 2022 do not require the collector to obtain the consent of Gram Sabhas before the in-principle approval.
- This means, the Union Government can give its final approval and will, thereafter, leave it to the state government to pass an order for de-reservation or diversion or assignment. It is then left to the state government now to make sure that the claims of forest dwellers are settled.
- Neither Gram Sabha consent is required nor is it necessary for the collector to oversee the process of recognition and vesting of individual claims of forest rights before the grant of In Principle approval.
- Those applying for diverting forest land in a hilly or mountainous state with a green cover of over two-thirds of its geographical area or a state/UT with a forest cover of over one-third of the geographical area would be able to take up compensatory afforestation in other states/UTs where the cover is less than 20%.
- The new guidelines allow private players to use the land for plantation, which can lead to monoculture cultivation.

### Criticism of the new Rules

- The FC Rules, 2022 snatch away the participatory rights of the forest dwellers by making them simple bystanders to a process that affects their land and forest rights, their culture and livelihood.
- The issue of Gram Sabhas and FRA, according to the new rules, comes into play only after a final approval has been given by the Central Government.

### How is NCST involved?

- Within two months of the FCR, 2022 coming into force, the NCST constituted a "**Working Group on the Forest Rights Act 2006 & other issues related to the Forest and Scheduled Tribes**" to monitor the

implementation of the FRA and "make recommendations to the Union government and State governments".

- **The NCST concluded that the new FCR violated the rights of STs and other traditional forest dwellers (OTFDs) by violating the FRA.**
- According to the FRA, in the event of a dispute over forest land, the rights of STs and OTFDs who live in and off the forest and its resources must take precedence over the rights of any other party.

### Issues claimed by NCST

- In September 2022, NCST highlighted the potential consequences of FCR, 2022, recommending that they be put on hold and that the previous Rules, which provided for the consent clause, be strengthened.
- **No legal space:** The ST panel argued that previous versions of the Rules provided a legal space for ensuring completion of the processes for recognition and vesting of rights under the FRA in areas where forests are being diverted.
- **Consent of tribal and forest dweller:** The ST Commission observed that it made little sense to seek tribal and forest dweller consent after an applicant had received Stage 1 clearance. By then, the applicant would have invested in the project and would have an incentive to "pursue the State Governments or Union Territories" to divert the land as soon as possible.
- **Safeguards or mechanism with FRA:** The NCST also stated that while the FCR, 2022 provided for Compensatory Afforestation, it did not include any safeguards or a mechanism for FRA compliance.
- **FRA compliance in trouble:** The NCST Working Group discovered that FRA compliance was in jeopardy even under the old rules. According to the report, nearly 25,000-30,000 hectares of forest land are diverted each year.

### Response of the Environment Ministry

- It stated that the FCR, 2022 does not violate any provisions granting land rights to STs and OTFDs.
- It was stated that the FCR was issued in accordance with the **Forest (Conservation) Act, 1980**, for a procedure that would run "parallel" to the provisions of the FRA, 2006, and that there was "no legal basis" for the ST Commission's concerns about the FCR's impact on the FRA.

### Demand of the documents

- In order to obtain "authentic FRA reports," the National Commission for Scheduled Tribes (NCST) demanded the Supreme Court, invoking powers under Clause 8(d) of Article 338A of the Constitution, requesting all documents filed in Writ Petition (Civil) 109/2008.
- The petition was initially filed by a Trustee of Wildlife First, a Bengaluru-based advocacy organization that believes in the "ideology of strictly protected wildlife reserves" and "voluntary resettlement solutions" for local tribespeople and OTFDs living in forest reserves.
- The plea essentially challenged the constitutionality of the FRA, prompting a slew of related petitions to be tagged and scheduled for hearing before a three-judge Constitution Bench.

### Conclusion

The commission recognizes the importance of implementing the FRA to protect tribal rights. The court documents will assist the commission in evaluating states' performance in enforcing the law. According to the statement, the commission will make comments and recommendations to the states and the Union government based on the documents.

## Students To Get New NCERT Textbooks After A Gap Of Nearly 20 Years

Priority: **Medium**



Primary Source: The Hindu

**Prepp Prelims Booster:** National Curriculum Framework

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

**Context:**

- Recently, Ministry of Education (MoE) announced that school students at **all levels** will learn from updated textbooks to be introduced in the 2024-25 academic year.
- The NCERT books are being updated after nearly two decades. This is in keeping with the National Education Policy 2020 and National Curriculum Framework (NCF) released in August 2022.

### National Steering Committee meeting under the NCF agenda

- The Minister of Education Dharmendra Pradhan convened the National Steering Committee meeting to streamline the next steps under the NCF agenda.
- At present the government has released **NCF for pre-school to Class 2**, for children aged between three and eight years. The framework for other classes is yet to be rolled out.
- Correspondingly, textbooks based on NCF for Class 1 and 2 will be released by the end of this month.
- In consonance with the NEP 2020 perspective of **imparting multilingual education**, the new National Council of Educational Research and Training (NCERT) textbooks will be developed in 22 languages
- NCERT has developed material to feed into the **play-way teaching method**: the Jaadui Pitaara (magic box) would be made available to every school in the form of open education resources.

### National Curriculum Framework

- The NCF is the foundation for curricular development. It informs the enhancement and development of syllabus materials, teacher guides, textbooks, learning materials, and wider teaching resources (including technical and scientific resources).
- NCF (National Curriculum Framework) is an important step taken to implement the New Education Policy-2020.
- As per the National Education Policy, 2020, The NCF-2022 has four sections —
  - the National Curriculum Framework for School Education,
  - the National Curriculum Framework for Early Childhood Care and Education,
  - the National Curriculum Framework for Teacher Education and
  - the National Curriculum Framework for Adult Education.
- The framework has listed the **'panchakosha' concept for education of children** and its five parts are
  - physical development (sharirik vikas),
  - development of life energy (pranik vikas),
  - emotional and mental development (manasik vikas),
  - intellectual development (bauddhik vikas) and
  - spiritual development (chaitisik vikas).
- Panchakosha is an ancient concept that explains the significance of the body-mind complex in human experience and understanding.
- This approach does not separate the body and mind and provides clear directions for a more comprehensive education.



### Significance of NCF (National Curriculum Framework)

- NCF through its guidelines has emphasised that students' learning should be planned keeping in mind Indian roots and has proposed a five-step

learning process or **panchaadi for children** at the preschool or foundational level.

- Panchaadi includes aditi (introduction of a topic), both (conceptual understanding), abhyas (practice), prayog (application), and prasar (expansion).
- This system will help in moving away from rote learning.
- The Ministry of Education through NCF, aims to help students enhance their **cognitive and critical thinking abilities**, which includes problem-solving in real-life situations.
- It also speaks about **nurturing the social and emotional capacities** of the child.
- In order to promote an **entrepreneurial mindset** there is an emphasis on **vocational education**.

### Conclusion

Education is fundamental for achieving full human potential, developing an equitable and just society, and promoting national development. Providing universal access to quality education is the key to India's continued ascent, and leadership on the global stage in terms of economic growth, social justice and equality, scientific advancement, national integration, and cultural preservation.

### India Needs Public Policy Education

Priority: **Medium**



Primary Source: The Hindu

**Prepp Prelims Booster:** Education

**Prepp Mains Booster:** Issues relating to development of Education; Government policies and interventions for development in various sectors and issues arising out of their design and implementation; Growth and Development

### Context:

- In this article, written by Hasmukh Adhia, former Finance Secretary in the Government of India states that India requires a public policy education.
- It was suggested that Public Administration should be made a mandatory paper for UPSC examination.
- Hence, the article contains a few ideas for improving public policy education in India.

### What is Public Policy?

- Public policy is the basic guide to action done by various government bodies in relation to various problems in the nation.
- It is created on behalf of the citizens in order to address their concerns and better the overall condition of the nation.
- If these policies are well-integrated into the workings of the government, they make administration of a city, state, or nation easier and more effective.

### Role of Government Policies

- Government strategies are crucial in determining the future of a country. Good public policies promote economic development and public wellbeing while also improving residents' quality of life.
- However, there is little enthusiasm in public policy education in India.
- Only a small proportion of lawmakers, civil service employees receive formal training in public policy and management.
- The term "public management" refers to both public policy and public administration.

### Why is the governance lagging behind?

- There are many talented individuals operating at different levels of the Indian bureaucracy.
- In terms of efficiency and usefulness, however, governance is still viewed to trail behind private sector management. This is primarily due to a dearth of instruction in public administration.
- Many policymakers have been noted to be ill-equipped to create successful policies.

### Why are there few programmes for public management?

- The majority of executive positions in the organized sector are in government or government-owned organizations and require knowledge of public administration.
- However, compared to business management education, the quantity of formal education in public management is inadequate.
- The universities do not have many public management programs as there are few positions open for those who complete such programs.
- There are few chances in the private industry for government advisory roles, consulting, and Corporate Social Responsibility (CSR).
- Students must pass tough examinations to be considered for positions in the public sector.
- As a result, neither educational institutions nor students see any reason to favor public management classes over professional or management courses that offer profitable private sector possibilities.

### What are the suggestions?

- Public administration should be made one of the mandatory topics for the UPSC civil service examination.
- The advent of a public management paper can either be a substitute for one optional topic or an extra paper. This will be beneficial in several ways.
  - For example: Before joining the government, civil servants would receive formal instruction in public administration.
  - Because approximately five lakh applicants apply for UPSC civil service each year, each of whom must study for the public policy exam, this provides a chance or motivation for colleges and private schools to teach the topic at the graduate or post-graduate level.
  - This new demand will significantly increase public policy schooling, study, and case studies.
  - Even if only 10% of UPSC aspirants are hired for various government jobs, including those at the state level, those who studied this subject for the exam will gain a better understanding and sensitivity to the complexities involved in public management, making them better citizens as well as effective private sector managers.
- As part of induction training, established government training schools should include a greater emphasis on public policy. They should also create a case study library for instruction.
- The government can establish specialized roles of public policy analysts to be filled directly from the market, thereby creating new employment opportunities for graduates of public policy programs.

## INTERNATIONAL RELATIONS

### Understanding The Windsor Framework

Priority: **Medium**

Primary Source: The Hindu

**Prepp Prelims Booster:** Windsor Framework

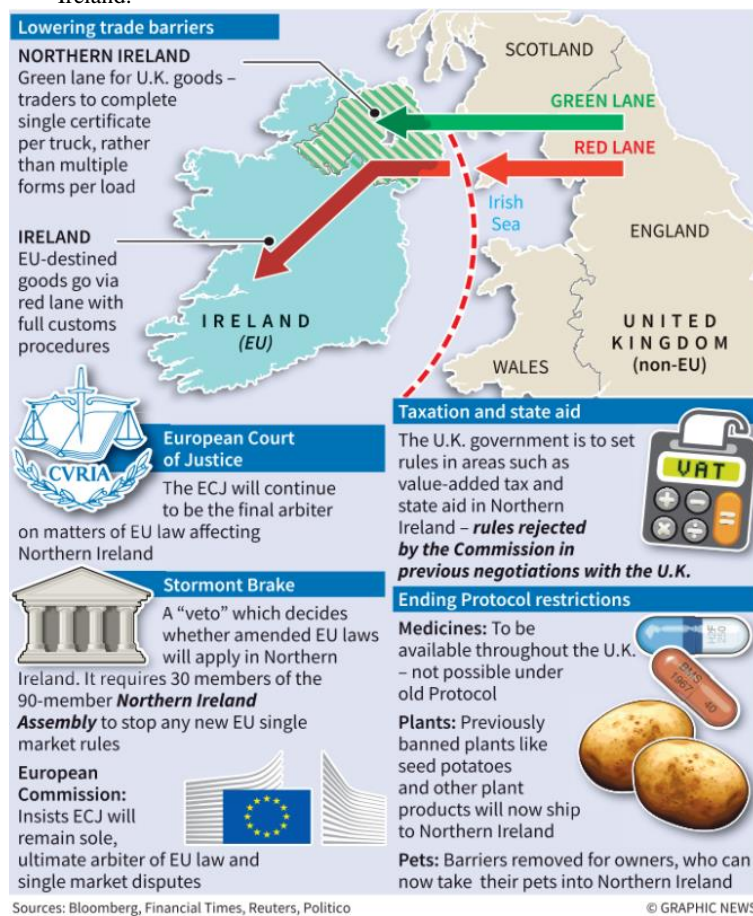
**Prepp Mains Booster:** International Relations

#### Context:

- Recently, the **United Kingdom and the European Union reached an agreement on post-Brexit trade rules for Northern Ireland**, with the goal of eliminating the border between Britain and Northern Ireland that runs through the Irish Sea.
- The Republic of Ireland remained in the EU after Brexit caused trade complications, which the UK's conservative government ironed out with the **Northern Ireland Protocol**.
- The Protocol, which allowed EU customs rules to apply across Northern Ireland, sparked tensions in the province.
- **The Windsor framework** seeks to address the disruption to trade between Northern Ireland and the rest of the UK caused by Northern Ireland protocol.

#### Background

- Northern Ireland has remained a part of the United Kingdom since the Anglo-Irish Treaty of 1921 established the Irish Free State.
- Growing tensions on the island exacerbated the political split, particularly from the 1960s onward, with spiraling violence between Unionists, who wanted Northern Ireland to remain part of the United Kingdom, and Republicans, who wanted unification with the Republic of Ireland.
- Over the next three decades of attacks known as "The Troubles," more than 3,500 people were killed and hundreds of thousands were injured.
- This dark saga on the island ended only after the Good Friday Agreement was reached in 1998 between Prime Ministers Tony Blair of the United Kingdom and Bertie Ahern of the Republic of Ireland.
- The Agreement made it clear that, in order to respect the wishes of the majority of Northern Irish people, the province would remain a part of the United Kingdom.
- The province's people would be governed by mixed political institutions based on power-sharing between the Republic of Ireland and Northern Ireland.



### What is the issue?

- With the prospect of Brexit looming, these carefully **crafted arrangements faced an impending challenge, resulting in the Northern Ireland Protocol**, which allowed EU customs rules to apply in Northern Ireland in 2019. This was done to avoid a hard border between Northern Ireland and the Republic of Ireland.
- Under the Protocol, Northern Ireland would formally be outside the EU single market, but EU rules on free movement of goods and customs union would continue to apply.
- While the Protocol promoted peace and harmony on the island, it effectively cut Northern Ireland off from the UK in terms of trade by imposing a hard customs border in the Irish Sea.
- This aggravated Northern Ireland unionists who argued that it was unfair that goods could not flow freely between the province and the rest of the UK.

### What is the Northern Ireland Protocol?

- Northern Ireland is a British-ruled province of the United Kingdom that shares a long porous border with Ireland, a member of the European Union.
- Trade across the open border when Britain left the EU was one of the most difficult aspects of the Brexit negotiations, which culminated in the Northern Ireland Protocol.
- The protocol is part of the Brexit agreement, which governs trade in Northern Ireland.
- It keeps Northern Ireland in the EU's single market for goods.
- It keeps the Irish land border open, but products entering Northern Ireland from the rest of the UK are subject to checks and controls.
- The checks hampered trade between the United Kingdom and Northern Ireland.

### About Windsor Framework

- The new agreement, called the "Windsor Framework," will provide "smooth flowing trade" within the UK, "protect Northern Ireland's place" in the UK, and "safeguard" Northern Ireland's sovereignty.
- The deal's goal is to address the issues raised by the Northern Ireland Protocol, an addendum to the Brexit agreement reached between Boris Johnson and the EU in 2019.
- The protocol was designed to avoid a hard border on the island of Ireland by keeping Northern Ireland aligned with the EU, which means goods do not need to be checked between the Republic and the province. The Windsor Framework will take the place of the Northern Ireland Protocol.

### How does the Windsor Framework attempt to resolve trade issues?

- **Address the Disruption:** The Windsor framework aims to address the aforementioned trade disruptions between Northern Ireland and the rest of the United Kingdom caused by the Northern Ireland Protocol.
- **Free Trade:** It does so by allowing free trade between the United Kingdom and Northern Ireland via the use of green and red lanes for goods entering Northern Ireland.
  - **Green lane goods** will have fewer checks and controls, including no customs checks or rules of origin.
  - **Red lane goods** will be subject to full checks and controls in order to preserve the EU's single market.
- To reduce the impact on farmers, agri-food goods such as meat and dairy will have fewer checks and controls, and food retailers such as supermarkets, wholesalers, and caterers will be able to move agri-food through the green lane. Certain chilled meats from the United Kingdom will be allowed to be sold in Northern Ireland.
- The UK and EU leaders are hoping that this will increase the availability of British goods in Northern Ireland markets, including foods and medicines.

### Conclusion

The Windsor Framework is an important step toward preserving and strengthening the hard-won peace and progress of the Belfast/Good Friday Agreement. It was praised as a means of finding a way forward that protects Northern Ireland's place within the UK's internal market as well as the EU's single market, to the benefit of all communities in Northern Ireland.

### UK To Provide Weapons Containing Depleted Uranium To Ukraine

Priority: Medium



Primary Source: Indian Express

**Prepp Prelims Booster:** Russia-Ukraine crisis, Depleted Uranium

**Prepp Mains Booster:** Effect of policies and politics of developed and developing countries on India's interests, Indian diaspora.

### Context:

- Recently, Minister of State for Defence of the United Kingdom, Annabel Goldie, said that some of the ammunition for the Challenger 2 battle tanks that Britain is giving to Ukraine includes armor-piercing rounds

containing depleted uranium, following this Russian President Vladimir Putin announced plans to station tactical nuclear weapons in neighboring Belarus.



### What is depleted uranium?

- Depleted uranium is a **byproduct of the process of creating enriched uranium**, which is used in nuclear reactors and nuclear weapons.
- In comparison to enriched uranium, depleted uranium is much **less radioactive and is incapable of generating a nuclear reaction**.
- Depleted uranium is more dense than lead and is widely used in weapons as it can easily penetrate armour plating.
- Depleted uranium munitions have been in use for decades and make for a formidable weapon **against heavily armoured tanks**.
- Another 14 states are known to store them, according to news agency Reuters.

### Usage

- Depleted Uranium is used in the manufacturing of ammunition used to pierce armour plating, such as those found on tanks, in missile nose cones and as a component of tank armour.
- Armour made of depleted uranium is much **more resistant to penetration** by conventional anti-armour ammunitions than conventional hard rolled steel armour plate.
- Armour piercing ammunitions are generally referred to as "kinetic energy penetrators".
- DU is preferred to other metals, because of its high density, its pyrophoric nature (DU self-ignites when exposed to temperatures of 600° to 700° and high pressures), and its property of becoming sharper, through adiabatic shearing, as it penetrates armour plating .
- The US military is still developing depleted uranium munitions, notably the M829A4 armour-piercing round for the M1A2 Abrams main battle tank.
- **Other countries:** In addition to the US the other countries using them are Britain, Russia, China, France and Pakistan.
- These countries produce uranium weapons, which are not classified as nuclear weapons, as per the International Coalition to Ban Uranium Weapons.
  - The International Coalition to Ban Uranium Weapons (ICBUW) is a global coalition of organizations and individuals whose goal it is to ban uranium weapons and eliminate the consequences of their use.
  - The International Coalition to Ban Uranium Weapons (ICBUW) coordinates campaigning against DU ammunition worldwide within the framework of the United Nations.

### Wars

- They were used in the 1991 Gulf War to destroy T-72 tanks in Iraq, used by NATO in bombing of Yugoslavia and during the 2003 invasion of Iraq.
- According to the Royal Society, a London-based fellowship of scientists, about 340 tons of depleted uranium were used in munitions during the 1991 Gulf War, and an estimated 11 tons in the Balkans in the late 1990s.

### Risk

- They emit low levels of radiation even though they are **not considered nuclear weapons**.
- Ingesting or inhaling quantities of uranium is dangerous as it depresses renal function and raises the **risk of developing a range of cancers**.
- According to the International Coalition to Ban Uranium Weapons, depleted uranium munitions which miss their target **can poison groundwater and soil**.

### How India's New Naval Base At Andamans Will Force Beijing To Reassess Its Strategy

Priority: High



Primary Source: Indian Express

Prepp Prelims Booster: Security

Prepp Mains Booster: India and its neighborhood- relations

#### Context:

- Recently, India has begun building a naval base on Great Nicobar Island as part of its strategy for the Indian Ocean Region.
- The move was expected to counter increasing Chinese expansionism in the Indian Ocean and provide an alternative to the land-based strategy adopted against China so far.



#### Why is India building a new base in the Andaman and Nicobar islands?

- The government of India has recently begun the construction of a **holistic naval base in the Andaman and Nicobar islands**, a strategically important region in terms of India's naval security and maritime commitments.
- Chinese maritime aggressiveness in the **Indian Ocean Region (IOR)** had increased with China developing its **String of Pearls** initiative and signing agreements to coordinate with ports as far off as Gwadar and Djibouti.
- China has been awarded a major dredging contract off the Gwadar port and intended to set up an aircraft carrier in support of Djibouti which would be based in Gwadar.
- The new Indian base was being established on Great Nicobar island overlooking the **Malacca strait** which was among the busiest shipping routes in the world.
- China was extremely dependent on the sea routes in the Malacca strait, through which 65% of the oil-deficient nation imported its oil.
- It was expected that the increased Indian naval strength in the region would serve as a deterrent to further Chinese aggression.
- The intelligence sharing and communication agreements signed by India and **QUAD** have given India a tactical advantage in the Malacca strait and the South China Sea.
- These agreements which would be activated in crises such as Chinese aggression in the Himalayas would allow India to counter by posing a threat to the China-bound oil supplies passing through the Malacca Strait.

- Indian dominance in information on the sea routes would be furthered by the early warning that could be provided by aircraft operating out of the base in Great Nicobar.
- Chinese attempts to investigate or counter tanker blockades would be deterred or defeated by the presence of Indian aircraft, armed ships and submarines.
- The establishment of an Indian naval base in Great Nicobar would provide India with an entry point to the Malacca strait situated just 100 miles away while the closest **Chinese base, Sonya** would be 1500 miles away.



#### What factors could affect the country's defense preparedness?

- The new strategic approach depends on whether India was prepared to allow the new base in Great Nicobar to be used as the **beginning of a new oceanic strategy**.
- The **existing land-centric strategy** employed by India to counter China had proven to be less effective due to the **geographically unfavourable** conditions faced by India across the land border theatre.
- **Political intent** would also play a major role in determining whether the base was set up as a minor renaissance post or as an outpost of the Indian Eastern Theatre Command that would serve as an effective deterrent to China.
- Indian military policy would have to evolve with the focus now being placed on the denial of information to the enemy and formation dominance in order to secure military victories.
- Indian domination of the Malacca straits would be catastrophic for China's ambitions in Gwadar and Djibouti but would require a balance between military and diplomatic strategy to prevent escalation.

#### War strategy

- The move by India has illustrated that the strategic rules governing war have not changed over the years.
- Most of the greatest military leaders in history such as Alexander the Great and Napoleon Bonaparte did not always fight battles on favourable grounds.
- Choosing the area to fight in the maritime domain would mean that information dominance would prevail and China's advantage in terms of numbers would be neutralized.
- This was demonstrated in the Ukraine war, where local satellite information was passed to platoon commanders via the internet and mobile phones. This allowed Ukraine to resist Russia, even though it was significantly weaker.

#### String of Pearls

- The **String of Pearls** was a Chinese strategy to establish a network surrounding India in the Indian Ocean Region by building commercial and military structures.



- The strategy aimed to preserve China's maritime interests in the IOR and challenge India's national security, trade and territorial integrity.
- Commercial ports were developed in **Gwadar (Pakistan), Hambantota (Sri Lanka), and Sittwe (Myanmar)** which could be upgraded to military ports and used to threaten India.
- In order to counter the Chinese strategy, India developed the **Necklace of Diamonds** which would counter-encircle China through port development and relationship building with strategic partners.
- **Changi Naval base (Singapore), Duqm Port (Oman), Sabang Port (Indonesia), Assumption Island (Seychelles) and Chahbahar Port (Iran)** were the diamonds that India had signed agreements with.
- Additionally, India had also initiated cooperation with Japan, Vietnam and Mongolia which have been affected by Chinese aggressiveness.
- **India's Act East Policy** has also helped build closer ties with South East Asian nations including military and strategic agreements. An example was the recent India-Philippines military deal for Brahmos missiles worth \$375 billion.



### Conclusion

- India should abandon its two-front war scenario, downsize the army and counter the Chinese on the seas which would deny Beijing a fight on favourable grounds.
- The presence of an Indian tri-service base would effectively deter China from pursuing over-confident actions and push China to begin treating India as an equal.

### Great Nicobar

- The **Great Nicobar Island**, which has a 910 sq km surface area, is the southernmost of the Andaman and Nicobar Islands in the Bay of Bengal.
- India's southernmost point is **Indira Point** on Great Nicobar Island, which is only 150 kilometres from Indonesia.
- Great Nicobar is located near the **East-West international shipping corridor**, along which a significant portion of the world's shipping traffic flows, and is equidistant from Port Klang and Singapore to the southeast, and Colombo to the southwest.
- In order to transform the island into a major player in marine trade, the Indian government has proposed to construct an **International-Trans Container Shipping Port** there.
- Two national parks—**Campbell Bay National Park and Galathea National Park**—as well as a biosphere reserve—the **Great Nicobar Biosphere Reserve**—can be found on the island.
- The Great Nicobar Biosphere Reserve is home to a diverse range of ecosystems, including coastal plains, mountain ranges including **Mt. Thullier** (642 metres above sea level), and tropical wet evergreen forests.

- Some of the endangered species found here are the crab-eating macaque, Nicobar Tree Shrew, Dugong, Nicobar Megapode, Serpent Eagle, saltwater crocodile, marine turtles, and Reticulated Python.
- Angiosperms, ferns, gymnosperms, bryophytes, and lichen are among the vegetation.
- The **Mongoloid Shompen Tribe** and the **Mongoloid Nicobarese Tribe** had their ancestral homes on the island.

### Strait of Malacca



- The **Strait of Malacca** is a narrow stretch of water that **connects the Andaman Sea (Indian Ocean) and the South China Sea (Pacific Ocean)**.
- The 550 Km strait lies between the island of Sumatra (Indonesia) and peninsular Malaysia and South Thailand.
- It serves as the shortest route between Asia and the Middle East and carries about 60% of the world's maritime transits.
- The route is the major source of oil for Japan and China.
- The strait is a critical element of India's foreign and military policy in terms of its influence on South East Asia.

### FTA To Boost Indo-Australian Trade To \$45-50 Billion By 2027

Priority: **High**



Primary Source: Indian Express

**Prepp Prelims Booster:** Indo-Australia

**Prepp Mains Booster:** Bilateral, regional and global groupings and agreements involving India and/or affecting India's interests; Effect of policies and politics of developed and developing countries on India's interests, Indian diaspora

### Context:

- Recently, the **India-Australia Economic Cooperation and Trade Agreement** which came into force in December 2022 was predicted to boost bilateral trade to \$45-50 billion by 2027.
- India and Australia have shared close ties as members of the **Commonwealth** and strong people-people relationships over the years.

### What is the INDAUS ECTA?

- In 2022, India and Australia agreed on a **Free Trade Agreement** which was expected to raise bilateral trade between the two countries from \$27.5 billion to \$45-50 billion within the next five years.
- The **India-Australia Economic Cooperation and Trade Agreement (INDAUS ECTA)** was signed by the two parties in April 2022 and came into force in December 2022.
- The ECTA was developed considering the growing Indian diaspora in Australia and its contribution to the Australian economy as well as the role it has played in expanding Australian businesses in India.
- The ECTA has emphasized the traditional nature of the trade relationship between India and Australia with **Australia being described**

as a primary exporter of raw materials and India a primary exporter of finished goods and services.

- The Union Minister of Commerce, Piyush Goyal, had described this symbiotic relationship as an opportunity for India to boost its exports while also acquiring raw materials at cheaper rates, thus enabling the country to perform better on the international market and provide quality goods at affordable prices to the domestic consumer.
- As a result of the ECTA, Australian exporters would gain access to the world's largest democracy with over 1.5 billion potential customers.



### What are the major benefits of the deal?

- **Customs:** Indian goods on all tariff lines would be permitted to access the Australian market at zero customs duty while 90% of Australian exports by value would be allowed zero-duty access to the Indian market.
- **Jobs:** A major objective behind the ECTA was the creation of 10 lakh additional jobs.
- **Students:** More than one lakh Indian students in Australia would benefit from post-study work visas through the ECTA.
- **Exports:** Exports were projected to increase by \$10 billion by 2026-27 while the total bilateral trade between the two countries was expected to exceed \$45-50 billion by 2035.
- **Customs:** The agreement provides for increased cooperation between the two countries on customs procedures and improved facilitation of trade.
- **Sanitary and Phytosanitary Conditions:** Both countries have reaffirmed their commitment to the **Agreement on the Application of Sanitary and Phytosanitary Measures** under WTO rules and agreed to cooperate as per the regional rules of both nations.
- **Pharmaceuticals:** India's second largest export commodity to Australia after petroleum products have been pharmaceuticals. According to the agreement, medications already approved in the US and UK will be expeditiously approved in Australia.
- **Services:** The deal was expected to provide Most Favoured Nation status in nearly 120 sectors that were of interest to India such as IT, ITES, education, health, etc.
- **Double Tax:** As part of the agreement, the **Double Tax Avoidance Agreement** that was pending between the two countries has also been resolved which could result in annual savings of around \$200 million.

### India-Australia

- Australia and India have shared a long-established diplomatic relationship based on people-people ties, shared interests and cross-sectoral cooperation.
- The two countries have been members of the **Commonwealth** and are participants in a **Comprehensive Strategic Partnership**.
- India and Australia are both strong and vibrant democracies with a free press and independent judicial system.
- India and Australia shared close ties during their colonial occupation by the British in terms of food supply, people links and navigational routes.
- Both nations are members of international fora such as the **UN, G-20, IOR-ARC** etc.

- Australia has been an observer in **SAARC** since 2008 as well as a defence partner through the **QUAD, the Malabar exercise** as well as treaties such as the **Mutual Logistic Support Agreement**.
- In terms of trade India was Australia's fifth-largest trading partner while Australia was India's eight largest trading partner.

### Conclusion

- The India-Australian ECTA was expected to produce numerous long-term gains for the Indian economy while also consolidating the growth of India's products and services exports share in the global market.
- The deal will lead to greater collaboration between India and Australia in trade and services alongside the already strong defence ties by significantly increasing the bilateral trade in goods and services, generating employment opportunities and improving the general quality of life of the people of both nations.

### Free Trade Agreement

- A Free Trade Agreement is an accord between two or more nations that aims to promote free trade by reducing barriers to imports and exports between the members.
- It was developed as a counter to the ideas of trade protectionism and isolationism.
- Under an FTA, goods and services can be purchased or sold transnationally with little or no restrictions via tariffs, subsidies or quotas.
- FTAs have been supported by advocates of a **free-market economy** as it is believed to **increase access to high-quality low-priced goods and services while promoting growth, competitiveness, innovation and fairness**.
- On the other hand, critics of FTAs have attributed **the loss of domestic jobs, migration and the collapse of nascent industries due to competition with large MNCs** to FTAs.
- **India has signed 13 FTAs** including the India-Sri Lanka FTA, India-Thailand FTA, SAFTA (South Asia), INDAUS ECTA, CEPAs with Japan, UAE, South Korea, CECPA with Mauritius, CECA with Singapore, Malaysia and ASEAN and trade agreements with Nepal and Bhutan.

## Sri Lanka Clears Global Oil Companies' Entry Into Country's Retail Fuel Market

Priority: **Medium**



Primary Source: The Hindu

**Prepp Prelims Booster: Sri Lanka**

**Prepp Mains Booster:** Effect of policies and politics of developed and developing countries on India's interests; India and its neighbourhood-relations

### Context:

- Recently, **Sri Lanka has decided to issue licenses to three global oil corporations to operate in the local retail market as part of the government's attempts to reorganize State-Owned Enterprises**, including the loss-making Ceylon Petroleum Corporation (CPC).

### News Summary

- The Cabinet has accepted the licensing of **China's Sinopec; United Petroleum, Australia, and RM Parks, USA**, in collaboration with Shell, to enter the Sri Lankan retail sector.
- The three new companies will be allocated 150 dealer operated fuel stations each, which are currently operated by the CPC.
- The move aims to diversify Sri Lanka's retail petroleum industry, which is presently dominated by the state-owned CPC and Indian Oil Corporation affiliate Lanka IOC, which controls one-third of the market.

### About Sri Lanka's Economic Crisis

- The Sri Lankan economic crisis is an ongoing crisis in the island country of Sri Lanka that began in 2019. It is the country's worst economic crisis since its independence in 1948.

- It has resulted in unprecedented levels of inflation, near-depletion of foreign exchange reserves, shortages of medical supplies, and price increases for basic commodities.
- The crisis is said to have started as a result of a number of interconnected factors, including tax cuts, money creation, a nationwide policy shift to organic or biological farming, the 2019 Sri Lanka Easter bombings, and the impact of the COVID-19 pandemic in Sri Lanka.
- The subsequent economic hardships triggered the 2022 Sri Lankan protests.

### Fuel Shortage in Sri Lanka

- During last year's economic downturn, Sri Lanka had severe fuel shortages as the government ran out of cash to buy crude oil.
- After the severe fuel crisis due to the dollar crunch since the beginning of 2022, Sri Lanka decided to give half of nearly 1200 state-owned filling stations to foreign companies.
- Citizens waited in huge lines outside gas stations for days to receive fuel, and it was only after Indian aid that supply was largely restored.
- Following that, the government implemented a QR-code system for restricting weekly gasoline sales to customers.
- In May of last year, Sri Lanka hiked fuel prices by 24.3% and diesel prices by 38.4%, a record increase that resulted in a quick spike in the cost of basics.



### India-Sri Lanka Relation

- **Bilateral Relations:** India is Sri Lanka's nearest neighbor, and the two nations' relationship dates back more than 2,500 years, with a heritage of intellectual, cultural, religious, and linguistic exchange. In recent years, the relationship has been defined by close connections at the highest political level, such as bilateral exchanges at various levels.
- **Security:** Mitra Shakthi is a military exercise, and "Slinex" is a naval exercise. Both countries' defense teams recently met at the Colombo Security Conclave (CSC) in Kochi, India, to strengthen defense ties.
- **Trade:** India is Sri Lanka's greatest trading partner, accounting for 16% of total world commerce. Between 2000-01 and 2018-19, bilateral trade between India and Sri Lanka expanded by around 9 times. India has traditionally enjoyed a trade surplus with Sri Lanka. India's exports to Sri Lanka are losing competitiveness in comparison to China's exports to Sri Lanka.
- **Cultural Relations:** The Cultural Cooperation Agreement signed by the Governments of India and Sri Lanka in 1977 serves as the foundation for periodic Cultural Exchange Programs between the two nations.
  - Buddhism has been one of the greatest pillars uniting the two nations and civilizations since the Great Indian Emperor Ashoka.
  - Since its foundation in 1998, the Swami Vivekananda Cultural Centre (SVCC), the cultural arm of the High Commission of India in Colombo, has played a significant role in deepening these relations and encouraging people-to-people contacts between India and Sri Lanka.
- **Development:** India's grants to Sri Lanka alone amount to roughly USD 570 million, with the GOI's entire contribution totaling more than USD 3.5 billion. On June 16, 2021, the Government of Sri Lanka and EXIM

Bank signed a US\$ 100 million Letter of Credit for the development of solar projects in Sri Lanka.

- The Indian Housing initiative is the Government of India's (GoI) main grant initiative in Sri Lanka, with an initial pledge to build 50,000 dwellings in war-torn districts for estate employees in plantation areas.

### AUKUS Focus Is On Submarine Technology; There Is No Room For A Fourth Nation: Sources

Priority: Medium



Primary Source: The Hindu

**Prepp Prelims Booster:** AUKUS

**Prepp Mains Booster:** Bilateral, regional and global groupings and agreements involving India and/or affecting India's interests. Effect of policies and politics of developed and developing countries on India's interests

#### Context:

- Recently, Australia, the United States of America and the United Kingdom agreed on a deal to equip Australia with nuclear SSN submarines as part of the AUKUS initiative.
- India which has sought to strengthen its depleting submarine fleet has found it more challenging to cooperate with the USA on such sensitive technology.



#### What is the new AUKUS initiative?

- Under the **AUKUS initiative**, Australia has agreed to purchase five new US submarines, after which a new model, the **SSN AUKUS**, will be developed in partnership with the US and the UK.
- Three second-hand SSNs from the U.S. will be delivered to Australia in the 2030s while five new SSNs designed and developed by the U.K. will be delivered from the early 2040s to the late 2050s.
- The move was part of the efforts by **Western countries to improve their security presence in the Indo-Pacific amid concerns about an aggressive China**.
- The deal has not however provided Australia with access to nuclear weapons.
- The nuclear powered-submarines which have been armed with long-distance missiles would be at the forefront of the Western defence against China.
- According to estimates prepared by the Government of Australia, the project which had an estimated cost of \$40 billion in the first ten years would lead to the generation of around 20,000 jobs.
- According to some reports, Australia, the United States and the United Kingdom have established the AUKUS in order to beat China in the race for high-tech supremacy by pooling resources and integrating defence and industrial supply chains.

#### What have diplomatic sources claimed?

- Diplomatic sources have stated that the **primary focus of the AUKUS arrangement was the submarine technology development** arm and that there was no room for a fourth nation to join.

- The submarine initiative was based on addressing the security challenge in the region and maintaining a strategic security balance in the Indo-Pacific.
- Sources also stated that the diplomatic cooperation between the AUKUS and other nations such as India was possible through the **second pillar of broader technology cooperation**.
- The second pillar offered opportunities for cooperation in technology development in areas such as electronic warfare, cyberspace, quantum technology, etc.
- The **QUAD** leaders' meeting scheduled to be held in Australia in May was expected to discuss the opportunities provided by the second pillar.
- The diplomatic sources have also stated that the new AUKUS initiative did not have implications for the QUAD arrangement.
- The **AUKUS was not a military arrangement like NATO but a technological and strategic mission** to maintain stability while the QUAD was a much broader collaboration.

#### How will the deal affect India?

- India has still not become a member of the **Nuclear Proliferation Treaty** which has limited the likelihood of it acquiring nuclear propulsion technology from one of the nuclear states.
- The difficulties in acquiring an HEU-based reactor from the UK and the US would force India to acquire the high-powered reactors from France.
- The alternative option of acquiring an LEU from France also posed certain complications as it would lead to a dependence on France for reactor fuel and periodic refuelling.
- The deal which aims at building resistance to Chinese aggression in the Indo-Pacific has not included India, one of the largest nations in the region and a major security provider and development partner.
- Concerns have also been expressed that the AUKUS initiative could adversely affect the QUAD and that it could provoke China into more aggressive action.

#### India and nuclear subs

- Cooperation between India and the US on sensitive technologies such as the SSN technology was unlikely due to the regulatory system in the US and India's position on strategic autonomy.
- India has established its own SSN design and development programme which would give the Navy unlimited endurance underwater.
- India had aimed at procuring six advanced conventional submarines in order to combat the country's depleting submarine strength and also speed up its SSN programme.

#### Others

- The US and the UK were in a race alongside India and France to develop a new fighter jet engine.
- The US government was also considering an application from General Electric to manufacture the engine for the Light Combat Aircraft - MK2 in India.
- The U.K.'s Minister for Defence Procurement Alex Chalk had said that the jet engine cooperation proposal put forward was the best and most cost-effective and that it would set India apart.
- The UK had stated that this would be the largest capability transfer in its history and that it exceeded any transfer with a **G-7, G-20 or Five eyes country**.

#### QUAD

- The **Quadrilateral Security Dialogue (QSD)** or Quad, is a strategic security grouping between Australia, India, Japan, and the United States that aims for a free, open and prosperous Indo-Pacific.
- It was initiated by Shinzo Abe, the former Japanese prime minister in 2007 on the basis of shared interest in **free and secure marine trade and security and democracy**.
- The QUAD has been frequently referred to as an Asian or mini NATO due to it being viewed as a counterbalance to Chinese aggression in the Indo-Pacific and South China Sea regions as well as its economic influence in the Indo-Pacific.

- Securing open and free sea lanes of communications in the Indo-Pacific and limiting the influence of the Belt and Road Initiative were among the QUAD's major goals.
- However, the USA has described the QUAD as an opportunity to cooperate on matters of economy, technology, climate and security and that it was not a military alliance although QUAD members participated in the annual Malabar exercise.

### India, China Discuss LAC Situation As Jaishankar Meets Counterpart Qin

Priority: **Medium**

Primary Source: The Hindu

Prepp Prelims Booster: LAC

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

#### Context:

- Recently, **External Affairs Minister S Jaishankar held bilateral talks with visiting Chinese Foreign Minister Qin Gang** focusing on the situation along the **Line of Actual Control (LAC)**, and sent a categorical message that ties cannot be normalized until peace and tranquillity along the LAC is established.
- This was the first such bilateral interaction between the two Ministers since Qin was appointed Foreign Minister.



#### About the meeting

- The meeting which is the first between the two Ministers, with Mr. Qin, appointed in December 2022 was **focused on addressing "challenges in the bilateral relationship,"** specifically border peace and tranquillity and G20 agenda.
- The two sides held their first in-person high-level border talks in more than three years last week, with Shilpak Ambule, Joint Secretary (East Asia) in the Ministry of External Affairs, traveling to Beijing for the 26th meeting of the Working Mechanism for Consultation and Coordination on India-China Border Affairs.
- The two sides discussed proposals for disengaging in two remaining areas of contention in order to "restore normalcy" in relations, and agreed to hold the next round of talks between senior military commanders as soon as possible.
- **Prior to his meeting with the Chinese foreign minister, Jaishankar met with his US counterpart, Antony Blinken,** and discussed bilateral relations as well as pressing global issues such as the Russia-Ukraine conflict.

#### What is Line of Actual Control (LAC)?

- The Line of Actual Control (LAC) is the line that separates Indian-controlled territory from the Chinese-controlled territory.
- Himachal Pradesh, Uttarakhand, Sikkim, and Arunachal Pradesh, as well as the Union Territory of Ladakh, share a border with China.

- The LAC is broadly split into three sectors: the Western sector, the Middle sector, and the Eastern sector.

### Origin of border dispute with China

- After the communists took power in China, they withdrew from all international treaties, citing them as "unequal treaties" imposed on the country during its "century of humiliation," and demanded that all of its borders be renegotiated.
- The LAC separates Indian and Chinese territory. It is divided into three sectors:
  - **Eastern Sector** (Arunachal Pradesh and Sikkim),
  - **Middle Sector** (Uttarakhand and Himachal Pradesh), and
  - **Western Sector** (Ladakh).
- The alignment of the LAC in the Eastern Sector is along the McMahon Line, named after Sir Henry McMahon, British India's foreign secretary. He established the 890-kilometer border between British India and Tibet (a part of the 1914 Shimla Convention Between Great Britain, China, and Tibet). China is no longer in accordance with this.

### Major Point of Contention between India-China Border

- **Depsang Plains:** Located in the far north of Ladakh, this area has seen previous incursions by Chinese troops.
- **Demchok:** This area in eastern Ladakh has been the site of border disputes between India and China.
- **Pangong Lake:** This area has been a major flashpoint between the two countries, with Chinese troops attempting to change the status quo on the region's Line of Actual Control (LAC).
- **Gogra and Hot Springs:** These two areas in eastern Ladakh have seen standoffs between Indian and Chinese troops in recent years.
- **Arunachal Pradesh:** This northeastern Indian state is claimed by China as part of its territory and has been a major source of contention between the two countries.

### Significance of India-China Meet

- The India-China meeting is significant in light of the two countries' ongoing military standoff in the Ladakh sector of the Line of Actual Control (LAC).
- The eastern Ladakh border standoff erupted on May 5, 2020, following a violent clash in the Pangong lake area.
- Following the fierce clash in the Galwan Valley in June 2020, which marked the most serious military conflict between the two sides in decades, ties between the two countries deteriorated significantly.
- The two sides completed the disengagement process in 2021 on the north and south banks of Pangong Lake, as well as in the Gogra area, as a result of a series of military and diplomatic talks.

### Importance of Peace for India and China

- **Economic cooperation:** India and China have two of the world's largest and fastest-growing economies, and improved relations can help increase trade and investment.
- **Regional stability:** India and China are two major Asian powers, and their relations have a significant impact on regional stability.
- **Border security:** A peaceful relationship between the two countries is essential for maintaining border security and avoiding conflicts or misunderstandings along the border.
- **Geopolitics:** India and China are both major players in the global geopolitical landscape, and their peaceful coexistence is critical to creating a more stable and predictable international environment.

### Conclusion

The India-China peace process will require sustained efforts from both sides to address these challenges and build mutual trust and understanding. The Foreign Minister S.Jaishankar stressed the importance of resolving all outstanding issues in eastern Ladakh. The foreign minister stated that the two countries' relationship should be based on "three mutuals" — mutual respect, mutual sensitivity, and mutual interests.

## Slow Steps To India-China Border Tranquillity

Priority: **Medium**



Primary Source: The Hindu

**Prepp Prelims Booster:** International relations

**Prepp Mains Booster:** India and its neighborhood- relations, Bilateral, regional and global groupings and agreements involving India and/or affecting India's interests

### Context:

- Recently, the Foreign Ministers of India and China discussed the border issue and related tensions in Indo-China ties at the G-20 Foreign Minister's meeting.
- The two countries have made progress towards establishing a new arrangement to maintain peace and tranquillity along the 4000 km long border.

### Ladakh clashes

- The Southwest extension of the Tibetan Plateau, known as **Aksai Chin** in India was the major dispute between the two countries in the western and middle sectors of the 3,400 Km border.
- China seized control of the region in the aftermath of the Sino-Indian war of 1962.
- Indian and Chinese troops clashed along the **Pangong Tso lake** in May 2020.
- This was followed by clashes in the **Galwan Valley** (Ladakh) in June which led to the deaths of 20 Indians and 4 deaths on the Chinese side.
- Both countries have since established arrangements to restore normalcy across the border and improved infrastructure in the region.
- The older arrangements which had been developed through the agreements of 1993, 1996, 2005 and 2013 failed in Ladakh after the Chinese massed troops in Tibet and established blockades at six points on the **Line of Actual Control (LAC)** to prevent Indian troops from patrolling the border.
- India-China economic ties have also been affected with the government tightening FDI norms for border nations and the banning of Chinese apps over fears of surveillance and cyberterror.
- Another clash between the two forces in December 2022, at **Yangtse**, northeast of Tawang, has suggested that new measures were required across the LAC.



### Attempts to ease border tensions

- The first in-person meeting of the **Working Mechanism for Consultation and Coordination** was held in February 2023, after the previous eleven editions were held by video conference.

- Since 2020, the two sides have managed to disengage from four of the six points of tension, **Galwan, Pangong Tso, Gogra Post and near Jianan Pass (PP15)**, through negotiations.
- The two remaining contested areas, **Depsang Bulge and the Charding Ninglung Junction in Demchok** covered nearly 1000 square km.
- According to Indian officials, open and constructive discussions were held to create conditions for the restoration of normalcy in bilateral relations.
- The Chinese also agreed to cooperate in efforts to promote the border situation into a phase of normalized management and control.

#### What are the other measures for normalcy and control?

- Several proposals have been discussed by representatives of the two countries but experts have suggested that the most likely outcome was to convert other areas of the LAC into similar no-patrol zones.
- This could lead to an immediate agreement in Depsang and the Charding Nala.
- The two countries have also discussed the replacement of the WMCC mechanism with a new border management mechanism involving both civilian and military officers.

#### Why are new agreements needed?

- All confidence-building measures since 1993 were based on two nations' acceptance of the LAC, although there were differences in perception in some 18-20 points.
- The 1993 and 1996 agreements specifically focussed on the importance of identifying and resolving these differences.
- Towards the beginning of the 2000s, the Chinese retracted on the goal of defining a clear LAC.
- This had resulted in the Indian and Chinese patrols pushing, shoving, stone-throwing and physical violence.
- This situation escalated until it erupted into conflict in 2020.

#### On no-patrol zones

- The new agreement was likely to confine **no-patrol zones** to the areas where there was a disagreement between the two countries.
- Until 2020, the two sides would patrol the limit of their contending claims and in event of a meeting, the protocol of displaying banners and asking the other side to go back was followed, following which the matter was discussed at one of the five designated border meeting points.
- Chinese journalist and scholar Qian Feng suggested in 2020 that the line of actual control be replaced by a **zone of actual control** in areas without any identifiable geomorphological features or population.
- Other areas could also be delimited as **border belts** if they did not require the adjustment of population. However, this would require genuine cooperation from China.
- A similar plan had been suggested in 1959 by then-Chinese Prime Minister Zhou Enlai following the ambush of Indian personnel in **Kongka La** that led to the death of 10 and the capture of a dozen Indian officers.
- The Chinese PM had suggested that both sides withdraw 20 Km from the **McMahon line** and the lie of control in the west.

#### Shifting goalposts

- India has regularly expressed dissatisfaction with how China has changed the targets of the consultation process at will, particularly related to the Ladakh border.
- The lack of availability of detailed maps and the absence of clarity over how much control China has over the contested areas has allowed it to change the goals of the process.
- The Indian Minister of External Affairs had told the Chinese Foreign Affairs Minister that normalcy in ties could not be achieved without China cooperating in resolving the Ladakh issue.
- Previous attempts by the Prime Minister to convince China to clarify the LAC in contested areas had failed.

#### Conclusion

- The events of 2020 have destroyed most of the trust built up between the two countries through peace and border management agreements.

- The ties between the two countries have become extremely fragile and dangerous with the level of engagement required for normalcy having risen much higher than earlier.

#### Working Mechanism for Consultation and Coordination

- The WMCC was founded in 2012 to serve as an institutional structure for consultation and coordination regarding the administration of the China-India border.
- The body will share opinions on enhancing communication and collaboration, particularly between the border security forces of the two countries.
- It is made up of joint secretaries from both sides who have been given the responsibility of assisting the special envoy for boundary negotiations, which is the **NSA**.
- The objectives of the body were to achieve normalcy in bilateral relations and restore peace along the Line of Actual Control.
- The WMCC was activated following the clashes between Indian and Chinese forces in 2020.

### Raisina Dialogue

Priority: **Medium**



Primary Source: The Hindu

Prepp Prelims Booster: Raisina Dialogue

Prepp Mains Booster: Important International institutions, agencies and fora- their structure, mandate

#### Context:

- Recently, the Prime Minister of India, Narendra Modi delivered the inaugural address of the 8th **Raisina Dialogue** jointly organized by the Observer Research Foundation and the Ministry of External Affairs.
- Giorgia Meloni, the Prime Minister of Italy was the chief guest of the 2023 edition.

#### What is the Raisina Dialogue?

- The Raisina Dialogue is an **annual geo-political event** organized jointly by the Observer Research Foundation and the Union Ministry of External Affairs.
- It was named after **Raisina Hill, the seat of the Government of India**.
- It has since its inception in 2016 evolved into India's premier geo-political and geo-economical conference.
- The Dialogue was designed as a multi-delegate forum for discussion attended by policymakers including cabinet ministers, heads of state, chief executives of private corporations as well as members of the media and academia.



#### Objectives

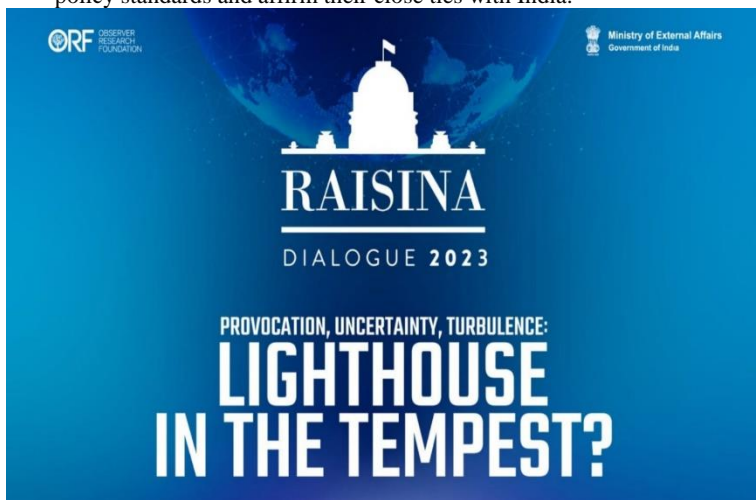
- Explore **future opportunities for Asian integration** and further **advancement of Asia's integration with the world**.
- The Dialogue aims to express the **crucial role played by India in the Indian Ocean Region** and assert **India's contributions in building a stable regional and world order** along with its partners.

### Raisina 2023

- The theme of the eighth edition of the Raisina Dialogue was **Provocation, Uncertainty, Turbulence: Lighthouse in the Tempest**.
- The thematic pillars of the 2023 conference were:
  - **Neo Insurgence - Geographies, Domains, Ambitions:** This pillar will include discussions on uprisings and revolutions arising across the world
  - **Amoral Mosaic - Contest, Cooperate or Cancel:** This pillar will discuss the theme of immoral activities and how they can be countered with a view towards greater cooperation.
  - **Chaotic Codes - Sovereignty, Security, Society:** This pillar will include dialogues between policymakers on the various interpretations of sovereignty and security and their impact on society.
  - **Pernicious Passports - Climate, Commons, Citizens:** Discussion on the cross-border threat of climate change and its impact on shared natural wealth and citizens.
  - **Grey Rhinos - Democracies, Dependencies and Debt Traps:** Here, the discussion will focus on debt traps and democratic challenges.
- Giorgia Meloni, the Prime Minister of Italy who was the keynote speaker stated that global interconnections had allowed the economies of the two countries to flourish but could not reach their potential due to the turbulence caused by the war in Ukraine.
- She also condemned the war in Ukraine as a violation of the fundamental rights of the global order and an act against the territorial integrity of a sovereign nation.

### Conclusion

- The 2023 edition of the Raisina Dialogue assumes special importance for India due to it being conducted while India held the **G-20 Presidency**.
- The annual conference was a display of India's geo-political and geo-economic influence as world leaders attended to discuss and negotiate policy standards and affirm their close ties with India.



### Concluding On A High Note, In Manhattan

Priority: **Medium**

Primary Source: The Hindu

**Prepp Prelims Booster:** UNSC

**Prepp Mains Booster:** Important International institutions, agencies and fora- their structure, mandate, Bilateral, regional and global groupings and agreements involving India and/or affecting India's interests

**Context:**

- The author, T.S Tirumurti, former Permanent Representative of India to the United Nations has discussed India's performance, goals and achievements as a member of the **UN Security Council**.
- This was India's eighth term as a member of the Security Council.

### Indian priorities

- When **India entered the UNSC for its eighth term as a member**, the major issues that it wished to prioritise were **maritime security, terrorism, UN peacekeeping, reformed multilateralism and the Global south**.
- India was elected the chair of three committees - the **Taliban Sanctions Committee, the Libyan Sanctions Committee, and the Counter-terrorism Committee**.
- During its term, a committee on maritime security was chaired by the Prime Minister of India.
- The Presidential statement issued by the Committee was a holistic document that set out a direct framework for maritime activities based on the **UN Convention on the Laws of the Sea**.
- The Presidential Statement also called for freedom of navigation, anti-piracy and combating terror and transnational crime at sea.
- India attempted to develop a consensus among the members of the Council, which had been polarized over differences in opinion related to the conflicts in Afghanistan, Ethiopia, Mali or Syria, Palestine, Yemen, Haiti, Libya, the Sahel, and Ukraine.
- The military coup in Myanmar also took place in the initial period of India's tenure. The P-5 countries expressed opposing views while the ASEAN recommended the need to exercise caution.
- India shared a 1,700 Km long border with Myanmar making it vital that a solution to the violence was found and stability and democracy were maintained.
- India ensured that the Council's pronouncements were balanced and comprehensive and succeeded in developing a resolution during its Presidency in December 2022.

### On War and Terror

- In the aftermath of the Taliban's seizure of power in Afghanistan in August 2021, India steered negotiations in a manner that resulted in **Resolution 2593** which laid down guidelines on:
  - Stopping Afghanistan-origin **cross-border terrorism** including from Pakistan-based proscribed UN terrorist entities
  - Protecting the **rights of women, minorities and children**
  - Ensuring an **inclusive government**
  - Providing **humanitarian assistance**
- The Resolution proved to be the best course of action as the UN Secretariat and the West were not successful in engaging with the Taliban or convincing it to adopt a moderate approach.
- On the **Ukraine crisis**, India's independent position that recommended peace and negotiations was acceptable to a majority of the developing countries that were also subjected to unilateral sanctions.
- India protested against the sanctions on food, fertilizers and oil that disproportionately affected other countries.
- India's **G-20 Presidency** was an ideal opportunity to express its views on peaceful dialogue and launch an initiative to implement its position.
- As chair of the UNSC Counter-terrorism Committee, India has increased the global focus on terrorism.
- Although India's attempt to list terrorists under **UNSC Resolution 1267** sanctions failed, sanctions proposed by India on Abdul Rahman Makki, the Deputy Chief of the LeT were approved by the Council.

### Peacekeeping and Climate Action

- India has been the largest contributor to the UN Peacekeeping Forces and a pioneer in women in peacekeeping.
- India launched the **UNITE Aware Technology** platform to strengthen the real-time protection of peacekeepers and also piloted a UNSC resolution that demanded accountability for crimes against peacekeepers.
- India also attempted to focus global attention on its close partners, Africa and West Asia.

- In December 2021 India resisted efforts by the West to transfer climate change from the **UN Framework Convention on Climate Change-led process** and bring it under the ambit of the UNSC in order to favour the P-5, who were major historical polluters.
- The draft resolution was defeated in the Council with India and Russia voting against it as a change in the architecture to combat climate change would have adversely impacted nations of the Global South, specifically Small Island Developing States.
- India also raised the matter of **religiophobia** in the Council while condemning phobia against Abrahamic religions.
- The need to combat rising hate crimes and phobias against non-Abrahamic religions as well was put forward by India as hate crimes were being fuelled abroad by vested interests.



### UNSC

- The **United Nations Security Council** is one of the six major organs of the United Nations.
- It was headquartered in New York.
- The Council consisted of 15 members, 5 members being Permanent and 10 being non-permanent members.
- The five permanent members of P5- include the USA, Russia, China, France and the UK while the ten non-permanent members are elected on two-year terms.
- The presidency of the Council rotated on a monthly basis among its members.
- The members each have one vote, with the P-5 members also receiving the power of veto.
- **Role:** Under the UN charter, the Security Council
  - Was empowered to investigate any situation that threatens international peace
  - Could advise parties on the peaceful resolution of a dispute;
  - Could call on member nations to completely or partially disrupt economic relations, as well as all other modes of communication.

### Conclusion

- India's Presidency has helped highlight the need for immediate reform of the Council.
- India's performance over its two-year term on the Security Council has proved why India needs to be made a permanent member of the UNSC through multilateral reform.

### India's Moment Under The Diplomatic Sun Must Be Used

Priority: **Medium**



Primary Source: The Hindu

**Prepp Prelims Booster:** International relations

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

### Context:

- Recently, India hosted the G-20 Foreign Ministers meeting (March 1-2, 2023), the G-20 Finance Ministers meeting (February 22-25), and the

Quad Foreign Ministers meeting (March 3), and the Raisina dialogue (March 2-4).

- India's pivotal position at the G-20, the Quad (the United States, India, Australia, and Japan), the Shanghai Cooperation Organisation (SCO) and the Global South today has given India a surge in stature and reputation.



### India in world politics

- India's leaders, including Jawaharlal Nehru, A.B. Vajpayee, and Narendra Modi, have widely mentioned the country's role in the world and how its culture, history, demography, and economic strength gave it a solid foundation for such a role.
- However, for the majority of its history, New Delhi was either too small or inconsequential to make an impact, but the strong foundations built over the years are beginning to show their worth.
- Due to a fortunate convergence of planned and unplanned events that seem to be favoring New Delhi, India currently has a key position in global affairs.
- New Delhi had cleverly used the failure of the post-war world order today to its advantage.
- Global leaders are now searching the Indo-Pacific area for geopolitical options due to concerns about China that is aggressively rising.

### Present status

- Contemporary Indian foreign policy is a textbook example of **treading the fault-lines of world politics**.
- The India Way's author External Affairs minister S. Jaishankar describes achieving national interests by spotting and taking advantage of **opportunities presented by global contradictions**.
- In layman's terms, New Delhi has mastered the **art of playing both sides** (though not without its costs).
- India is the chair of both the United States/West-led G-20, and the China-centered SCO at the same time.
- It is seeking to be at the global high table while staking a serious claim to be the leader of the Global South.
- India has long wanted a seat at the global high table. However, it has realised that it has little chance of getting one currently, **particularly with the United Nations Security Council (UNSC)**.
- It has, therefore, been hinting at the dysfunctionality of the UNSC, and the utility of more inclusive and flexible forums such as the G-20.
- Mr. Modi's argument at the G-20 Foreign Ministers meeting that "global governance has failed" is to drive home precisely that point.
- Even though the meeting ended without a joint statement thanks to the Ukraine war, it was a success for at least two reasons:
  - It was **able to create an environment for the U.S.** Secretary of State Antony Blinken and **Russian Foreign Minister Sergey Lavrov** to have a **meeting for the first time since the beginning of the war**.
  - When most other forums are unable to bring together the warring parties in one room, **the G-20 has been able to do it**.
- The G-20 and the Global South are both useful in New Delhi's quest for a place at a reorganized global high table. New Delhi has understood the instrumental utility of the Global South argument in its **pursuit of power and status**.



- India can undoubtedly utilize the **Global South justification for its geopolitical objectives if China can.**
- In its pursuit for a seat at the high table, New Delhi also understands that falling in line with the U.S./the West (in the Ukraine war for instance) reduces India's instrumentality (even for them).
- **'Fall in line, and you will be forgotten'** appears to be the lesson that it has learnt about realpolitik over the past several decades.
- New Delhi has come to understand that its usefulness is increased by its capacity to **delicately balance the world's fault lines.**
- So, those looking to win India's assistance for establishing **more stability and order in world affairs** may wish to take into account what New Delhi actually wants: a place at the top table of world politics.
- In fact, New Delhi's desire to be a part of a reorganized status quo lies at the heart of its revisionist language.

### Challenges

- Indian chairpersonship of the G-20 and the SCO ends this year, and Beijing will not let New Delhi take over the leadership of the Global South so easily.
- Therefore, India needs to **fortify strategic alliances**, seek geopolitical accommodation, and build institutions that will improve India's national security.
- The language that emanates from New Delhi in response to western or the U.S.'s statements/criticisms could be construed as needlessly offensive by some.
- Being subtle in one's assertions has far more utility, notwithstanding the domestic political uses of harsh foreign policy assertions. Indian diplomacy needs to adopt the language of finesse and authority rather than that of aggression.
- **Balancing opposite:** There are limitations to balancing opposites. Playing all sides may **prevent the development of solid strategic alliances** that will support a conflict, such as a future conflict with China.
- While bridging the divide in world politics is a noble task, indecisiveness might not yield lasting partnerships.
- Last but not least, there is always a chance that governments may use diplomatic highs like this for internal political goals rather than for geopolitical goals.

## India Comes Under Fire At WTO For Avoiding Questions On MSP Subsidy

Priority: **Medium**

Primary Source: The Hindu

Prepp Prelims Booster: WTO

Prepp Mains Booster: Important International institutions, agencies and fora- their structure, mandate; GS 3 - Issues related to direct and indirect farm subsidies and minimum support prices;

### Context:

- Recently, India has come under fire at the World Trade Organisation (WTO) for avoiding questions raised by members such as the U.S., Australia, Canada, the EU, and Thailand at a WTO agriculture committee meeting on India's Minimum Support Price (MSP) programs for food grain, particularly rice, where subsidies have breached prescribed limits.
- Some countries have alleged that India did not give sufficient replies to concerns raised by them during consultations.
- MSPs are the prices at which the government procures certain crops from farmers to insure them against any sharp fall in prices.

### What is the Issue?

- At the WTO agriculture committee meeting the members of the U.S., Australia, Canada, the EU, and Thailand asked India to reply to questions asked on its **public stockholding (PSH) programs** at the committee.
- However, India insisted that it has provided the best possible information and clarifications at the consultations held with interested members and

also said that some of the questions raised were already addressed in earlier responses.

- WTO is scrutinizing India's MSP program, as it is the first country to invoke the Bali '**peace clause**' to justify **exceeding its 10% ceiling (of the total value of rice production) for rice support in 2018-2019 and 2019-2020.**
- The 'peace clause' allows developing countries to breach the 10% ceiling without invoking legal action by members, it is subject to onerous notification requirements and numerous conditions such as not distorting global trade and not affecting the food security of other members.



- WTO members, including the U.S., have accused India of habitually not including all required information in its notifications.
- Under the peace clause, it is mandatory to report all public stockholding programs '.
- India has been accused of not disclosing public stock holding and also they alleged that India does not have an adequate monitoring mechanism to ensure no stocks were exported.
- India said that it had provided data on the value of production (VoP) for several crops and that it did not have **any obligation to notify any public stockholding programs other than for the crop where the subsidy limits were breached.**
- During the agriculture committee meeting, the U.S., Brazil, Canada, Ukraine, Thailand, the EU, and Australia notified the committee of all questions that they had raised in their individual consultations with India and said the country should make replies to the committee and should not avoid the questions.

### Conclusion:

- The peace clause protects India's food procurement programs against action from WTO members in case the subsidy ceilings are breached.
- India has earlier told the WTO that the stocks under the program are acquired and released to meet the **domestic food security needs of India's poor and vulnerable population**, and not to impede commercial trade or food security of others.
- The right to food is a basic human right. Therefore, Western misgivings about a country like India where 1/3rd of the population lives under the poverty line – providing food subsidies seems hypocritical.
- The developed nations see India as a huge market for foodgrains and other products, but their produce is rendered uncompetitive when the government is willing to subsidize farmers, purchase their products for a minimum support price and then sell it at a loss through the public distribution system and other channels

### What is the Minimum Support Price?

- MSPs are the prices at which the government procures certain crops from farmers to insure them against any sharp fall in prices.
- The Centre currently fixes MSPs for 23 farm commodities — 7 cereals (paddy, wheat, maize, bajra, jowar, ragi and barley), 5 pulses (chana, arhar/tur, urad, moong and masur), 7 oilseeds (rapeseed-mustard, groundnut, soyabean, sunflower, sesamum, safflower and

nigerseed) and 4 commercial crops (cotton, sugarcane, copra and raw jute) — based on the CACP's recommendations.

- CACP itself is **not any statutory body set up through an Act of Parliament**. It is an attached office of the Ministry of Agriculture and Farmers Welfare, Government of India.
- It can recommend MSPs, but the decision on fixing (or even not fixing) and enforcement rest finally with the government.

## How is MSP determined?

The Centre fixes MSPs for every kharif and rabi cropping season based on recommendations of the Commission for Agricultural Costs and Prices (CACP)

• When a farmer grows a crop, he incurs costs, some of it explicit and some implicit or unpaid. The CACP considers the following costs:



#QUIXPLAINED

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## Understanding The Saudi-Iran Detente

Priority: **Medium**



Primary Source: The Hindu

**Prepp Prelims Booster:** Saudi-Iran

**Prepp Mains Booster:** Regional and global groupings and agreements involving India and/or affecting India's interests; Effect of policies and politics of developed and developing countries on India's interests

### Context:

- Recently, **Saudi Arabia and Iran, two major powers in West Asia** that have been at odds for decades, **agreed to restore diplomatic relations in an agreement brokered by China**.
- It was stated that Iran has agreed to prevent further attacks against Saudi Arabia and Saudi Arabia on its part agreed to rein in Iran International, a Farsi news channel that is critical to the Iranian regime.
- **China has economic, regional and strategic interest in playing the role of a peace broker in West Asia.**



### What led to the breakdown of relations?

- The rivalry between the two dates back to pre-revolutionary Iran, when they competed for regional dominance.

- After the 1979 revolution deposed the Iranian monarchy and transformed the country into a Shia theocratic republic, sectarianism and ideology were introduced.
- It had recently devolved into a cold war, with both sides supporting their proxies throughout West Asia.
- Formal ties between them collapsed in 2016 after the Saudi embassy in Tehran was overrun by protesters in response to Riyadh's execution of a revered Shia cleric.
- They have now agreed to a new beginning through China's mediation. If the peace holds, it could have far-reaching implications for regional security, stability, and geopolitics.

### What are the terms of agreement?

- Saudi Arabia and Iran began direct talks in 2021 and have held multiple rounds of negotiations since then, first in Iraq and then in Oman, with no breakthrough.
- On both sides, however, there was a growing realization that the diplomatic path should be kept open.
- The reconciliation was announced recently after days of secret talks in Beijing.
- **Iran** has agreed to prevent further attacks on Saudi Arabia, particularly those from Houthi-controlled areas of Yemen.
- **Saudi Arabia**, for its part, agreed to rein in Iran International, a Farsi news channel critical of the Iranian regime (which the Iranian intelligence has termed a terrorist organization).
- Both countries' Foreign Ministers will meet soon to finalize the terms of the reconciliation before reopening embassies in each other's capitals in two months.
- China also intends to host a cross-Gulf conference this year between Iran and the six Gulf monarchies that comprise the **Gulf Cooperation Council, or GCC (Saudi Arabia, the UAE, Qatar, Bahrain, Kuwait, and Oman)**.

### Why did Saudi Arabia reach out to Iran?

- West Asia has been undergoing strategic realignment in recent years. In 2020, the UAE became the first Arab country in a quarter-century to normalize relations with Israel. In the years that followed, Israel and Arab countries strengthened their ties.
- In 2021, Saudi Arabia, the UAE, and their allies decided to lift their failed blockade of Qatar.
- The US was also attempting to mediate a normalization agreement between Saudi Arabia and Israel. One of the primary drivers of these realignments is the United States' deprioritization of West Asia.

### Why is the US deprioritising the West Asian region?

- The United States, the region's traditional great power, now faces more difficult foreign policy challenges, such as Russia's war in Ukraine and China's rise in the Indo-Pacific.
- America's regional allies face the dual realities of a power vacuum created by the US's deprivation and the challenge posed by Iran's rise.
- To address these issues, the US sought to unite the two pillars of its West Asian policy — Israel and the Arab world, against Iran so that the American alliance system in the region would not be disrupted.
- While the UAE chose this path through the Abraham Accords, the Saudis decided to take their time reconciling with Israel, especially since violence continued to spread in Israeli-occupied Palestinian territories.
- The United States is now one of the world's leading oil producers, and it is no longer as reliant on the Gulf Arabs as it was during the Cold War.
- This enabled American Presidents to accelerate the United States' deprioritization of the region. When Saudi oil facilities were attacked in 2019 (and Iran was widely blamed), the US remained silent.
- This appears to have prompted the Saudis to seek alternative solutions to the Iran problem. They came up with the solution of reaching out to the Iranians.

### What does China gain from the agreement?

- While the United States' ties with Saudi Arabia have deteriorated in recent years, and it has hostile ties with Iran, China has warm ties with

both — it is the largest buyer of Saudi oil and Iran's largest trading partner. This enabled China to use its economic clout to bring the parties closer together.

- **Market Stability:** China has economic, regional, and strategic interests in acting as a peace broker in West Asia. China is the world's largest oil buyer, and energy market stability is critical to its continued rise.
- **Major Power in West Asia:** If a détente between Saudi Arabia and Iran can provide some stability to West Asia in particular, and global energy supplies in general, China stands to benefit. Regionally, the agreement marks China's arrival as a major power in West Asia.
- **Brokering Peace:** Furthermore, China is attempting to send a clear message to countries in the Global South. While the United States is busy rallying the Western world to arm Ukraine in order to push back Russia and weaken Moscow through sanctions, China is quietly brokering peace in the Global South.

### What can be the Global implications?

- The agreement may have ramifications for a US-led effort to economically isolate Iran through sanctions, as it may facilitate potential Saudi investment inside Iran.
- In Yemen, the Saudis have been supporting the internationally recognized government in an eight-year civil war against Iranian-backed Houthi rebels, but have been looking for a way to end the conflict by holding private talks with the Houthis in Oman.
- Many Israeli politicians who have sought global isolation for Iran's arch-enemy will be concerned by the agreement. The pact was described by Israel as a "serious and dangerous" development.

### Implications for India

- **Energy Security:** Iran and Saudi Arabia are the world's two largest oil producers, and any conflict between them can cause oil price spikes that have a significant impact on India's energy security. Normalizing relations between these two countries could help stabilize global oil prices and ensure a consistent supply of oil to India.
- **Trade:** Iran and Saudi Arabia are both important trading partners for India. Normalizing relations between them could open up new trade and investment opportunities for India.
- **Regional Stability:** India has significant economic and strategic interests in the Middle East, including the International North-South Transport Corridor (INSTC).
  - Iran is part of India's extended neighborhood. Any instability in the region can have far-reaching consequences for India.
  - Ties between Iran and Saudi Arabia could contribute to greater regional stability, reducing the risk of conflict and terrorism.
- **Geopolitics:** India maintains friendly relations with both Iran and Saudi Arabia and plays an important role in ensuring regional peace and stability.
  - Ties between these two countries could aid India's efforts to promote regional peace and security.
  - However, Chinese mediation between Iran and Saudi Arabia will pose challenges for India because it will contribute to China's growing influence in the region.

## Myanmar Officials In Bangladesh To Fix Rohingya Return Plan

Priority: **Medium**



Primary Source: The Hindu

**Prepp Prelims Booster:** Rohingyas

**Prepp Mains Booster:** Government policies and interventions; India and its Neighbourhood- relations; Challenges to internal security through communication networks

### Context:

- Recently, Myanmar officials were in a meeting with Rohingya return refugees in which Bangladesh authorities stated the revival of a long-stalled effort to return the stateless minority to their homeland.

- Bangladesh is home to around a million Rohingya, most of whom fled a 2017 military crackdown in neighbouring Myanmar now subject to a UN genocide investigation.
- China is mediating between both countries on the renewed repatriation push and Beijing's ambassador to Dhaka.

### News Summary

- A Myanmar delegation is visiting Rohingya refugee camps in Bangladesh to verify a few hundred potential returnees for a pilot repatriation project, though a Bangladeshi official said it was unclear when they would return.
- Nearly one million Rohingya Muslim refugees are living in camps in Bangladesh's border district of Cox's Bazar, the majority of whom fled a military-led crackdown in Myanmar in 2017.
- According to Bangladesh's deputy refugee commissioner, a 17-member team led by a senior official from Myanmar's immigration ministry arrived in the border town of Teknaf.
- The delegation will interview over 700 Rohingya to determine the viability of their return to Myanmar.
- It was "the first time since 2017 that a Myanmar team has arrived to interview in person the Rohingya refugees for repatriation."



### Who are Rohingyas?

- The Rohingya are a stateless Indo-Aryan ethnic group who primarily follow Islam and live in Rakhine State, Myanmar.
- Prior to the Rohingya genocide in 2017, when over 740,000 fled to Bangladesh, an estimated 1.4 million Rohingya lived in Myanmar.

### Rohingya Genocide

- The Rohingya genocide is a series of ongoing persecutions and killings of the Muslim Rohingya people by the Burmese military.
- To date, the genocide has been divided into two phases: the first was a military crackdown from October 2016 to January 2017, and the second has been occurring since August 2017.

### India's stance on Rohingya migrants

- India regards Rohingya refugees as illegal foreigners.
- MHA has already raised the issue of their deportation with the concerned country via the ministry of external affairs (MEA).
- All foreign nationals (including refugees) are subject to the provisions of the Foreigners Act, 1946, the Registration of Foreigners Act, 1939, the Passport (Entry into India) Act, 1920, and the Citizenship Act, 1955.
- As a result, foreign nationals who enter the country without valid travel documents are considered illegal migrants.

### Status of Refugees in India

- Since its independence, India has accepted various groups of refugees from neighboring countries, including:
  - Partition refugees from Pakistan in 1947.
  - Tibetan refugees who arrived in 1959.
  - Chakma and Hajong from modern-day Bangladesh in the early 1960s.

- Other Bangladeshi refugees arrived in 1965 and 1971.
- Tamil refugees from Sri Lanka since the 1980s.
- Most recently, Rohingya refugees from Myanmar, 2022.



### India's Refugee Policy

- Despite the increasing influx of refugees, India lacks specific legislation to address the issue.
- **India is not a signatory to the 1951 Refugee Convention or its 1967 Protocol**, which are the primary legal documents governing refugee protection.
- However, India has a stellar record in terms of refugee protection. India has a moral tradition of assimilating foreign people and cultures.
- The Foreigners Act of 1946 fails to address the unique issues that refugees face as a group. In addition, the Indian constitution protects human life, liberty, and dignity.
- In *National Human Rights Commission vs. State of Arunachal Pradesh* (1996), the Supreme Court held that "while all rights are available to citizens, persons including foreign citizens are entitled to the right to equality and the right to life, among others."
- Article 21 of the Constitution includes the right to non-refoulement.
- Non-refoulement is the international law principle that states that a person fleeing persecution in his own country should not be forced to return to his home country.

### Japan, South Korea Renew Ties At Tokyo Summit

Priority: **Medium**



Primary Source: The Hindu

**Prepp Prelims Booster:** Tokyo Summit

**Prepp Mains Booster:** Effect of policies and politics of developed and developing countries on India's interests; History of the world - Events from the 18th century such as industrial revolution, world wars, redrawing of national boundaries, colonization, decolonization, political philosophies like communism, capitalism, socialism etc.— their forms and effect on society.

#### Context:

- Recently, Japan and South Korea agreed to resume regular visits between their leaders and take steps to resolve a trade dispute during a highly anticipated summit in Tokyo.
- The summit could revise the strategic map of northeast Asia. The two U.S. allies, who have long often been at odds over their history, are seeking to form a united front, driven by shared concerns about a restive North Korea and a more powerful China.

#### Tokyo Summit

- The summit between South Korea's Yoon Suk Yeol and Japan's Fumio Kishida in Tokyo **is the first visit to Japan by a South Korean president in 12 years** - highlighted how the two U.S. allies have been

brought closer by North Korea's **frequent missile launches and growing concern over China's** more muscular role on the international stage.

- The Japanese Prime Minister, Mr. Kishida said that the meeting will mark the resumption of **regular visits** between the leaders, which have been on hold for more than a decade.
- Kishida said that the countries had agreed to **resume defence dialogue and vice-ministerial strategic talks**, while also restarting a process of trilateral communication among Japan, South Korea and China.
- South Korean President Yoon said that the ever-escalating threat of North Korea's nuclear missile program poses a huge threat to peace and stability not only in East Asia but also to the (broader) international community.
- The two nations agreed to drop a four-year trade dispute on some high-tech materials used for chips.
- They also agreed to revive **regular bilateral visits and to restart a security dialogue suspended since 2018**. Yoon also declared a "complete normalisation" of an **intelligence-sharing pact, known as GSOMIA**, which Seoul threatened to pull out of in 2019.
- The General Security of Military Information Agreement (GSOMIA) is a bilateral security agreement between South Korea and Japan to share sensitive military and intelligence information.



#### Impact

- Improved ties between South Korea and Japan could pave the way for the two U.S. allies to cooperate more closely on shared security concerns related to China and North Korea.
- Restoring trade relations **could relieve pressure** from global high-tech supply chains.

#### Historical Background

- **1910-1945:** Japan effectively colonized the Korean Peninsula between 1910 and 1945, in a regime that imposed Japanese names and language on Koreans and conscripted many into forced labor or forced prostitution (Comfort Women) in military brothels before and during World War II.
- **Post World War II:** In 1965, Japan paid South Korea's military-run government \$800 million in reparations; however, the money was never given to the victims. When the government apologised in 1995, a semi-government fund provided compensation to former "comfort women," but many South Koreans think that the Japanese government needs to bear more of the responsibility for the occupation.
- The two sides also have a protracted territorial disagreement over a group of islands that are claimed by Japan but controlled by South Korea.
- **Present status:** Seoul and Tokyo have attempted to establish better ties before. In 2004, leaders began regular visits, but these ended in 2012 after South Korean President Lee Myung-bak visited the disputed islands.
- Tensions grew in the last ten years as the conservative Japanese governments moved to rearm the nation while intensifying efforts to downplay atrocities committed during World War II. In 2018, the South Korean Supreme Court ordered compensation for victims of forced labour from Nippon Steel and Mitsubishi Heavy Industries in Japan.

- Japan reportedly retaliated in 2019 by imposing export restrictions on chemicals used to produce semiconductors and screens for smartphones and other high-tech products.

### How do Japan and South Korea address history?

- Seoul announced plans to utilize its own resources to pay out compensation from the 2018 court judgment, which was a substantial concession made before the summit.
- Using an already-existing state-run foundation, South Korea would pay the plaintiffs' compensation by collecting funds from South Korean businesses that benefited from the 1965 pact, which was also supported by \$800 million in loans and economic assistance from Tokyo to Seoul.
- It's a major relief for Tokyo, which fears that further South Korean court orders could impose massive compensation demands on hundreds of other Japanese companies that used wartime forced labor.

### Challenges

- Surviving victims of forced labour, their sympathisers, and opposition politicians have vehemently opposed the plan and sought direct compensation from Japanese corporations as well as a new apology from Tokyo.
- Only three of the fifteen victims of forced labour who received compensation in 2018 are still alive, and all three stated in written statements given to the foundation that they would not take South Korean payments.
- Third-party reimbursements are permitted by South Korean law, and officials declared that they will make every attempt to persuade the victims to accept the funds.
- Japanese Foreign Minister Yoshimasa Hayashi said it's up to Japanese companies to decide whether to contribute to the funds voluntarily.

### Conclusion

- Experts say that the two countries will have to find an accommodation in history if this round of diplomacy is to achieve lasting results.
- The Kishida-Yoon summit won't influence public sentiment in South Korea, according to analyst Choi Eun-mi at the Asan Institute for Policy Studies.
- She said that there must be some sort of expression of apologies and self-reflection by Japan, in particular by the Japanese government and the defendant companies
- The future of the deal may also rest on whether Kishida's government can win over South Korean public opinion.

## International Criminal Court Issues Arrest Warrant Against Putin Over Ukraine

Priority: **Medium**



Primary Source: The Hindu

Prepp Prelims Booster: ICC

Prepp Mains Booster: Important International institutions, agencies and fora- their structure, mandate.

### Context:

- Recently, the [International Criminal Court](#) announced an arrest warrant for Russian President Vladimir Putin and Maria Lvova-Belova, Russia's presidential commissioner for children's rights on the war crime accusation of unlawfully deporting Ukrainian children.
- It was unclear whether or how Mr. Putin may ever find himself in court because Russia is not a party to the ICC.
- The International Criminal Court (ICC) investigates and, where appropriate, prosecutes individuals accused of the world's most serious crimes: genocide, war crimes, crimes against humanity, and aggression. Governed by an international treaty called 'The Rome Statute'.

### What is the Issue?

- According to Ukraine, more than 16,000 Ukrainian children have been sent back to Russia since the invasion on February 24, 2022, with many of them supposedly being placed in institutions and foster homes.

- The arrest warrants were issued a day after U.N. investigators declared that Russia committed a war crime when it forcibly relocated and deported Ukrainian children to territories under its control.



- According to ICC prosecutor Mr.Khan, **the arrest warrants** were based upon forensic evidence, scrutiny, and what's been said by those **two individuals (Vladimir Putin and Maria Lvova-Belova)**.
- The ICC said judges found there were "reasonable grounds" to suspect Mr. Putin's criminal responsibility and grant Mr. Khan's application for the warrants.
- It is a **first for the ICC to issue** an arrest warrant for Mr. Putin, a **sitting head of state of a member of the U.N. Security Council**.
- When nations are unable or unwilling to prosecute suspects in the world's worst crimes, the ICC serves as the court of last resort.
- Just days after Russia's invasion of Ukraine, prosecutor Khan opened an investigation into possible war crimes and crimes against humanity.
- Ukraine's and its Western allies hailed the move. Human Rights Watch said it was a "big day for the many victims" of Russian forces.

### Impact

- Putin is now **subject to arrest** if he steps foot in any of the court's more than 120 member states, according to ICC prosecutor Karim Khan.
- The execution of the warrants "**depends on international collaboration**," according to ICC President Piotr Hofmanski.
- The investigators said parents and children had spoken of youngsters being informed by Russian social services that they would be placed in **foster families or adopted**.
- Although **neither Russia nor Ukraine are ICC members**, Kyiv has acknowledged the court's authority and is collaborating with Mr. Khan's office.
- Russia **denies allegations of war crimes by its troops**. Experts have said it is **unlikely it would ever hand over any suspects**.

### What is the International Criminal Court?

- The International Criminal Court (ICC) investigates and, where warranted, tries individuals charged with the gravest crimes of concern to the international community: genocide, war crimes, crimes against humanity and the crime of aggression.
- As a court of last resort, it seeks to complement, not replace, national Courts.
- It is governed by an international treaty called the **Rome Statute**, the ICC is the world's **first permanent international criminal court**.
- The ICC is intended to complement, not replace, national criminal systems;
- It prosecutes cases only when States do not are unwilling or unable to do so genuinely.
- The Rome Statute concedes the ICC ward more than four principle wrongdoings:
  - The wrongdoing of Genocide
  - Violations against Humanity
  - Atrocity
  - Wrongdoing of Aggression

- **Headquarters:** The Hague, the Netherlands.

### International Court of Justice

- The International Court of Justice, also known as the World Court, is the main judicial organ of the UN.
- It was established in June 1945 by the Charter of the United Nations and began work in April 1946.
- The seat of the Court is at the Peace Palace in **The Hague (Netherlands)**. Of the six principal organs of the United Nations, it is the **only one not located in New York (United States of America)**.
- The Court's role is to settle, in accordance with international law, legal disputes submitted to it by States and to give advisory opinions on legal questions referred to it by authorized United Nations organs and specialized agencies.
- The Court decides disputes between countries, based on the voluntary participation of the States concerned.
- If a State agrees to participate in a proceeding, it is obligated to comply with the Court's decision.
- The International Court of Justice is composed of **15 judges** elected to nine-year terms of office by the United Nations General Assembly and the Security Council.
- The Court may not include more than one national of the same State.

- Beijing and Moscow announced that Chinese leader and strategic ally Mr. Xi would be in Russia next week to sign accords ushering in a new era of ties.
- The United States has accused China of mulling arms shipments to support Russia's campaign, which China has strongly denied.

### Understanding The Russia-Belarus Nexus

Priority: **Medium**



Primary Source: The Hindu

**Prepp Prelims Booster:** Russia-Belarus

**Prepp Mains Booster:** Effect of policies and politics of developed and developing countries on India's interests

#### Context:

- Recently, **in the most recent escalation of the Russia-Ukraine conflict, Russian President Vladimir Putin declared that Russia intends to deploy tactical nuclear weapons in Belarus.**
- Tactical nuclear weapons are small nuclear warheads and delivery devices designed for use on the battlefield or in limited attacks.



#### Where is Belarus?

- Belarus is a landlocked nation in Eastern Europe.
- It is bounded by Russia to the east and northeast; Ukraine to the south; Poland to the west; and Lithuania and Latvia to the northwest.
- Belarus is Europe's 13th-largest and 20th-most numerous nation. Minsk is the capital and biggest metropolis.

- The major waterways are the west-flowing Western Dvina and Nyoman rivers, as well as the south-flowing Dnieper and its branches, the Berezina, Sozh, and Prypyat rivers.
- Since Kievian Russia, the Prypyat River has acted as a link between the Dnieper River in Ukraine and the Vistula River in Poland.
- Pustaz, or vast uninhabited tracts of forest, occupy nearly one-third of the nation.



#### What are Tactical Nuclear Weapons?

- Tactical nuclear weapons are designed to eliminate hostile soldiers and weapons on the battleground.
- They have a much shorter range and a much smaller yield than nuclear warheads attached to long-range strategic missiles capable of annihilating entire towns.
- Unlike strategic weapons, which have been subject to arms control treaties between Moscow and Washington, tactical weapons have never been subject to such treaties.
- The US government thinks Russia has around 2,000 tactical nuclear weapons, which include aircraft-carrying explosives, short-range missile warheads, and artillery rounds.
- While strategic nuclear weapons are fitted to land- or submarine-based intercontinental ballistic missiles that are always available for launch, tactical nuclear weapons are kept at a few closely guarded storage sites in Russia, and delivery to combat troops takes time.

#### Why is Russia planning to station tactical nuclear weapons in Belarus?

- Putin stated that the move was prompted by the United Kingdom's move last week to furnish Ukraine with armour-piercing rounds containing depleted uranium.
- Depleted uranium bombs improve tank defenses and have been characterized as a "chemically and radiologically toxic heavy metal" by the United Nations Environment Programme (UNEP).
- Russia claims that placing tactical nuclear weapons in Belarus does not break any international agreements made by Moscow because control over the weapons would stay with Russia, just as the US maintains control over its nuclear weapons on the lands of its partners.

#### Why Belarus?

- **Military and Political Relation:** Belarus, a former Soviet state that, like Kazakhstan and Ukraine, turned over its nuclear weapons to Russia after

the collapse of the Soviet Union and has established strong military and political relations with Russia.

- **Close Ally:** It is one of Russia's closest and last surviving friends. There are also few border restrictions between the two nations.
- **Member of EEU:** Belarus is a member of the Russian-led armed coalition, the Collective Security Treaty Organization, and the Eurasian Economic Union.
- Russia provides Belarus with subsidized oil and natural gas supplies. Russia, like Ukraine, wants to retain Belarus in its area of influence, so it backs the government of Belorussian President Alexander Lukashenko (dubbed "Europe's last dictator"), whom Russia regards as favorable.
- **Geostrategic location:** Belarus' geostrategic location between Russia and Ukraine, as well as between Russia and Poland, renders it vital to Russia. It also shares boundaries with three NATO members: Lithuania, Latvia, and Poland.
- Russia has traditionally used Belarus as a forward base for force projection, giving it strategic depth. Russia has used Belarus as a staging area for soldiers and attacks in the ongoing conflict.

#### Relation between Russia and Belarus

- Belarus and Russia have a strategic alliance founded on their physical proximity, strong historical and cultural connections, economic ties, and coordination between Belarusian and Russian companies.
- The Agreement on Establishment of the Union State of Belarus and Russia, signed by the leaders of state in 1999, establishes a formal foundation for union between the two nations.
- Belarus and Russia defined a number of major goals in the Agreement, including ensuring peaceful and democratic development, establishing a single economic and customs area and a proper legal framework, ensuring sustainable economic development, pursuing agreed-upon foreign, defense, and social policies, ensuring security, and combating crime.
- **Trade:** Russia has traditionally been an important trading partner as well as a significant export market for Belarusian manufacturers.
- By the end of 2022, mutual trade between the two nations had grown by nearly 15%. Russia provides for more than half of Belarus's international trade. Belarus and Russia are successfully building collaboration in areas such as electricity, transportation, and industrial cooperation.
- In 2022, joint initiatives for the manufacture of import-substituting products based on Belarusian industry's flagships were introduced.
- **Cultural Initiative:** The two nations expand their cultural collaboration. The yearly fair Slaviansky Bazar in Vitebsk is one of the most important and well-known combined cultural initiatives.
- Crossing the boundary between Belarus and Russia requires no visa or immigration checks, nor does receiving and filling out a migration card.

### Power Play In Moscow: What China Hopes To Gain From Xi's Meeting With Putin

Priority: **Medium**



Primary Source: Indian Express

**Prepp Prelims Booster:** China-Russia

**Prepp Mains Booster:** Effect of policies and politics of developed and developing countries on India's interests

#### Context:

- Recently, **China's President Xi Jinping was on a three day visit to Russia**, days after the **International Criminal Court issued warrants for President Vladimir Putin's arrest** for alleged war crimes and fighting in eastern Ukraine that continued for 13 months after the Russian invasion began.
- **Xi Jinping regards Vladimir Putin as an ally in the fight against Western liberal values and a US-led global system.**
- Beijing is unlikely to want to end Russia's war in Ukraine.



#### Details

- The **International Criminal Court (ICC)** has recently issued an arrest order for Russian President Vladimir Putin.
- The court accuses him of war crimes and has concentrated its charges on the illegal repatriation of children from Ukraine to Russia.
- It claims the atrocities were perpetrated in Ukraine beginning on February 24, 2022, when Russia started its full-scale invasion.
- Moscow has disputed the claims and called the warrants "outrageous."

#### Why is the China-Russia Relationship important to Beijing?

- **Security:** Beijing must continue both outreach and friendly relations with Moscow. During the Cold War, the former Soviet Union and China had a history of collaboration as well as deadly conflicts.
- Despite the fall of the Soviet Union and its successor's significantly less significant global political and economic influence, some objective conditions have not changed.
- Russia remains China's largest neighbor, a major source of military technology, and continues to wield influence in the former Soviet states that border China's troubled west.
- **Market and Industry:** Russia is currently a key supplier of hydrocarbon energy as well as a market for Chinese industry and technology.
- **Russian as an ally:** Xi Jinping regards Vladimir Putin as an ally in the fight against Western liberal values and a US-led global system.

#### What is the Russia - Ukraine conflict?

- The Ukraine crisis is based on a contest about the post-Cold War central European territoriality and the resurrecting of a burnished Russian past.
- Ukraine and Russia have had cultural, linguistic, and familial ties for hundreds of years.
- For many in Russia and ethnically Russian regions of Ukraine, the countries' shared heritage is an emotional issue that has been used for electoral and military purposes.
- Ukraine was the 2nd-most powerful Soviet republic after Russia as part of the Soviet Union, and it was significant strategically, economically, and culturally.
- The major causes of the ongoing conflict are the region's balance of power, Ukraine's role as a crucial buffer between Russia and the West, Ukraine's bid for NATO membership, and Russian interests in the Black Sea, all of which are accompanied by protests in Ukraine.

#### China Unlikely to end the Russia-Ukraine War

- Being encircled in Ukraine weakens Russia militarily, economically, and politically. This is a need that China can fill, particularly in Eurasia; for example, during Xi's visit to Kazakhstan in September, China gave security assurances and designated Belarus as its second "all-weather strategic partner" after Pakistan.
- **Attention and resources are diverted:** A protracted conflict in Ukraine diverts the West's, particularly the US', attention and resources, which the Chinese regard as a good thing. From Beijing's perspective, it undermines the focus on and limits the resources available for any

prospective Western involvement on China's eastern shore, particularly in the event of a Taiwan crisis.

- **Rise in Chinese Power:** A continued situation in Ukraine provides possibilities for worldwide messaging regarding China's relative growth in power relative to both the Russians and the Americans. Russia's regional and global standing has suffered as a result of what it has done and what it is unable to do, that is pursue a rapid conclusion to the conflict.
- **Restoring Diplomatic Ties:** Just as China's role in restoring diplomatic ties between Iran and Saudi Arabia was intended to demonstrate Beijing's rising influence and the decline of the US in the Middle Eastern region, Ukraine's inability to expel Russian invaders despite Western support can be used to send a signal in Europe.

#### Are the US and China also discussing the war?

- Washington and Beijing are talking about the Ukraine issue, but they are unlikely to reach an agreement in the near future.
- On these and other topics, the two countries have fundamentally conflicting interests.
- These differences are fundamental and deep-seated, and the recent American shooting down of a Chinese surveillance balloon in US airspace implies that tensions in the US-China relationship will only worsen.

#### How does the war affect China?

- The conflict has consequences for China, not just economic costs but also political costs, particularly from large Western nations that are also significant customers for Chinese industry and providers of high technology.
- However, these are expenses that the Chinese economy appears to be able to endure, especially given that it can obtain oil at low discounts from Russia and has had its own form of technical self-reliance programs in place for decades.
- China may also use its economic influence to do commerce in its own currency with Russia and other sanctioned countries, such as Iran.
- The impact of the Russia-Ukraine crisis on China is not just external and economic, but also domestic.
- The dispute validates Xi's comments in recent times in various significant domestic publications and speeches that China "is confronting global changes of a size not seen in a century."
- An uncertain external environment and its economic effects may also be used to justify both China's present economic woes in the aftermath of the epidemic as well as Xi's continued grip on power as necessary for national stability and recovery.

#### Global Implications of the China-Russia Alliance

- **Western Unity:** Instead of destroying the US's global supremacy, the Russia-China alliance has encouraged the US and Western countries to become more united and dominated by the US. The invasion of Ukraine also allowed the US to put pressure on both Russia and China. In Europe, Russia's invasion of Ukraine has helped the United States galvanize and extend the North Atlantic Treaty Organization (NATO).
- **Rise of Reluctant and Pacifist Powers:** The China-Russian alliance and the Ukraine war have drawn two hesitant and pacifist states (Germany and Japan) into the fight against Russia and China.
- Japan and Germany are the world's third and fourth biggest economies, respectively, and their mobilization considerably modifies the so-called "correlation of forces" between the West and the Russia-China axis.
- Germany and Japan have also pledged to increase defense spending in order to meet Russia and China's security threats.
- **US Alliances in Europe and Asia:** Russia and China's goal to control Eurasia through an alliance has failed, while the US is doing something similar to deepen its alliances and partnerships in Europe and Asia.
- For the first time, America's Asian partners represented at the NATO summit in June 2022, and NATO has vowed to play an active role in defining Indo-Pacific power balances.

## China Boosts South Pacific Influence With Solomons Port Deal

Priority: **Medium**

Primary Source: The Hindu

Prepp Prelims Booster: Solomon Islands

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

#### Context:

- Recently, a state-backed Chinese company has won a contract to develop a key port in the Solomon Islands, a major victory in Beijing's quest to gain a strategic toe-hold in the South Pacific.
- Solomon Islands' government announced that the China Civil Engineering Construction Corporation had been chosen to lead a \$170 million project to develop the international port in the capital Honiara.

#### What is the issue?

- The Solomons have become the **epicentre of a diplomatic tussle** between China and the U.S., after it signed a **secret security pact with Beijing in 2022**.
- However, China and Solomon Islands denied the pact would lead to the establishment of a permanent Chinese naval base. But the details of the agreement have never been revealed.
- Solomon Islands is becoming increasingly dependent on Chinese investment, for instance the construction of a new stadium for the upcoming Pacific Games in Honiara.
- The Chinese company had a \$7 million contract in 2020 to build a new terminal at Munda International Airport, western province of the Islands.
- China Civil Engineering Construction Corporation was established by the Chinese government in the 1970s and has played an integral role in the **Belt and Road initiative**. It holds contracts for infrastructure projects throughout Africa, the Middle East and the Pacific



#### What is in the Solomon Islands-China pact?

- The final agreement has not been made public, although it is thought to be along the lines of a draft that was leaked in 2022.
- According to a leaked draft agreement, Chinese warships will be allowed to dock at the Solomon Islands, and China would also be permitted to send security forces to assist with maintaining social order.
- This agreement could potentially provide Beijing with the means to intervene in situations where its foreign investments or diaspora face threats in the region



- The draft suggests that a threat to anything linked to China, including its citizens or small businesses, could be sufficient to warrant the deployment of **Chinese troops**.
- China has signed economic and security agreements with several nations in the recent past, including Djibouti, Pakistan, and Cambodia. China pumps in funds for infrastructural development, while also gaining access to several vital ports.

### What is behind China's growing influence in the region?

- Over the last 30 years, China has been steadily increasing its presence and influence in the South Pacific region.
- According to a report by the Council on Foreign Relations, China considers the Pacific Island region to be a **vital component of its Belt and Road Initiative**, particularly in establishing **an air freight hub in its "Air Silk Road,"** which connects Asia to Central and South America.
- The report also highlights the strategic importance of the Solomon Islands in the Pacific, which could offer **China a military advantage**.
- The United States and its regional allies, including Australia and New Zealand, are concerned that the security agreement between China and the Solomon Islands could open the doors for a Chinese naval base.

### The New Warsaw Pact

Priority: **Medium**



Primary Source: Indian Express

**Prepp Prelims Booster:** International Relations

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

#### Context:

- Recently, the air chiefs of Denmark, Finland, Norway and Sweden agreed to integrate their air defenses to counter the Russian threat.
- The Nordic move is about coping with a heightened sense of insecurity in northern Europe after the Russian invasion of Ukraine.
- The emerging security arrangements are being called the "New Warsaw Pact"
- The geopolitical arc in Central Europe has come full circle as the "New Warsaw Pact" points its weapons eastward in opposition to Russian revisionism.

### What was the old Warsaw Pact During the Cold War?

- The Warsaw Treaty Organization (also known as the Warsaw Pact) was a political and military alliance established on May 14, 1955, between the Soviet Union and several Eastern European countries.
- The Soviet Union formed this alliance as a counterbalance to the North Atlantic Treaty Organization (NATO), a collective security alliance concluded between the United States, Canada and Western European nations in 1949.
- The original signatories to the Warsaw Treaty Organization were the Soviet Union, Albania, Poland, Czechoslovakia, Hungary, Bulgaria, Romania, and the German Democratic Republic.
- In September 1990, East Germany left the Pact in preparation for reunification with West Germany.
- By October, Czechoslovakia, Hungary, and Poland had withdrawn from all Warsaw Pact military exercises. The Warsaw Pact officially disbanded in March and July of 1991 following the dissolution of the Soviet Union.

#### Formation of alliances

- The combination of the Russian threat, western European passivity and Anglo-American support have begun to change the dynamics in eastern Europe which are now coalescing into a coherent regional alliance, operating both within and outside NATO.
- After the Russian annexation of the Crimean peninsula in 2014.
- The Bucharest Nine or Bucharest Format, often abbreviated as the B9, was founded on November 4, 2015, and takes its name from Bucharest, the capital of Romania

- Bucharest Nine includes nine central European states Bulgaria, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovakia, and Romania.
- These countries were either part of the Soviet Union or the Warsaw Pact.
- In 2015, Poland and Croatia initiated the Three Seas Initiative, also known as the Baltic, Adriatic, Black Sea (BABS) Initiative.
- It is an ambitious forum of 12 European Union states along a north-south axis from the **Baltic Sea to the Adriatic Sea and the Black Sea in Central and Eastern Europe**, which includes Bulgaria, Estonia, Croatia, Latvia, Lithuania, Austria, Poland, Romania, Slovakia, Slovenia, the Czech Republic, and Hungary.
- The initiative's aim is to foster dialogue and develop the region's relatively weak infrastructure.
- The objective of the **Three Seas Initiative** is to consolidate **political and economic cooperation** in the Central European belt running from the Baltic Sea to the Black Sea.
- In 2020, a smaller group called the **Lublin Triangle** involving Poland, Lithuania, and Ukraine was formed.
- It seeks to promote political, economic and security cooperation among the three states that have a shared history and cultural commonality.
- **Role of Poland:** Poland is at the centre of these new arrangements. The economic transformation of Poland has been quite rapid since the breakup of the eastern bloc during 1989-91 and is leading the regional effort to support Ukraine's fight against Russia.
- Poland has become Europe's center of gravity. However, Poland on its own, cannot sustain a new strategy.
- It needs to work closely with its Central European neighbours in building sub-regional coalitions.



### Difference in opinion about the Russia-Ukraine crisis

- **India:** Many countries including India opinion that Russia's reaction was inevitable because of NATO expansion. Central Europe's concerns and interests are not considered in this narrative.
- **China:** Currently, China is a close ally of Moscow but it had frequent periods of conflict with Czarist Russia and the Soviet Union.
- **Central Europe:** Central European Nations have a different perspective that is not only different from those of India but also from those in the Western flank of Europe such as France and Germany, that do not share borders with Russia.
- Ukraine's resistance is more about nationalist Ukraine's political **refusal to be absorbed into a Russian sphere of influence**, formal or informal. Ukraine's **deep distrust for Moscow** is shared widely by most of the Central European nations.
- The central European countries want to **control their own destiny** and are unwilling to simply cede their future to potential compromises between West Europe and Russia.
- Central Europeans have long been a **trampling ground for their larger European neighbors**, especially Russia and Germany.
- Great power map-making in **Central Europe repeatedly redefined the borders** and identity of the nations in the heart of the continent.

- It is not surprising that countries in the area are currently forming regional alliances to strengthen deterrence against Russia and are also looking to the US and Britain to support their sub-regional security initiatives.
- **Britain:** With US backing, Britain has seized the Ukraine crisis to demonstrate Britain's continuing relevance to European security by signing several security agreements in North and Central Europe.
- **USA:** The US wants its regional partners take larger responsibility for their own security and it welcomes the creation of new political/military structures in Central Europe that both transcend and supplement NATO and the EU.

### What should be the way forward for India?

- The present government had spent considerable diplomatic energy in engaging Europe, including the central Europeans and Nordics. However, Russia's Ukraine war has complicated India's central European strategy.
- India has genuine compulsions arising from a long-standing strategic partnership with Russia.
- However, understanding Central European perspectives is important for any Indian long-term strategy for dealing with the war in Ukraine and its geopolitical consequences for Europe and the world.
- India must necessarily find a way to reconnect with the central European states that are well on their way to rearranging the strategic map of Europe.
- It would be possible for central Europe and India to mutually collaborate if they de-hyphenate their relations from those with Moscow.

## The Limits Of American Power In West Asia

Priority: **Medium**



Primary Source: The Hindu

**Prepp Prelims Booster:** International relations

**Prepp Mains Booster:** Effect of policies and politics of developed and developing countries on India's interests

### Context:

- In this article, it is discussed how American Power has been limited in West Asia.
- Over the last two decades, the United States has committed a slew of blunders in West Asia, resulting in a reduction in its overall power and a corresponding strategic rethinking by its allies.



### Background

- Faced with the danger of the Soviet Union stretching its reach into the Gulf, the Carter administration in the United States took an assertive stance in 1980.
- The US had suffered two failures in Asia the previous year: in February, the Shah's regime in Iran, one of the pillars of America's West Asia policy, crumbled; and in December, the Soviets dispatched the Red Army to Afghanistan.

- President Jimmy Carter stated in his State of the Union address on January 23, 1980, that "any outside force attempting to gain control of the Persian Gulf region will be regarded as an assault on the vital interests of the United States, and such an assault will be repelled by any means necessary, including military force."

### What is the Carter Doctrine of the US?

- Carter Doctrine, US foreign policy proposal presented by US President Jimmy Carter in his 1980 State of the Union speech that restored the US to its historic strategy of containment of the Soviet Union.
- Carter vowed in his address that the US would use military action against any government that sought to take control of the Persian Gulf region.
- That declaration signaled a significant reversal in US foreign policy, which had been centered on advancing international human rights and seeking détente with the Soviet Union since Carter's election.

### Mistakes in the past

- Over the last two decades, the United States has made a number of blunders in West Asia, resulting in a fall in its overall power and a corresponding strategic rethinking by its allies.
- **Situations of Iraq, Syria, and Iran:** one, a country the US invaded, brought regime change, and occupied; two, a country where it sought regime change without a full-scale invasion; and three, a country which it sought to contain and engage.
- **US invaded Iraq:** The United States was at the pinnacle of its power when it attacked Iraq on March 20, 2003. Arab allies of the United States queued up to support the war. But, from a security standpoint, what they witnessed was the senseless demolition of the Iraqi state, which prompted sectarian carnage and led to the formation of extremist Islamist organisations such as al Qaeda in Iraq, which eventually morphed into the Islamic State, further destabilizing the area.
  - From a geopolitical standpoint, the Iraq war removed a barrier between the Sunni Arab Gulf monarchies and a Shia theocratic Iran, and it handed over post-Saddam Iraq to Shia groups with historical links to Tehran.
- **Syrian Civil War:** When the Syrian civil war broke out, Arab monarchs saw it as a chance to drive Iran back by overthrowing the regime in Damascus.
  - The US backed the regime change coalition, advocated for President Bashar al-Assad to step down, provided supplies to the rebels, and started a covert Central Intelligence Agency (CIA) campaign.
  - But, having burned its fingers in Afghanistan, Iraq, and Libya, the United States' enthusiasm for another full-scale military involvement was already waning.
  - When the United States decided against intervening in Syria, Russia and Iran acted quickly, turning the civil war around.
  - America's allies, from Saudi Arabia to Jordan, Qatar to Turkey, who had all gambled on anti-Assad forces, watched helplessly as the Syrian Army and Iran-trained militias, backed by Russian planes, annihilated the revolt.
- **Multilateral Deal:** American President Barack Obama, seeing that the United States' ongoing entanglements in the area were impeding its efforts to handle developing conventional problems, went out to Iran and achieved a multilateral deal on its nuclear program.
  - Obama's strategy was to strike an agreement with Iran and persuade America's Arab allies and Tehran to "share" the area.
  - However, striking a deal with Tehran at a time when the United States' own actions had strengthened Iran enraged both its Gulf allies and Israel.

### What are the limitations of the US?

- To handle the problem of sustaining America's influence in West Asia with decreased commitments, the US proposed collectivising its alliances — bringing Arab allies and Israel closer together so that Israel may play a stronger security role in a collective front against Iran.
- With the deprioritization of West Asia, the United States' clout over its partners is eroding, emboldening the allies to make their own foreign policy decisions.
- The Israeli occupation of Palestinian territory might derail efforts to form collectivist coalitions. The UAE not only committed to normalize

relations with Israel through the Abraham Accords, but also modified relations with Iran and warmed up to Syria and Turkey.

- Saudi Arabia, on the other hand, has avoided embracing Israel. Instead, the Kingdom, perhaps the most powerful Arab country, found a path to stability in the China-mediated peace agreement with Iran.
- Israel, the cornerstone of America's collectivist plan, is opposing American control. Despite pressure from Washington, Israel's new government is pressing ahead with its judicial reform agenda. Israel refused to join Western sanctions on Russia and refused to deploy arms to Ukraine.

### What are the new pillars of the region?

- As the United States deprioritized West Asia, its allies are attempting to forge more predictable connections with friends and rivals alike, carving out their own circles of influence and emerging as the region's new pillars.
- Israel seeks to improve connections with the Arab countries in order to confront Iran without conceding on Palestine.
- Iran aspires to break free from the economic stranglehold of sanctions and realize its full potential.
- Turkey seeks to reclaim its dominance over the area, and Saudi Arabia aspires to become the Arab world's natural leader.
- And China, the emerging superpower, wants to ensure that its economic interests are protected.

### Conclusion

- This situation does not imply that America will withdraw from the area. The United States has multiple bases and tens of thousands of troops stationed around the area, and it will continue to play a significant security role.
- However, the Gulf or greater West Asia is no longer an exclusive American sphere of influence, as Mr. Carter and Zbigniew Brzezinski had anticipated.
- It is too early to tell if the regional realignments, especially the Saudi-Iran reunion, can survive the notoriously volatile geopolitics of West Asia.
- But there are three constants in this whirlwind: America's dwindling capacity to control geopolitical outcomes in the area, China's steady development, and a rising demand for the United States' partners to make independent foreign policy decisions. This is fresh territory for America in West Asia.

## House Panel On Tribal Affairs Apprehensive About PM-PVTG Outlay Without Population Data

Priority: **Medium**



Primary Source: The Hindu

**Prepp Prelims Booster:** Particularly Vulnerable Tribal Groups

**Prepp Mains Booster:** Government policies and interventions for development in various sectors and issues arising out of their design and implementation; Issue related to SCs & STs

### Context:

- Recently, the **Standing Committee on Social Justice and Empowerment expressed disappointment about a large budgetary allocation** that had been planned for the **Prime Minister's Particularly Vulnerable Tribal Groups (PM-PVTG) Development Mission** when even the **Ministry of Tribal Affairs does not have data on PVTG populations in several States and Union Territories.**
- The Finance Minister, Nirmala Sitharaman had announced a **Rs.15,000 crore expenditure outlay for the PM-PVTG Development Mission.**

### About Pradhan Mantri PVTG Development Mission

- In February, 2023 the Finance Minister stated that the Pradhan Mantri PVTG Development Mission will be launched to improve the socioeconomic conditions of **particularly vulnerable tribal groups (PVTGs).**

- This will provide basic facilities such as safe housing, clean drinking water and sanitation, improved access to education, health, and nutrition, road and telecom connectivity, and sustainable livelihood opportunities to PVTG families and habitations.
- An amount of Rs.15,000 crore will be made available to implement the Mission over the next three years as part of the Development Action Plan for Scheduled Tribes.

### Who are Particularly Vulnerable Tribal Groups (PVTGs)?

- In India, a particularly vulnerable tribal group, or PVTG (previously known as a Primitive tribal group), is a sub-classification of a Scheduled Tribe or section of a Scheduled Tribe that is considered more vulnerable than a regular Scheduled Tribe.
- The Indian Government developed the PVTG list with the goal of improving the living conditions of endangered tribal groups based on priority.

### Data of PVTGs in India

- The Indian government designated 52 tribal groups as PVTGs in 1975.
- 23 new groups were added to the list in 1993.
- As a result, out of 705 Scheduled Tribes, there are 75 PVTGs.
- The state with the most PVTGs in Odisha. Odisha's government selected 888 villages/hamlets inhabited by PVTGs in 2020.
- PVTGs can be found in 18 states and one Union Territory (UT) across the country (2011 census).

### What are the concerns?

- **Lack of data:** The House panel, stated that the Committee are rather apprehensive on the enhanced budgetary allocation for PVTGs and its utilization by the Ministry of Tribal Affairs as data on population of Particularly Vulnerable Tribal Groups (PVTGs) in several States/UTs is still not available with them.
- **Financial Allocation:** It was stated that the states and union territories had been asked to conduct baseline surveys, which were now being verified. It was believed that this should have been done earlier because they are concerned that without accurate information on the population of PVTGs, the financial allocation for the Scheme may not produce the desired results.
- **PVTG Data:** The House panel also stated that an evaluation study revealed that PVTG data is missing in many States and UTs, including the Andaman and Nicobar Islands, which the panel members recently visited and where six of the seven Scheduled Tribes groups fall under the PVTG category.

### On Budget Allocation

- The detailed Budget statement for FY 2023-24 showed that the Ministry of Tribal Affairs has been allocated a total of Rs 12,461.88 crore, out of which the Ministry's scheme for the Development of PVTGs, has been allocated ₹256.14 crore.
- However, expenditure reports show that spending under this scheme has decreased significantly in the last five years, since 2018-19, when it was worth Rs 250 crore. The following year, it fell to Rs.249.99 crore, then to Rs 140 crore in 2020-21, then rising slightly to Rs.160 crore in 2021-22, and going down to Rs.124.79 crore in 2022-23.

### Reason for the decline

- The Committee expressed appreciation for the increased Tribal Affairs allocation of over Rs.12,000 crore in this year's Budget Estimates.
- However, it was also noted that over the last three fiscal years, the Tribal Affairs Ministry's allocation has consistently decreased.
- After overall analysis of all the reasons given by the Ministry, the Committee have found that absence of advance planning, change in procedures, and failure of States/UTs to implement Schemes with the requisite enthusiasm and procedural discipline, are the major reasons, due to which actual expenditure during these years was less in comparison to Budgetary Estimates.

### What are the committee's expectations?

- The Committee hopes that the details of the population of PVTGs in various States/UTs will now be collected seriously and verified as soon

as possible so that the budgetary allocation for them is used correctly and PVTG socio-economic development can be done comprehensively.

- The Committee anticipates that the Ministry will focus on the welfare of PVTGs through a well-conceived Action Plan, and that the Ministry will find a way to ensure that the pending utilization certificates are resolved and the grants due are released to the States/UTs.
- Expressing hope that the PM-PVTG Development Mission had the potential to rejuvenate a “crumbling scheme”, “if implemented with the requisite push” it expects the Ministry to frame the modalities, guidelines and SOPs expeditiously, and also sought regular updates on the same from the Tribal Affairs Ministry.

## Competition Law Amended To Tighten Scrutiny Of Big Tech Firms

Priority: **Medium**



Primary Source: The Hindu

**Prepp Prelims Booster:** Competition Amendment bill

**Prepp Mains Booster:** Changes in industrial policy and their effects on industrial growth; Government policies and interventions for development in various sectors and issues arising out of their design and implementation.

### Context:

- Recently, the Lok Sabha cleared the Competition (Amendment) Bill, 2022, which aims at bringing in greater regulation of corporates, particularly Big Tech firms, by introducing a deal value threshold for approvals by the Competition Commission of India (CCI) and enabling cartels to avail of the CCI's settlement mechanism.

### Competition (Amendment) Bill, 2022

- **Penalty:** A major change in the Bill is the provision relating to penalties that the CCI can levy. Currently, the CCI can impose a penalty of up to 10% of a company's average turnover in the “relevant market.”
- Now, the phrase “turnover” will refer to the “global turnover derived from all the products and services by a person or an enterprise”
- The introduction of deal value thresholds under the competition law will bring transactions involving ‘asset lite’ and ‘low revenue’ companies (which were previously not notifiable), under the CCI's scrutiny.
- The settlements and commitments system will make sure that anti-competitive behavior and practices are immediately fixed in the market and spare “willing and legally compliant enterprises” from having to go through the hardships of a lengthy inquiry.
- **Mergers and acquisitions (M&A):** The amendments make compliance easy by allowing CCI to regulate mergers and acquisitions (M&A) based on the value of transactions with ₹2,000 crore threshold, if the target entity has substantial business operations in India.
- It also proposed that CCI would need to take a view within 30 days on the likelihood of mergers and acquisitions (M&A) causing an adverse effect on the competition.



### Concerns

- **Discrimination:** Computation of penalties based on global turnover will result in higher penalties for global multi-product companies
- It may lead to ‘unfair and punitive’ outcomes and would also lead to discrimination between enterprises who commit a similar contravention but are penalized differently depending on the expanse of their business operations.
- **Rise in discretion:** For evaluating hub and spoke networks, the concept of intention to actively participate has been proposed. In addition to increasing the number of parties that can be investigated for hub and spoke cartel activity, such inclusion also raises the investigating authority's level of subjectivity and discretion.

### Conclusion

- The legislation is in the right direction as it provides CCI with more teeth and flexibility and aligns the Competition Act with the changing economic and business landscape in India. The actual implementation of these changes will hinge on the regulations that the CCI will issue.

### Competition Commission of India (CCI)

- The Competition Commission of India (CCI) was established in March 2009 by the Government of India under the Competition Act, 2002 for the administration, implementation, and enforcement of the Act.

CCI consists of a Chairperson and 6 Members appointed by the Central Government.

#### Objectives:

- Eliminate practices having adverse effect on competition
- Promote and sustain competition
- Protect the interests of consumers
- Ensure freedom of trade in the markets of India
- Establish a robust competitive environment

## No Evictions For Great Nicobar Project

Priority: **Medium**



Primary Source: The Hindu

**Prepp Prelims Booster:** Great Nicobar

**Prepp Mains Booster:** Mechanisms, laws, institutions, and Bodies are constituted for the protection and betterment of these vulnerable sections; Government policies and interventions for development in various sectors and issues arising out of their design and implementation; GS3 - Environment; Conservation

### Context:

- Recently, the Union Government stated that it will not allow displacement of tribespeople to make way for the Rs.72,000 crore Great Nicobar project.



### About Great Nicobar Project

- The Union Ministry of Environment, Forests, and Climate Change (MoEFCC) had granted in-principle (Stage 1) clearance for the diversion of 130.75 square kilometers of forest on Great Nicobar Island for the

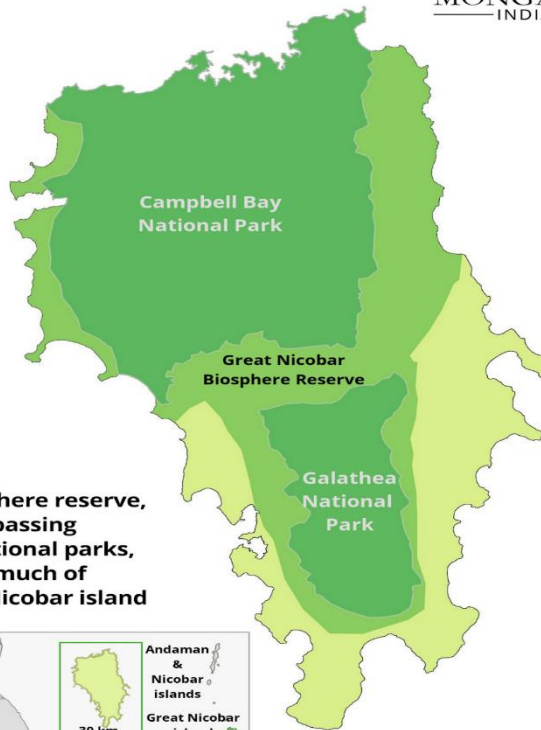
mega 72,000-crore project, which includes a transshipment port, an airport, a power plant, and a greenfield township.

- The Andaman and Nicobar Islands Integrated Development Corporation (ANIIDCO) is in charge of project execution.
- ANIIDCO initiative comprises a transshipment port, an airstrip, a power facility, and a greenfield township.

#### What is the concern?

- In November 2022, it was announced that the project had obtained Stage 1 clearance from the Union Environment and Forest Ministry to divert 130.75 square kilometers of forest territory for this purpose.
- However, the Tribal Affairs Ministry stated that the use of tribal reserve land will be subject to the interests of local tribes people residing in the region, particularly the Shompen tribe, which is designated as a Particularly Vulnerable Tribal Group (PVTG).

MONGABAY  
INDIA



A biosphere reserve, encompassing two national parks, covers much of Great Nicobar island



Map by T Ramachandran/Mongabay

Source: Gazette notifications (MoEFCC), OpenStreetMap

#### About Shompen Tribe

- The Shompen Tribe is a distinct tribal group that lives on Great Nicobar Island and is renowned for their distinct culture, society, and language.
- They have a subsistence economy and traditional clothing that reflects their simple and basic lifestyle.
- They have their own separate vernacular that emphasizes the tribe's uniqueness.
- They are classified as a Particularly Vulnerable Tribal Group (PVTG).

#### Great Nicobar Island

- Great Nicobar, the southernmost of the Andaman and Nicobar Islands, has an area of 910 sq km.
- Indira Point on the southern tip of Great Nicobar Island is India's southernmost point, less than 150 km from the northernmost island of the Indonesian archipelago.
- Great Nicobar is home to two national parks, a biosphere reserve, and the Shompen and Nicobarese tribal peoples, along with ex-servicemen from Punjab, Maharashtra, and Andhra Pradesh who were settled on the island in the 1970s.

#### How will the Tribal Reserve Territory be used?

- The government stated that the use of the tribal reserve territory will be subject to the following conditions:
  - The interests of tribal people, particularly Shompen, a Particularly Vulnerable Tribal Group, are not negatively impacted;
  - Strict execution of the terms of the Protection of Aborigine Tribe (PAT) Regulation to safeguard the interests of the Shompen;
  - Tribe relocation will be prohibited; and
  - Eco-tourism will be effectively controlled.

#### Major tribes in the Andaman Islands:

- **Great Andamanese:** The Great Andamanese tribe is one of the most prominent. Historically, they were divided into 10 different sub-tribes, but today, only a few are known for their distinct language, which is unrelated to any other language.
- **Onge:** The Onge tribe is believed to be the first tribe to have settled in the islands. The members of the tribe remain. They are known for their unique hunting and gathering lifestyle.
- **Jarwa:** The Jarwa tribe is one of the most isolated tribes in the world. They live on the islands and have had very little contact with the outside world. They are known for their unique culture.
- **Sentinelese:** The Sentinelese tribe is perhaps the most isolated tribe in the world. They live on the outside world and are known to be fiercely protective of their territory, culture and way of life.
- **Shompen:** Apart from these four major tribes, there are also several smaller tribes. The Shompen and the Nicobarese. The Nicobarese are the largest indigenous community known for their unique culture and language.

### GENERAL STUDIES 3

#### U.N. Panel Calls For Rapid Action Against Climate Change To Secure A Liveable Future

Priority: Medium

Primary Source: The Hindu

Prepp Prelims Booster: IPCC

Prepp Mains Booster: Environment; Environmental pollution and degradation

#### Context:

- Recently, the study, "Climate Change 2023: Synthesis Report" was released by the Intergovernmental Panel on Climate Change (IPCC) following a week-long IPCC session in Interlaken, Switzerland.
- It brings into sharp focus the losses and damages experienced now and expected to continue into the future, which are hitting the most vulnerable people and ecosystems.
- The Intergovernmental Panel on Climate Change (IPCC) said that climate change is a threat to human well-being and planetary health and there is a rapidly closing window of opportunity to secure a liveable and sustainable future for all.



#### Climate Change 2023: Synthesis Report

- It is the final report of the sixth assessment cycle of the UN panel.
- The IPCC through its multiple assessment cycles **beginning 1990 has collated and analyzed research** by scientists on global warming, the

role humans have had in exacerbating it, the long-term climate impact from current and future emissions and what people can do about it.

- The IPCC **does not itself undertake scientific assessments** but only evaluates the state of scientific evidence on various aspects of climate change.
- The report is based on the work of three working groups, which each focus on a different aspect of climate change.
  - **Working Group I** assesses the physical science basis of climate change,
  - **Working Group II:** focuses on the impacts, adaptation and vulnerability of climate change
  - **Working Group III:** looks at ways to mitigate climate change or reducing future greenhouse gas emissions
- The other reports that have been integrated are evidence from three special reports during the sixth assessment cycle:
  - Special Report on Global Warming of 1.5°C (October 2018),
  - Special Report on Climate Change and Land (August 2019), and
  - Special Report on the Ocean and Cryosphere in a Changing Climate (September 2019).

### Findings

- The solution proposed by the IPCC is “climate-resilient development,” which involves integrating measures to adapt to climate change with actions to reduce or avoid greenhouse gas emissions in ways that provide wider benefits.
- **Examples:** Access to clean energy, low-carbon electrification, the promotion of zero and low carbon transport, and improved air quality: the economic benefits for people’s health from air quality improvements alone would be roughly the same, or possibly even larger, than the costs of reducing or avoiding emissions.
- **Role of Governments:** The report emphasized on the power of governments to reduce barriers to lowering greenhouse gas emissions, through public funding and clear signals to investors, and scaling up tried and tested policy measures.
- **Lifestyle changes:** In addition to transitions to low-carbon lifestyles, which would enhance health and wellbeing, changes in the food sector, electricity, transportation, industry, buildings, and land use are emphasized as significant strategies to reduce emissions.
- This Synthesis Report highlights the need for more ambitious action and demonstrates that, if we take action now, we still have time to ensure a sustainable future for everyone.
- If significant action to cut emissions are not taken it would be impossible to prevent the earth from heating 1.5 degrees Celsius above the pre-industrial levels.

### Impact of Climate change on India

- One of the most significant implications of the report for India is the **increased frequency and intensity of extreme weather events**.
- These events could have severe consequences for agriculture, the economy, and public health.
- The research emphasises the necessity for policymakers to give investments in disaster risk reduction a high priority, including the development of infrastructure and early warning systems, evacuation plans, and safety measures for vulnerable people.

### Way forward

- **Mainstreaming effective and equitable climate action** will not only reduce losses and damages to nature and people, it will also **provide wider benefits**.
- This synthesis study highlights the need for more ambitious action and demonstrates that, if we take action now, we still have time to ensure a sustainable future for everyone.
- **Climate justice** is crucial because those who have contributed least to climate change are being disproportionately affected.
- India “welcomed” the report and it “reaffirmed” the principle that historically few developed rich countries were responsible for the crisis and India also called for financial support as current (financial) flows are insufficient, including the promised yet unpaid \$100 billion.

- The importance of unsustainable lifestyles and spending patterns has been highlighted.

## The Rise Of The ESG Regulations

Priority: **Medium**



Primary Source: The Hindu

**Prepp Prelims Booster:** ESG

**Prepp Mains Booster:** Environmental pollution and degradation; Government policies and interventions for development in various sectors and issues arising out of their design and implementation

### Context:

- Globally, regulators and corporations have emphasized that businesses should be measured not only on traditional economic metrics such as shareholder return, but also by their environmental impact, commitment to social issues, and the soundness of their corporate governance and protection of shareholder rights.
  - ESG stands for environmental, social, and governance. The goal of ESG is to capture all the non-financial risks and opportunities inherent to a company's day-to-day activities.
- This development is partly due to the belief that companies have a distinct responsibility as corporate citizens.

### How do Environmental, Social, and Governance (ESG) differ from corporate social responsibility (CSR)?

- While CSR aims to make a business accountable, ESG criteria make its efforts measurable
- India’s corporate social responsibility (CSR) policy mandates that corporations engage in initiatives that contribute to the welfare of society. This mandate was codified into law with the passage of the 2014 and 2021 amendments to the **Companies Act of 2013**.
- Corporate Social responsibility (CSR) is continuing commitment by businesses to integrate social and environmental concerns in their business operations.
- The amendments require companies with a net worth of ₹500 crore (approximately \$60 million) or a minimum turnover of ₹1,000 crore (approximately \$120 million) or a net profit of ₹5 crore (approximately \$6,05,800) in any given financial year spend at least 2% of their net profit over the preceding three years on CSR activities.
- On the other hand, **the impact and application of ESG regulations vary**. For instance, the U.K.
- **Modern Slavery Act** mandates that businesses operating in the U.K. with annual sales of more than £36 million publish the steps they have taken to identify and analyse the risks of child labour, debt bondage, and human trafficking in their supply chains, as well as to establish internal accountability procedures, assess supplier compliance, and train supply chain managers on these issues.
- Banks, pension funds, asset managers, and other participants in the financial system are required by the **EU's Sustainable Finance Disclosure Regulation** to explain how sustainability risks have been taken into account when making investment decisions.
- And these are only examples; there are scores of such regulations at the state, national and transnational levels.

### How are environmental, social, and governance issues governed in India?

- The environmental, social, and governance issues in India are governed by the **Environment Protection Act of 1986**, quasi-judicial organizations such as the **National Green Tribunal**, a range of labor codes and laws governing employee engagement, and corporate governance practices. The penalty for violations can be substantial.
- In June 2022, for example, the National Green Tribunal imposed an ₹520 million (\$63.7 million) penalty on Udupi Power Corporation Ltd., a subsidiary of a major Indian conglomerate, for violating environmental laws and polluting its surroundings.
- While these laws and organizations offer crucial environmental and social protections, recent initiatives in India go even farther by

establishing criteria that place an emphasis on monitoring, quantification, and disclosure, similar to the ESG standards found in other parts of the world.



### Present status in India

- The annual **Business Responsibility and Sustainability Report (BRSR)**, which is required by the **1,000 largest listed companies in India**, was significantly revised by the Securities and Exchange Board of India (SEBI) in response to the rise in ESG investing and the demand from investors for information on ESG risks.
- The current report format, which SEBI describes as a "notable departure" from prior disclosure requirements, is in line with evolving international standards and places "considerable emphasis on quantifiable metrics" to enable companies to engage meaningfully with stakeholders and to improve investor decision-making.
- Disclosures range from greenhouse gas emissions to the company's gender and social diversity.
- Further legislation regarding ESG is likely, given the increased emphasis by the Indian government on ESG issues, which can be seen in India's more active role in global climate forums.
- **Implications of ESG on Indian companies:** Compliance with ESG regulations both originating in India and elsewhere around the world poses a significantly different challenge than India's CSR regulations.
- **Prominent role in Global Supply Chain:** Compliance by Indian companies with the ESG regulations of the U.S., the U.K., the European Union, and elsewhere will be critical if India is to take full advantage of the **growing decoupling from China** and play a more prominent role in global supply chains and the global marketplace overall.
- The evolution of ESG laws and regulations are still at a nascent stage in India, where the focus is often on providing protections regarding the environment or workplace conditions without incorporating the controls and disclosure that are a hallmark of contemporary ESG regulation.

### Way forward

- As Indian organizations try to increase their ESG risk management thorough due diligence will be important. Nonetheless, this calls for more than just having sub-suppliers complete a form.
- Depending on the circumstance, this may entail reviewing corporate documents, speaking with former employees, and making covert trips to watch operations in order to confirm that the steps taken to adhere to international ESG standards are in place.
- This is especially true if the supplier has multiple layers in their own supply networks. Further difficulties may arise from ownership that is hidden behind shell corporations.
- Additionally, ESG due diligence needs to be supported within the company with detailed procedures for assessing risks and controls to assuring that no corners are cut.
- Businesses must accept these new requirements and modify their organizational structures if they want to take full use of their opportunities in the global economy.

## India's System Of Scientific Forest Cover Assessment

Priority: **Medium**



Primary Source: Indian Express

**Prepp Prelims Booster:** Forest Cover

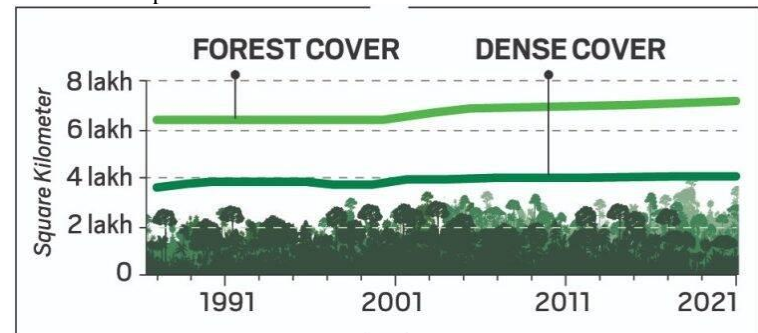
**Prepp Mains Booster:** Environment; Conservation; Important aspects of governance, transparency, and accountability

### Context:

- Jay Mazumadar, a Journalist has written this article titled '*The Case For Open, Verifiable Forest Cover Data*' published in the Indian Express on March 2nd.
- In this article he explained how India mapped its forest cover over four decades and why making the data freely available will improve the quality of this vital policy input.

### Forest and tree cover in India

- India is one of the few countries to have a scientific system of periodic forest cover assessment that provides "valuable inputs for planning, policy formulation and evidence-based decision-making".
- Since 19.53% in the early 1980s, **India's forest cover has increased to 21.71% in 2021**. Adding to this a notional 2.91% tree cover estimated in 2021, the country's total green cover now stands at 24.62%, on paper.
- India's forest **definition includes all plots of 1 hectare or above**, with at least 10% tree canopy density, regardless of land use or ownership.
- This differs from the United Nations' definition of forests, which excludes areas predominantly under agricultural and urban land use.
- Since 2001, India has also been assessing isolated or small patches of trees that are less than 1 hectare and not counted as forest.
- These small patches are evaluated by combining the crowns of individual trees and patches to determine a notional area under tree cover.



### NRSA versus FSI data

- The **National Remote Sensing Agency (NRSA)** under the Department of Space used satellite imagery to estimate India's forest cover for the periods of 1971-1975 and 1980-1982. Their analysis showed a **loss of 2.79% in just seven years, from 16.89% to 14.10%**.
- While there is no reliable data on encroachment, government records indicate that **42,380 sq km** (size of Haryana) of forest land was diverted for non-forest use between 1951 and 1980.
- However, the government was initially hesitant to accept the NRSA's findings of such a large forest cover loss.
- The FSI did not contest the NRSA's finding of a decline in dense forest cover from 14.12% in the mid-1970s to 10.96% in 1981, they reconciled it to 10.88% in 1987.
- This suggests that the decline in dense forest cover was acknowledged, but the overall forest cover was adjusted upwards through reconciliation.

### Recorded Forest

- In India, land that is recorded as forest in revenue records or proclaimed as forest under a forest law is referred to as Recorded Forest Area. These areas were recorded as forests at some point in the past due to the presence of forests on the land.
- **Recorded Forest Areas are divided into Reserved, Protected, and Unclassed forests** and account for 23.58% of India's total land area.

- However, over time, some of these Recorded Forest Areas have lost forest cover due to various factors such as **encroachment, diversion, forest fires, etc.**
- On the other hand, tree cover has improved in many places outside of Recorded Forest Areas due to **agroforestry, orchards, etc.**
- In 2011, when the Forest Survey of India (FSI) furnished data on India's forest cover both inside and outside Recorded Forest Areas, it was found that nearly one-third of the Recorded Forest Areas had no forest at all.
- This means that over 2.44 lakh sq km (larger than Uttar Pradesh) or **7.43% of India's old natural forests were already gone.**
- Of what remains of the forests in Recorded Forest Areas, only a fraction is dense forests.

#### Loss of Natural forests

- Despite extensive plantation efforts by the forest department since the 1990s, the **dense forests within Recorded Forest Areas account for only 9.96% of India in 2021**, which is a one-tenth decrease since 1987 when the FSI recorded 10.88% dense forest cover.
- Moreover, this loss of dense forests remains invisible due to the **inclusion of commercial plantations, orchards, village homesteads, urban housing, etc.** as dense forests outside Recorded Forest Areas.
- The State of Forest Report (SFR) 2021, for instance, reports **12.37% dense forest cover** by including **random green patches that may not be natural forests.**
- Although the FSI does not provide specific information on the share of plantations in the remaining dense forests inside Recorded Forest Areas, its data offers some hints.
- Since 2003, **almost 20,000 sq km of dense forests have become non-forests**, which is largely compensated by nearly **11,000 sq km of non-forest areas** that became dense forests in successive two-year windows since 2003.

#### Concerns

- Experts believe that these newly added dense forests are mostly plantations, as natural forests do not grow so fast.
- While plantations may seem like a quick fix to India's forest cover loss and carbon emissions, they come with their own set of problems.
- The replacement of natural forests with plantations can lead to a **loss of biodiversity**, increase susceptibility to fire, pests, and epidemics, and hinder natural forest regeneration.
- Additionally, plantations may **not be able to store as much carbon as natural forests** in the long term, as they are often harvested more readily.
- In 2018, the United Nations Framework Convention on Climate Change (UNFCCC) flagged India's assumption that new forests (plantations) reach the carbon stock level of existing forests in just eight years.

#### Way forward

- Opening up the forest data for public scrutiny can help in **improving the accuracy and reliability of the data.**
- With the participation of thousands of researchers and enthusiasts, the FSI can have more resources to **verify the quality of the remotely sensed data** on the ground, which can improve the **accuracy of the forest cover data.**
- Additionally, making the field data freely available can help **ease the FSI's burden of verifying the quality of the data.**
- Brazil's open web platform for forest data is an excellent example of how data transparency can help in tracking deforestation and forest cover change.

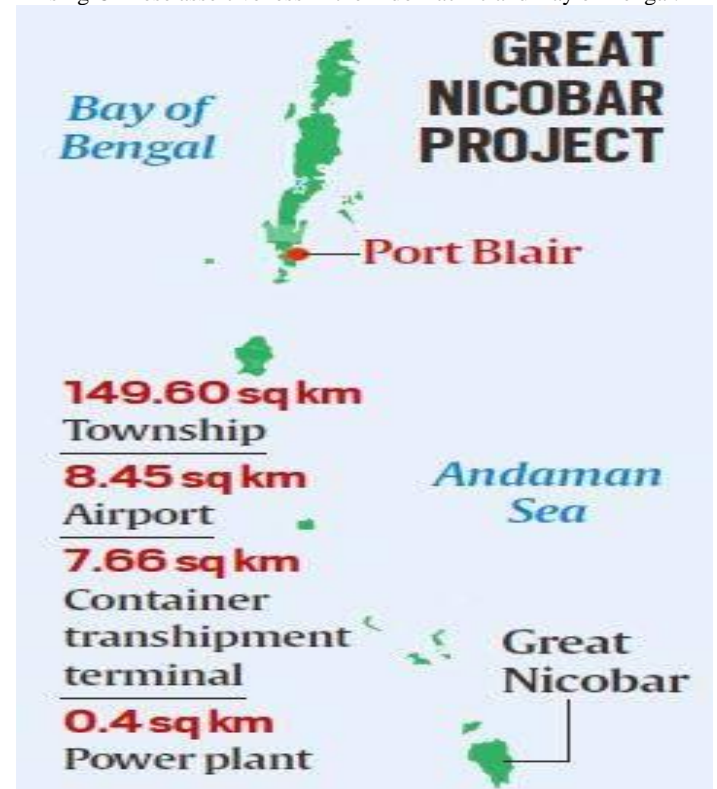
**Prepp Mains Booster:** Mechanisms, laws, institutions, and Bodies are constituted for the protection and betterment of these vulnerable sections; Government policies and interventions for development in various sectors and issues arising out of their design and implementation. Environment; Conservation

#### Context:

- Recently, the Union Ministry of Environment, Forest and Climate Change (MoEFCC) has approved a mega project at the cost of about ₹70,000 crore at the southern tip of the Andaman and Nicobar Islands. The project is to be implemented in three phases over the next 30 years.
- The **'Holistic Development of Great Nicobar Island'** project piloted by NITI Aayog and the Andaman and Nicobar Islands Integrated Development Corporation is the project proponent. It aims to develop an international transshipment port at Galathea Bay, an international airport, gas and solar-based power plant, and an ecotourism and residential township of about 160 sq km.
- The proposed massive infrastructure development in an ecologically important and fragile region, including the felling of almost a million trees, has alarmed many environmentalists.

#### What is the purpose behind the project?

- **Cargo cub:** The government's greater goal is to leverage the locational advantage of the island for **economic and strategic reasons**. Great Nicobar is located equidistant from Colombo to the southwest and Port Klang and Singapore to the southeast, and positioned close to the **East-West international shipping corridor**, through which a very large part of the world's shipping trade passes.
- The proposed international Container Transshipment Terminal (ICTT) can potentially become a hub for cargo ships traveling on this route.
- To leverage the **tourism** potential of the Island.
- More than 1 lakh new direct jobs and 1.5 lakh indirect jobs are likely to be created on the island over the period of development.
- **China:** Great Nicobar's development was first proposed in the 1970s, and its significance for bolstering regional stability and national security has been emphasized repeatedly.
- This objective has recently taken on a lot more significance as a result of rising Chinese assertiveness in the Indo-Pacific and Bay of Bengal.



### The Great Nicobar Project: Economic Opportunity Or Ecological Ignorance

Priority: Medium  
Primary Source: The Hindu

**Prepp Prelims Booster:** Andaman and Nicobar islands



## Concerns

- **Environmental:** After the completion of the project it is expected to attract more than 3 lakh people which is equivalent to the current population of the entire 1,000-km-long island chain.
- The ecological and environmental costs (marine and terrestrial biodiversity) of this urbanisation project appear to have been neglected without giving them any serious consideration.
- The island, which is spread over 900 sq km, was declared a **biosphere reserve in 1989** and included in the UNESCO's Man and Biosphere Programme in 2013.
- **Tribals:** More than three-fourth of it is designated as a tribal reserve under the Andaman and Nicobar Islands (Protection of Aboriginal Tribes) Amendment Regulation.
- The agenda to convert this pristine island into a commercial hub to compete with the international port in Singapore will run counter to the **rights of vulnerable tribal communities**, such as the Nicobarese and Shompen, who have been living in these areas for thousands of years and who depend on the forests for survival.
- **Afforestation and Translocation of corals:** According to the EIA assessment, compensatory afforestation would be done in Madhya Pradesh and Haryana.
- It makes little sense to plant trees in remote regions, especially when those areas lack ecological context. Large areas of coral reefs will be destroyed as a result of the project.
- The report suggests "translocating" these organisms, which are threatened with extinction as a result of ocean warming due to climate change. According to numerous research, transplanted corals do not have a high survival rate and are vulnerable to bleaching.
- **Quick clearances:** The process towards implementation of this free trade zone and transshipment facility in Great Nicobar (located about 1,650 km from Chennai and 40 nautical miles from the international shipping route), started in September 2020 when the NITI Aayog issued a request for proposals for preparing the master plan for the project.
- The MoEFCC's Expert Appraisal Committee initiated the process of environmental clearance in April and in December 2021, the Ministry placed the draft EIA report in the public domain for comments and discussion.
- The quick approvals, clearances, exemptions and de-notifications show that the Union government is keen to implement this project.
- **Tectonic instability:** The Great Nicobar Island is located close to the epicentre of the 2004 Indian Ocean earthquake which displaced the sea floor by 10-20m vertically as well as trillions of tonnes of undersea rock.
- The repeated up and down movement of land in response to such earthquakes makes the Great Nicobar Island unsuitable to be developed as an urban port city, but the EIA report hardly considers the tectonic instability around Great Nicobar.

## Conclusion

- Growth in terms of GDP makes no sense if it ends up in the irretrievable loss of natural capital.
- It is high time that the Prime Minister's expressed vision of 'green developmental model' becomes the guiding principle for future economic activities.

### Andaman and Nicobar

- The Andaman and Nicobar Islands are a cluster of about 836 islands in the **eastern Bay of Bengal**, the two groups of which are separated by the 150-km **wide Ten Degree Channel**.
- The Andaman Islands lie to the north of the channel, and the Nicobar Islands to the south.

### Great Nicobar

- Great Nicobar, the southernmost of the Andaman and Nicobar Islands, has an area of 910 sq km.
- Indira Point on the southern tip of Great Nicobar Island is India's southernmost point, less than 150 km from the northernmost island of the **Indonesian archipelago**.

- Great Nicobar is home to two national parks, a **biosphere reserve**, and the **Shompen and Nicobarese tribal peoples**, along with ex-servicemen from Punjab, Maharashtra, and Andhra Pradesh who were settled on the island in the 1970s.

### Tribes of Great Nicobar

- **Shompen:** Hunter-gatherers who depend on forest and marine resources for sustenance.
- **Nicobarese:** who lived along the west coast of the island were mostly relocated after the 2004 tsunami.
- An estimated 237 Shompen and 1,094 Nicobarese individuals now live in a 751 sq km tribal reserve, some 84 sq km of which is proposed to be denotified. The approximately 8,000 settlers who live on the island are engaged in agriculture, horticulture, and fishing.
- The Nicobarese and Shompens, living in Nicobar Islands belong to the **Mongoloid group**.
- **Flora and Fauna:** The Great Nicobar Island has tropical wet evergreen forests, mountain ranges reaching almost 650 m above sea level, and coastal plains. Fourteen species of mammals, 71 species of birds, 26 species of reptiles, 10 species of amphibians, and 113 species of fish are found on the island, some of which are endangered.
- The **leatherback sea turtle** is the island's **flagship species**.

## The Ship Has Reached The Shore': The Planet Finally Has A Treaty To Protect Life In The High Seas

Priority: **Medium**



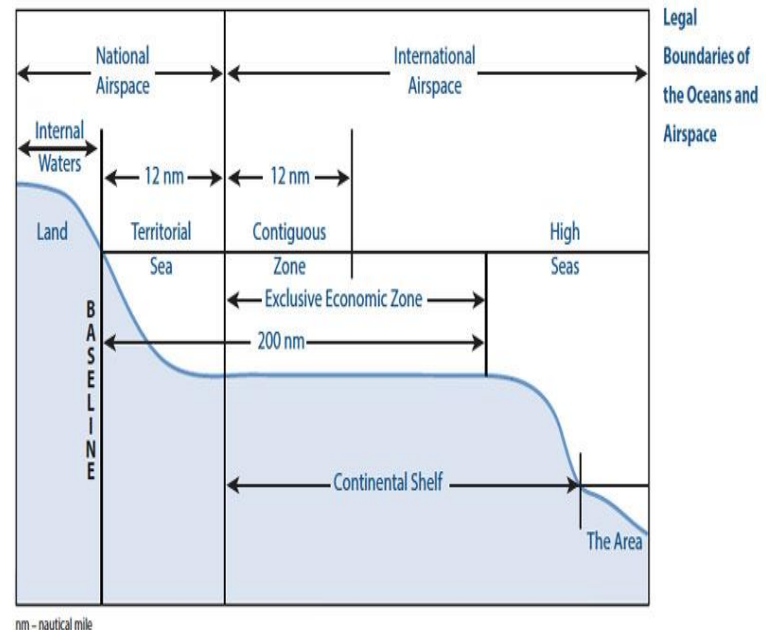
Primary Source: Down to Earth

**Prepp Prelims Booster:** High seas treaty

**Prepp Mains Booster:** Bilateral, regional and global groupings and agreements involving India and/or affecting India's interests; geographical features and their location-changes in critical geographical features (including water-bodies and ice-caps) and in flora and fauna and the effects of such changes

### Context:

- Recently, UN Secretary-General Antonio Guterres confirmed that countries meeting at the UN headquarters had reached an agreement on a **treaty to protect marine life on the high seas**.
- The high seas are the ocean waters beyond the national waters of countries and are the world's largest habitat housing millions of species.



### What are the high seas?

- The area of the ocean that is not a part of either the exclusive economic zone, the territorial sea, the internal waters of a coastal state, or the waters of an archipelagic state is known as the high seas.
- **High seas are available to all states for freedom of navigation, freedom of overflight, freedom to create artificial islands installation, freedom of fishing, and freedom of scientific study.**
- The high seas are only for peaceful travel in foreign waters and restrictions have been implemented to avoid the prohibition of the slave trade, piracy, seizure of ships, illicit narcotics trafficking, and unlawful broadcasting.



### What is the new agreement?

- According to the Secretary-General of the UN, a meeting of governments at the UN has reached an agreement on key issues of a treaty to protect marine life on the high seas.
- The meeting was part of the UN General Assembly's efforts to protect the **biodiversity in areas beyond the national jurisdictions under UNCLOS**.
- The high seas are considered to be the world's largest habitat and are home to millions of species.
- According to the High Seas Alliance, the new treaty was expected to provide a guideline for the establishment of **marine protected areas** on the high seas.
- The treaty was also expected to aid in the achievement of the **Kunming-Montreal target of at least 30% protection of the World's oceans by 2030**.
- Scientists have claimed that 30% is the minimum limit required in order to sustain a healthy ocean ecosystem.
- According to the Alliance, the new treaty would bring ocean governance into the 21st Century by establishing modern assessment and management of anthropological activities affecting marine ecosystems.
- **Effective area-based management of activities like fishing and shipping** that have contributed to the decline in ocean health would be implemented easily under the new treaty.
- The major points of difference between the countries of the Global North and South were concerns over the **financing and equity of the benefits** from the conservation of marine genetic resources.

### UNCLOS

- The **United Nations Convention on the Laws Of the Sea 1982** is an international agreement that established the legal framework for marine and maritime activities.
- It divides ocean waters into five categories:
  - **Internal Waters**
  - **Territorial Waters**
  - **Contiguous zone**
  - **Exclusive Economic zones**
  - **High Seas**
- It is the sole convention regarding state jurisdiction in maritime areas and acts as a guideline for the state's rights and duties in the different areas.

- The Convention considers all maritime matters to be closely interrelated and recommend inclusive attention.
- UNCLOS grants nations full economic rights over a 200-mile zone along the coast with the sea and ocean floor extending to this area recognised as belonging to a country's **Exclusive Economic Zone (EEZ)**, and that country is permitted to utilise these waters for economic purposes.
- Major initiatives under the UNCLOS include the **International Seabed Authority and the International Tribunal for the Laws of the Sea**.
- India has been a party to the convention since 1995.

### Significance of the treaty

- An updated framework to protect marine life in the regions outside national boundary waters, known as the high seas, had been in discussions for more than 20 years, but previous efforts to reach an agreement had repeatedly stalled.
- A country's legal jurisdiction generally extends 200 nautical miles from its shores. After that are the high seas, where no one nation is in charge.
- The treaty would create a **new body to manage the conservation of ocean life and establish marine protected areas** on the high seas which is critical in achieving the U.N. Biodiversity Conference's recent pledge to protect 30% of the planet's waters, as well as its land, for conservation.
- Efforts to protect migrating marine species like dolphins, and whales have long proven difficult for international governing bodies with this treaty **comprehensive protection of endangered species and habitats** will now be finally possible on more than 40% of the Earth's surface.
- It also establishes ground rules for conducting environmental impact assessments for commercial activities in the oceans.
- It would mean all activities planned for the high seas need to be looked at, though not all will go through a full assessment.
- **Promote coordination:** This treaty will help to knit together the different regional treaties to be able to address threats and concerns across species' ranges.
- **Protection of coastal biodiversity and economy:** It will strengthen the legal protection of two-thirds of the ocean and with it marine biodiversity and the livelihoods of coastal communities.

### Chinese Deep sea missions

- China has advanced its deep-sea research missions with it now possessing the ability to enter the world's deepest oceans to carry out scientific exploration and research.
- This reflected the nation's comprehensive strength in marine high technology fields with only the USA, France and Russia boasting similar capacities.
- In 2020, the **Fendouzhe** dropped to a record depth of 10,000 km while it also explored the world's deepest point, the **Marina Trench** in 2021.
- As part of its latest mission, the Chinese manned submersible, also known as the **Striver**, explored the **Kermadec trench** in the South Pacific Ocean in association with New Zealand.
- The Kermadec mission observed anemones at a depth of 8,880 metres for the first time and also saw fish feeding on shark remains at 9000 metres as well as a rich food supply.

### Why are deep sea missions conducted?

- Researchers at Sanya's Institute of Deep Sea Science and Engineering (IDSSE), China's official representative on the **BRICS Marine and Polar Science Working Group**, have said that the primary aim of the mission is understanding life in the unexplored ocean depths.
- Deep sea missions are also focussed on the **identification of reserves of valuable resources such as copper, gold, minerals and rare earth** that are believed to be found on the sea bed.
- From the ecological perspective, deep sea missions help researchers understand how to exploit valuable resources without damaging ocean environments and monitor long-term changes.
- The Marina Trench Mission discovered new species of microbes with great biotechnical potential from synthesising new enzymes to treating anti-microbial resistance.

- China also aims to form a China-led global deep-sea scientific research programme with the participation of numerous international research teams similar to the Kermadec project with New Zealand.
- The work done by the Fendouzhe mission has also boosted the Chinese government's efforts to develop the world's most advanced deep-sea mining capabilities.

### How To Become A Green Hydrogen Superpower

Priority: **Medium**



Primary Source: The Hindu

**Prepp Prelims Booster:** National Green Hydrogen

**Prepp Mains Booster:** Energy, Conservation; Government policies and interventions for the development of various sectors

#### Context:

- The article titled "How to become a green hydrogen superpower" published in the Hindu on 07th March 2023 has discussed the priorities of the **National Green Hydrogen Mission**.
- The Union Government had allocated **₹19,700 crores** in the 2023 Budget to the **National Green Hydrogen Mission** that aimed to make India a Hydrogen superpower.



#### What is green hydrogen?

- Hydrogen has been produced by the splitting up of water into hydrogen and oxygen through electrolysis.
- **When the electrolysis is powered by renewable sources of energy, the hydrogen produced is termed green hydrogen.**
- Green Hydrogen could be a potential source of energy for intensive operations such as industry, long-distance mobility, aviation and power storage.
- It could find application as an energy carrier in the form of green ammonia or in combination with natural gas.

#### What is the National Green Hydrogen Mission?

- The National Green Hydrogen Mission was approved by the Cabinet in January 2023.
- The Mission will be under the overall responsibility of the Ministry of New and Renewable Energy.
- Goals:
  - **By 2030, create 125 GW of new renewable energy capacity as well as 5 million metric tonnes (MMT) of green hydrogen production capacity.**
  - **Decarbonize the energy sector**, provide a sustainable replacement for fossil fuels and establish an **export market for green hydrogen** and its derivatives.
  - **Improving indigenous manufacturing capabilities**, as well as **lowering the cost of renewable energy generation** and equipment through subsidy assistance and R&D.
- An initial budget of Rs. 19,744 crores over the next five years has been allocated to the Mission.

- **SIGHT** or **Strategic Interventions for Green Hydrogen Transitions** and **SHIP** or **Strategic Hydrogen Innovation Partnership** are two of the sub-missions under the National Mission.
- A coordinated skill development programme will also be launched in coordination with the mission.

#### SIGHT

- The **SIGHT** or **Strategic Interventions for Green Hydrogen Transitions** initiative is a sub-mission of the National Green Hydrogen Mission.
- Under the initiative, two financial incentive programmes have been developed to focus on the **domestic production of electrolysers** and the **generation of green hydrogen** respectively.
- The objective behind the initiative was to reduce emissions and achieve a reduction in fossil fuel imports by 2030.
- ₹17,490 crores have been allotted to the initiative out of the total ₹19,744 crores that were initially allocated to the Green Hydrogen Mission.

#### SHIP

- The other sub-mission of the Green Hydrogen Mission, **SHIP (Strategic Hydrogen Innovation Partnership)** will involve the setting up of a public-private partnership for research and development.

#### Why is Green hydrogen important for India?

- India has committed to **50% electrical capacity from non-renewable sources by 2030** as part of its Nationally Determined Contributions.
- However, there was also a need for an energy transition as the majority of greenhouse gas emissions in India were of industrial origin from the cement, steel and petrochemical industries.
- Green hydrogen has provided an alternative that was capable of fuelling industrial growth while also transitioning to a cleaner economy.
- India has targeted the production of **at least five million tonnes of green hydrogen by 2030** which is more than that of any other economy.
- The increased production was expected to create demand for around 100-125 GW of renewable energy, and 60-100 GW of electrolysers, while opening investment opportunities worth ₹8 lakh crore, and consequently reducing annual emissions by 50 MMT.
- India's geographical location in the tropics has made it capable of becoming one of the lowest-cost producers of green hydrogen due to the abundance of sunlight and wind resources.

#### What should India's priorities be?

- In order to achieve the declared goal of the National Hydrogen Mission, the government, industry and all other stakeholders have to act in sync.
- The **first priority should be to develop domestic demand** which will help build the base for entry into the international market.
- The Strategic Interventions for Green Hydrogen Transitions (SIGHT) component of the Mission includes provisions for ₹13,000 crores of direct consumer support which was expected to increase demand and lead to economies of scale.
- Blending mandates can be gradually increased as another way of improving demand, particularly in urea plants which have been exempted so far.
- Government procurement can also be leveraged to raise demand for green hydrogen. India could emerge as the largest producer and later exporter of green steel in the world through developing economies of scale and modifying production technology.
- The **second priority for the government should be to develop India as an attractive destination for domestic and foreign investment.**
- A mission secretariat can be established to ensure project clearance is streamlined and financial risks are minimized.
- The difficulty in transporting green hydrogen can also be reduced through the government's plan to set up green hydrogen hubs where production, end use and exports will be consolidated.

- The **third priority was to make India self-sufficient in the production of all technology involved in the production and distribution of green hydrogen.**
- The **SIGHT** programme has offered ₹4500 crores worth of performance-linked incentives to support electrolyser manufacturing under the PLI scheme and thus reduce the dependence on imports.
- Targeted public funding can be utilized to develop electrolyzer technology production facilities and fund Research and Development initiatives on achieving higher efficiency and using non-fresh water and substitute critical materials in the production process.
- The **fourth priority has to be the establishment of resilient supply chains**, potentially through bilateral ties with like-minded countries on trade, standards, and research.
- The Mission has allocated ₹400 crores for R&D which can be utilized to encourage the entry of private capital while also setting up joint projects in countries with renewable energy resources and cheap finance.
- The **fifth priority was for India to cooperate with other major economies in order to set up a global green hydrogen economy.**
- The absence of a global intergovernmental framework has led to the establishment of rules and standards by private corporations which has comprised India's ambitions due to the conflicting regulations and protectionist measures in place.

### Way Forward

- India's presidency of the G-20 has provided it with an opportunity to establish a framework for a global green hydrogen economy that was capable of addressing operational challenges, industrial rivalry and strategic threats.
- A global network on green hydrogen that allowed countries to collaborate would allow India to emerge as a global leader in a fuel source that was set to become one of the most significant industrial fuel sources going forward.

### A Story Of Resilience

Priority: **Medium**

Primary Source: Indian Express

Prepp Prelims Booster: GDP

Prepp Mains Booster: Economy and issues relating to planning, mobilization, of resources, growth, development and employment; Inclusive growth and issues arising from it

#### Context:

- Recently, **GDP data** released by the **National Statistical Office** revealed that the economy's growth momentum was much more resilient than feared during the pandemic.
- Huge revisions of the order of ₹2.7 Trillion have been made in GDP growth estimates over 2020-21 and 2021-22 primarily via manufacturing and construction activity.



#### What does the NSO data reveal?

- The NSO data has seen huge revisions (around ₹2.7 trillion) in the GDP growth rates of 2020-21 and 2021-22 due to an **uptick in**

**manufacturing and construction activity** indicating how the Indian economy was much more resilient than was expected.

- The impact of the pandemic on the construction and manufacturing sectors was less than earlier predicted and the sectors rebounded very quickly.
- **India's three-year average GDP of 3.4% was the sixth largest** among the world's countries.
- Quarter-on-quarter private consumption expenditure increased by 7.3% in the last year which was close to the pre-pandemic average of 8.3% between 2015-16 and 2019-20.
- The consumption of resident Indians in the domestic market and the rest of the world has outpaced the consumption of foreign households in domestic consumption.
- **Per capita GDP at current prices has grown at 8% compounded per annum** since 2013-14 due to the government's efforts in improving the quality of life of citizens and the introduction of the **Direct Benefit Transfer (DBT) scheme** to stop the leakage of subsidy benefits.
- Excluding the pandemic year, per capita growth has been around 10.3% since 2013-14 and almost ₹25,218 in the current financial year alone.

#### On Investment

- **Gross capital formation** by the government improved from 10.7% in 2020-21 to 11.8% in 2021-22 which had a domino effect on private capital formation which rose from 10 to 10.8% in the same period.
- On aggregate, gross capital formation crossed 32% in 2022-23, the highest since 2018-19 while GCF to gross output ratio peaked in 2021-22.

#### Gross Capital Formation

- According to the RBI, gross additions to fixed assets i.e fixed capital formation and the change in stocks throughout the counting period constitute gross capital formation.
- It is a measure of the amount of investments made in the nation and is included in the expenditure method of calculating GDP.
- Fixed Assets include equipment, land machinery etc.

#### On Savings

- In 2021-22, **gross savings** rose to 30% and were expected to reach 31% by 2022-23.
- Household savings rose significantly during the pandemic period but have since moderated to 11.1% in 22-23 from 15.4% in 2020-21.
- Savings in physical assets of households and MSMEs rose from 10.7 to 11.8% in the same period, which indicated the success of the low-interest regime.

#### What is the outlook for the economy?

- Recently, concerns have been raised about the effect of **El Nino**, but according to an RBI report of 2015, El Nino occurred in 33% of the years between 1965 and 2015 but was not always accompanied by droughts.
- Retail or personal loans have been the fastest-growing segment in recent years. The regulator's move to adopt a **floating rate regime** has resulted in the majority of these loans being repo linked.
- A study of the effect of the rise in **repo rate** on the interest paid by customers has shown that the 250 bps rise over the last six MPC meetings could result in a 16% increase in the interest due on loans.
- In extreme cases, the interest servicing could potentially outstrip the principal amount itself but the debtor has the option of extending the loan period for the maximum permitted five years to reduce the EMI.
- This could create a **behavioural shift with customers prepaying the loans in order to ensure better credit scores** for future loans.
- However, the unyielding US market and the policy tightening of the Fed could result in similar rate hikes in emerging markets.

#### Way Forward

- The majority of activities done by women fall in the **unpaid domestic work** category, which is outside the domain of calculable economic activities.
- Even by modest assumptions, the contribution of unpaid women could be around **₹22.7 Lakh crores, which was equal to 7.5% of India's GDP.**

- Quantifying and integrating this contribution will undoubtedly aid the growth of the economy which should be delinked from the US Fed so that it becomes less volatile in response to external financial shocks.

## Budget 2023 Is A Case Of Education Taking A Hit

Priority: **Medium**



Primary Source: The Hindu

**Prepp Prelims Booster:** Budgeting

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

### Context:

- Furqan Qamar, a Professor of Management at Jamia Millia Islamia and a former Adviser for Education in the Planning Commission, and Navneet Sharma, a professor at Central University of Himachal Pradesh at Dharamshala have written an article titled '*Budget 2023 Is A Case Of Education Taking A Hit*' published in The Hindu on 9th March.
- According to them, the scrutiny of the Budget and its provisions for education tells that budgetary allocation to the sector took a hit despite an increase in budgetary allocation compared to last year. Because the increase is mostly due to the allocation toward newly announced programs.



## Budget 2023-Education Sector

### School Education

- The budgetary provision of ₹1,12,000 crore as compared to ₹1,04,000 crore, **does not take the education sector any closer to the top 10** list of allocations as a percentage of GDP.
- With a fresh allocation of 4,000 crores for the PM Schools for Rising India, or **PM-SHRI** alone, the school sector has received 68,804.8 crores, up from 63,449.37 crores last year.
- PM SHRI School is a **centrally sponsored scheme** by the Government of India.
- This initiative is intended to develop more than 14500 PM SHRI Schools managed by Central Government/State/UT Government/local bodies including KVS and NVS.
- The Scheme is proposed to be implemented over a period of 5 years w.e.f. 2022-23 to 2026-27.

### Higher education

- Amounts allocated to autonomous organizations (such as the University Grants Commission, All India Council for Technical Education, central universities, Indian Institutes of Technology, Indian Institutes of Science Education and Research, Indian Institutes of Information Technology, National Institutes of Technology, Schools of Planning and Architecture) **have increased by 13.6 percent**, while funding for higher education as a whole has increased from 40,828 crore in 2022–23 to 44,094 crores.
- The central universities benefit the most from them (22.39% rise).
- Centers of excellence for artificial intelligence:** The opening of "three" centres of excellence for artificial intelligence in prestigious educational institutions was announced in the budget.
- Also, a national data governance policy was promised. It is hoped that they won't put too much pressure on the education sector.
- The Department of Science and Technology has allocated 2,000 crore to the planned National Research Fund, but the Union cabinet needs to approve it.
- Thus, the overall increase in allocation to higher education is due to a reduction in recoveries from ₹14,250 crore in 2022-23 to ₹6,000 crore. In reality, the allocation for higher education has declined from ₹ 55,078 crore in 2022-23 to ₹50,094 crore in 2023-24.
- Decrease in allocation to IIMs:** Total budgetary allocation to the Indian Institutes of Management is down from ₹653.92 crore in 2022-23 to ₹300 crore this year.
- Most of the allocation is meant for the repayment of the Higher Education Funding/Financing Agency (HEFA) loan and interests thereon, leaving only ₹15.17 crore in 2023-24.
  - The Higher Education Financing Agency (HEFA) is a joint venture company of Canara Bank and the Ministry of Education GoI.
  - HEFA provides financial assistance for the creation of educational infrastructure and R&D in India's premier educational Institutions.
- Reduction in allocation to world-class Universities:** The allocation for world-class universities has been reduced from ₹1,700 crores to ₹1,500 crores.
- The allocation for the Prime Minister's girls' hostels has also been cut in half.
- Reduction in Research allocation:** Research, innovation, incubation, and startup budgetary allotments have either been drastically reduced or eliminated.
- While funding for the national project for design innovation has decreased from 17.80 crores to 10 crores, funding for the Startup India initiative in higher education institutions has decreased from 60 crores in 2022–2023 to 11.21 crore.
- The allocations have been substantially cut for **IMPacting Research, INnovation, and Technology (IMPRINT)** and the **Programme for Promotion of Academic and Research Cooperation (SPARC)**.
  - IMPRINT is the first of its kind MHRD-supported Pan-IIT + IISc joint initiative to address the major science and engineering challenges that India must address and champion to enable, empower and embolden the nation for inclusive growth and self-reliance.
  - There is **no funding in the budget** for Impactful Policy research in the social sciences (**IMPRESS**).
  - Impactful Policy Research in Social Science (IMPRESS) aims to encourage social science research in policy relevant areas so as to provide vital inputs in policy-formulation, implementation and evaluation.
- The **Pradhan Mantri Uchchatar Shiksha Protsahan (PM-USP) Yojana**, a new program, currently combines the interest subsidy and contribution for guarantee funds, scholarships for college and university students, and the unique scholarship for Jammu and Kashmir.
- The Pradhan Mantri Uchchatar Shiksha Protsahan (PM-USP) Yojana is to **provide financial assistance to meritorious students from poor families** to meet a part of their day-to-day expenses while pursuing higher studies.
- The budget for the three schemes has been reduced as a result, going from 1,878 crore to 1,554 crore.

- Massive open online courses (MOOCs), **e-ShodhSindhu**, the **national digital library**, and the national academic depository have not received any funding, while the provisions for the National Mission on Education through Information and Communication Technology (NMEICT) have remained unchanged at 400 crore.

### Impact

- Vulnerable to inflation:** When combined with the recently announced plans to open residential schools modeled after the Eklavya model in each district of India, this actually **reduces the funding available for currently operating schools and their operations**, leaving them vulnerable to rising costs and the strain of rising enrollment in government schools.
- The poor and the underprivileged continue to attend government and government-aided schools. Of about 15 lakh schools, 10 lakh are government-owned and managed, employing 97 lakh instructors and serving over 26 crore students.
- Rise in fee:** Such a significant cut might have caused unhappiness but that seemed inevitable as these institutes have raised their fees to justify public funding.
- Infrastructure:** The 2023-24 Budget makes no provision for HEFA, which could mean no new loans for infrastructure development in the centrally funded institutions.

### Conclusion

- According to the Economic Survey 2023, between 2019–20 and 2022–2023 (BE), the total Center and State expenditure on education (as a percentage of GDP) remained unchanged at 2.9%.
- It decreased from 10.7% of total government spending in 2019–20 to 9.5% in 2022–23 (BE), while the proportion of education in social services plummeted from 42.5% to 35.5% over the same time period.
- Everybody in this era of "Amrit Kaal" hopes to have their share. The rebirth and resurgence of education could be severely hampered by penny-pinching in this area.

## Friction Over Formula: Why Some States Get More From Centre

Priority: **Medium**



Primary Source: The Hindu

**Prepp Prelims Booster:** Sharing of Tax Revenues

**Prepp Mains Booster:** Indian Economy and issues relating to planning, mobilization, of resources, growth, development and employment; Inclusive growth, Powers, functions and responsibilities of various Constitutional Bodies.

### Context:

- The wide inter-state variations in the distribution of tax revenues from the divisible pool have led to discontent among the more developed states.
- The divisible pool of taxes was divided among the states on the basis of the recommendations of the Finance Commission which accounted for the needs and performance of the states and equity.

### How do states get revenue from the Centre?

- The major sources of the revenue of the states from the Union Government are:
  - Devolution:** This category contains the States' shares of the taxes from the gross revenue.
  - Schemes:** States are allocated funds for Centrally Sponsored Schemes from the Scheme expenditure based on budgetary allocations.
  - Finance Commission Grants:** States receive funds in the form of Revenue deficit grants, sectoral grants etc based on Finance Commission recommendations.
  - Others:** These include grants and loans granted to the states as mentioned in the Union Budget.
- The devolution of funds from the divisible pool was extrabudgetary.

### How are divisible pool funds distributed among the states?

- The **Fifteenth Finance Commission (XVFC)** had recommended that the vertical **devolution of the funds should be maintained at 41%**, the same as that recommended by the **Fourteenth Finance Commission (XIVFC)**.
- The tax collected by the Union Government was pooled from the states and then distributed among them on the basis of the recommendations of the Finance Commission.
- The Fifteenth Finance Commission has calculated a formula for the share of the states in the divisible pool of taxes based on criteria such as the needs, equity and performance of the states.
  - The needs of the States included criteria such as population, area and forest and ecology.
  - Equity covered the per capita income difference between the states
  - The performance of the states was assessed on criteria such as own tax revenue and lower fertility rates.
- The Commission assigned **40% weight to the needs, 45% to equity and 15% to the performance criteria**.



### Why are some states discontent with the fund devolution?

- Some states have claimed that the recommendations of the Commission had wide inter-state disparities and were skewed in the favour of a few states.
- According to the affected states, the **Commission's increased weightage for the population criteria (15% versus 10% under the XIVFC)** favoured the Northern states.
- Critics contended that allocating funds on the basis of population rewarded those states that had not been able to achieve population control.
- Under the formula developed by the XVFC, Uttar Pradesh and Bihar were allocated 17.9% and 10% respectively while Karnataka, Tamil Nadu and Kerala received 3.65%, 4.08% and 1.93% respectively.
- Uttar Pradesh and Bihar were the two most populous states in the country while Tamil Nadu, Karnataka and Kerala were 7th, 8th and 14th respectively.
- An analysis of the funds devolved by the past six Finance Commissions has revealed that the **share of the Southern States had declined consistently while that of the Northern States had increased on average**.
- According to the NHFS-5, Bihar(2.98) and Uttar Pradesh(2.35) had total fertility rates above the replacement level while Karnataka(1.7), Kerala(1.8) and Tamil Nadu(1.8) had below replacement level fertility levels.
- The XVFC had introduced the fertility criteria in order to reward states that had reduced their fertility rates but the component was given a very low weightage compared to equity and need which has resulted in these states not gaining significantly.
- The states with **lower Human Development Index scores ie Bihar and UP received higher allocations** of funds while those states that had raised human development such as Kerala and Tamil Nadu received lower allocations.

- Those states with the highest per-capita Net State Domestic Product at current prices were Karnataka, Tamil Nadu and Kerala respectively while UP and Bihar had the **lowest Net State Domestic Product, but received a higher share of the funds** from the divisible pool.

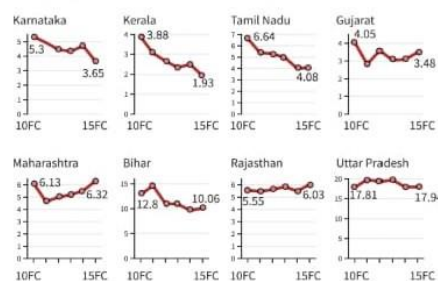
## What goes around, comes around?

The data for charts were sourced from Lok Sabha, the Ministry of Finance, the Reserve Bank of India, the National Family Health Survey, Budget documents and the Global Data Lab

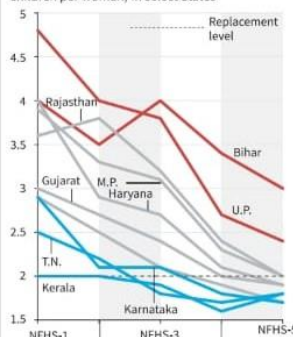
**Chart 1:** The chart shows the amount in ₹ each State got for every rupee they contributed to Central taxes in 2021-22. Customs and union excise duties have not been considered in the calculation as State-wise data is not maintained



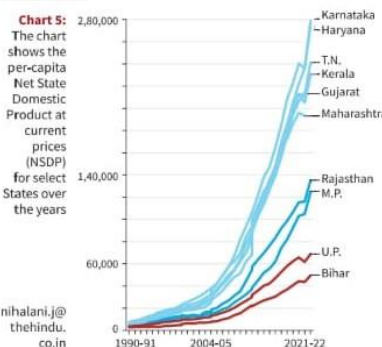
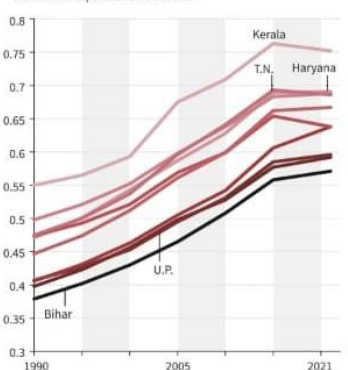
**Chart 2:** The chart shows the share of select States in shareable taxes during the past six Finance Commissions (FC)



**Chart 3:** Total fertility rate (avg. number of children per woman) in select States



**Chart 4:** The chart shows the Human Development Index scores of select States in the past three decades



### What have the experts said?

- M.Govinda Rao, a member of the XVFC justified the formula by stating that the **objective of fund devolution was not to return the money collected to the states but to enable the provision of comparable levels of services** across the various states.
- In order to achieve **horizontal equity** among the states, funds collected may be redistributed to benefit the most backward states.
- The increase in the per capita income levels was not due to the efforts of the states alone, therefore the taxes had to be distributed in an equitable manner.
- Critics of the model of devolution have argued that the southern states such as Karnataka, Tamil Nadu and Kerala have grown faster and contributed larger revenues to the central pool.
- Therefore, the fund allocation should be carried out in a manner that does not affect their efficiency.
- Maharashtra, one of the best-performing states received only 8 paise from the Centre for every rupee it contributed while Bihar received 7.06 per rupee.**
- Sustained fund devolution that was unfavorable to the performing states posed the risk of disincentivizing them from generating more tax revenue.
- This would reduce the divisible pool available to the Centre to redistribute funds among the states.

- Some critics have also questioned the lack of development and continued poor performance of states on criteria such as fertility and human development.

### Conclusion

The funds granted to the states from the Centre's divisible pool were in line with the recommendations of the Finance Commission that targeted horizontal equity in development across the states and not just the well-performing states.

### Finance Commission

- Article 280** of the Indian Constitution provides for the **Finance Commission** of India.
- The President constitutes the Commission every five years or as and when necessary.
- Role:**
  - The Finance Commission recommends the vertical and horizontal distribution of tax revenues
  - It determines the principles governing the grants-in-aid.
  - It suggests measures to augment the Consolidated Fund of the states to supplement resources of panchayats and municipalities as per recommendations of the State FC.
  - Recommendations on any other matter forwarded by the President in the interest of sound finance
- Membership:** The Commission consists of a Chairman and four other members, appointed by the President for a term of five years with the Parliament empowered to decide the qualifications of members.
- Qualification:** The chairman must be a person with expertise in public affairs while other members must satisfy any of the following conditions:
  - Be a judge of a high court or eligible to be one
  - Have specialised knowledge of finance and accounts of the government.
  - Have experience in financial affairs and administration.
  - Have special knowledge of economics.
- Recommendations made by the Commission are only advisory in nature and not binding on the government.

### The Ideal Track To Run India's Logistics System

Priority: **Medium**

Primary Source: The Hindu

Prepp Prelims Booster: PM Gati Shakti

**Prepp Mains Booster:** Infrastructure: Energy, Ports, Roads, Airports, Railways etc, GS2 - Government policies and interventions for development in various sectors and issues arising out of their design and implementation

### Context:

- Recently, the **Union Budget 2023** doubled the allocation to the states under the **PM Gati Shakti National Master Plan** from ₹5000 crores to ₹10000 crores.
- The Budget also included a disbursement of ₹2.4 lakh crore to the Indian railways as part of the government's efforts to **promote the railways as an economic and efficient mode of logistics movement.**

### What is the PM Gati Shakti National Master Plan?

- The **Gati Shakti National Master Plan** was aimed at coordinating the planning and execution of infrastructure projects in India in order to reduce logistics costs.
- Gati Shakti was a digital platform that enabled coordination between 16 ministries and departments of the Union Government including the Railways and Roadways.
- The project targeting holistic development of infrastructure was worth ₹100 crores and incorporated existing infrastructure schemes of the government such as **Bharatmala and Sagarmala**, etc.
- Under the Master Plan, economic clusters focussed on sectors such as pharmaceuticals, defence, textiles, and agriculture would also be set up.

- The primary objective behind the Master Plan was the seamless movement of people and goods throughout the country through multimodal connectivity between economic zones.
- The six pillars of the Master Plan were:
  - Comprehensiveness
  - Prioritization
  - Optimization
  - Synchronization
  - Analytical
  - Dynamic
- The programme would improve coordination between ministries and reduce working in silos which would ultimately lead to better planning, coordination and execution of projects.
- The Plan aims to utilize digital data to provide GIS-based spatial planning and modern techniques to enable proper execution.
- The stated objectives of the Master Plan included:
  - **Mapping existing and proposed connectivity projects**
  - **A comprehensive and integrated transport strategy** that would reduce turnaround times and cargo handling capacity while supporting the vision of Make in India.
  - **Establishment of industrial and defence corridors**
  - **4G connectivity to all villages** in India
  - Development of airports and aerodromes as well as **expansion of national highway network to 2 lakh kilometres**
  - **Expansion of the gas pipeline network** throughout the country
- In the Union Budget 2023, the allocation to the states under the PM Gati Shakti National Master Plan was doubled from ₹5000 crores to ₹10000 crores while ₹2.4 lakh crores were set aside for the Indian Railways.



### Why should railways be preferred?

- Railways can provide an **efficient and cost-effective** form of logistics transportation through its pan-India network while playing a key role in facilitating a coordinated and integrated logistics system.
- At present, the **majority of freight transported in India is by road (65%)** which has led to increased **congestion of roads, pollution and consequently higher logistics-related costs**.
- Experts have suggested that the adoption of railways as the primary mode of cargo movement was necessary to improve India's logistic competitiveness viz a viz the world.
- Freight movement by road was projected to cost nearly double that of movement by rail but has been increasingly adopted due to the convenience associated with it.
- In 2020-21, coal constituted 44% of the total freight movement in India of 1.2 by iron ore(13%), cement(10%), food grains(5%), fertilizers (4%) and iron and steel (4%), etc with non-bulk-commodities making up very little of the total freight moved by rail.
- By 2030, the PM Gati Shakti National Master Plan **aims to increase railways' freight movement share from 27% to 45% and freight movement from 1.2 billion tonnes to 3.3 billion tonnes**.

### What are the concerns associated with railways freight?

- The movement of non-bulk-commodities was easier in containers. This has led to an increase in container traffic from 7.6 million TEU in 2008 to 16.2 million TEU between 2008 and 2020.
- In order to present railways as an attractive option for transportation, railway systems across the world have invested heavily in advanced rail infrastructure that would enable quick and low-cost container movement.
- In China, special trains have been used to carry containers connecting significant ports and inland hubs while dedicated railway lines for container traffic and planned double-decker container carriages with greater efficiency have been established.
- The Indian railways have faced numerous infrastructural, operational and connectivity challenges which have led to an increase in freight movement by road.
- Rail transportation has been hampered by the **increased transit time, and pre-movement and post-movement procedural delays** such as wagon pavement, loading, handling and unloading.
- Infrastructural challenges faced by customers included the **lack of necessary terminal infrastructure, improper management of warehouses and goods sheds and the uncertainty in availability of wagons**.
- As a result of these challenges, the Indian railways have faced increased **congestion, lower service levels and increased transit times**.
- The **absence of integrated first and last-mile connectivity** by rail has resulted in an **increased risk of inventory damage due to multiple handling and raised costs**.

### Special entity

- The **Eastern and Western Dedicated Freight Corridors** and multimodal logistics parks to be set up by the Government was expected to reduce the congestion on these lines and improve the timings of rail services.
- **Private participation** in the management and operation of terminals, warehouses and containers could result in efficient resource utilization.
- Infrastructure backed by policy tools needs to be adopted by the Indian railways to streamline operations.
- A special entity established under the Railways to handle intermodal logistics in partnership with the private sector could help address the first and last-mile issues while also functioning as a single window for cargo transport and payments by customers.
- An **Uber-like model** could be adopted wherein a customer is allowed to book one of the two freight wagons in a passenger train through an online application which would improve utilization rates.
- The other wagon could be operated under the current utilization model and if the scheme proved to be successful, both wagons could be opened for online booking which would lead to an increase in freight traffic without requiring heavy investment.

### Conclusion

- An integrated logistics infrastructure for the country in association with assured first and last-mile connectivity was essential to making rail competitive with roads.
- Rail movement could emerge as a low-cost high-efficiency logistics model that would aid economic development across the country and boost India's exports to neighboring countries such as Nepal and Bangladesh.

## Money Laundering Laws Will Now Cover Cryptocurrency Trade

Priority: **Medium**



Primary Source: The Hindu

**Prepp Prelims Booster:** Cryptocurrency

**Prepp Mains Booster:** Money laundering and its prevention.

### Context:

- Recently, the government has imposed money laundering provisions on cryptocurrencies or virtual assets to tighten oversight of digital assets.



- In a gazette notification, the Finance Ministry said that the anti-money laundering legislation has been applied to crypto trading, safekeeping, and related financial services.
- Cryptocurrency is typically decentralized digital money designed to be used over the internet. Bitcoin, which launched in 2008, was the first cryptocurrency, and it remains by far the biggest, most influential, and most popular cryptocurrency.

### The reason behind the move

- In April 2022, India introduced a 30 percent income tax on gains made from cryptocurrencies. Then in July 2022, rules regarding 1 percent tax deducted at source on cryptocurrency came into effect.
- Digital currency and assets like **NFTs (non-fungible tokens)** have gained popularity globally over the last couple of years.
- **Regulation:** Trading in these assets has increased manifold with cryptocurrency exchanges being launched. However, India, till last year, did not have a clear policy on either regulating or taxing such asset classes.
- India tightened its tax regulations on the crypto space last year, including applying a levy on trading. Those moves, as well as a global rout in digital assets, caused a plunge in domestic trading volumes.
- The move is in line with the global trend of requiring **digital-asset platforms to follow anti-money laundering standards** similar to those followed by other regulated entities like banks or stock brokers.



### What does the Notification say?

- The notification said that Exchange between virtual digital assets and fiat currencies,
- **Exchange between one or more forms of virtual digital assets,**
- transfer of virtual digital assets,
- safekeeping or administration of virtual digital assets or instruments enabling control over virtual digital assets, and
- participation in and provision of financial services related to an issuer's offer and sale of a virtual digital asset will now be covered by **Prevention of Money-laundering Act, 2002.**
- Virtual digital assets were defined as any code or number or token generated through cryptographic means with the promise or representation of having inherent value.
- The Narendra Modi-led administration, as part of its leadership of the G-20 forum, has been pushing for a wider global agreement on dealing with the risks brought on by cryptocurrencies.

### Significance of the move

- **Money laundering:** After this, Indian crypto exchanges will have to report suspicious activity to the Financial Intelligence Unit India (FIU-IND).
- **Aid investigative agencies:** The measure is expected to aid investigative agencies in carrying out their actions against crypto companies
- **Monitoring movement of assets across borders:** It will be easier for authorities to monitor the transfer of these assets outside of India if India's anti-money laundering laws are extended to digital currencies.

### Challenges:

- The latest anti-money laundering move is concerning as implementing the requisite compliance measures is likely to require time and resources.
- **Absence of a direct regulator:** There are concerns about the wide ambit of the fresh notification and its enforcement in the absence of a direct regulator like the Reserve Bank of India is for banks.
- **Transition time:** The notification does not offer entities any transition time to adhere to the fresh norms.

### What is the Prevention of Money Laundering Act, 2002 (PMLA)?

- The Prevention of Money Laundering Act, 2002 (PMLA) forms the core of the legal framework put in place by India to combat money laundering. PMLA and the Rules notified there under came into force with effect from July 1, 2005 .
- **Director, FIU-IND, and Director (Enforcement)** have been conferred with **exclusive and concurrent powers** under relevant sections of the Act to implement the provisions of the Act.
- The PMLA and rules notified thereunder impose obligation on banking companies, financial institutions, and intermediaries and persons carrying on a designated business or profession, to verify identity of clients, maintain records and furnish information to FIU-IND.
- PMLA is an act to prevent money-laundering and to provide for confiscation of property derived from, or involved in, money-laundering and for matters connected therewith or incidental thereto.

#### Financial Intelligence Unit – India (FIU-IND)

- Financial Intelligence Unit – India (FIU-IND) was set by the Government of India vide O.M. dated 18th November 2004 as the central national agency responsible for receiving, processing, analyzing and disseminating information relating to suspect financial transactions.
- FIU-IND is also responsible for coordinating and strengthening efforts of national and international intelligence, investigation and enforcement agencies in pursuing the global efforts against money laundering and financing of terrorism.
- FIU-IND is an independent body reporting **directly to the Economic Intelligence Council (EIC) headed by the Finance Minister.**

### How To Double India's Farmers' Income

Priority: **Medium**



Primary Source: Indian Express

**Prepp Prelims Booster:** Doubling Farmers Income

**Prepp Mains Booster:** Major crop-cropping patterns in various parts of the country, transport, and marketing of agricultural produce and issues and related constraints; Direct and indirect farm subsidies

#### Context:

- Ashok Gulati, chair professor for agriculture at ICRIER, wrote an article titled '*How To Double India's Farmers' Income*' published in The Indian Express on 6th March 2023.
- On February 28, 2016, Prime Minister Narendra Modi shared his dream of doubling farmers' incomes in the year when India completes 75 years of Independence and enters Amrit Kaal.
- Now that India has entered Amrit Kaal, it is a good time to revisit that dream and see if it has been fulfilled, and if not, how best it can be done.

#### Why is there a need to double India's farmers' income?

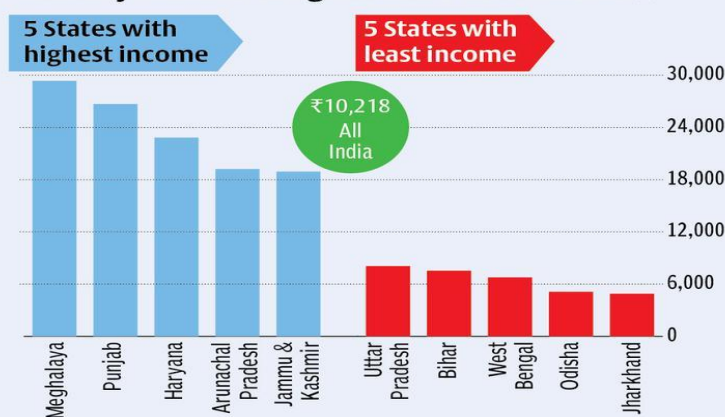
- **Sustained high growth:** Unless the incomes of farmers go up, we cannot have **sustained high growth of overall GDP**. It is the right way to ensure long-term high growth of the overall economy.
- **Food and nutritional security:** Agriculture also provides food and nutritional security to the largest population on this planet.
- **Employment:** Agriculture engages the largest share of the workforce (45.5 percent in 2021-22 as per PLFS).

#### Challenges

- **Rising cost of Production:** The cultivation costs have almost doubled, and their income is not commensurate with the rising inflation.

- Income from wages for farmers was 32 per cent in 2012-13. It was recorded to be 40 per cent in 2018-19. This implies that farmers are turning into daily wage labourers.
- MSP:** Only 14 percent of 14.6 crore landholding farmers (2015-16) getting benefits from the MSP, most farmers are out of the MSP net and continue to sell their produce below the MSP.
- MSP has distorted cropping patterns, with excessive focus on the cultivation of wheat, rice, and sugarcane in the procurement states at the expense of other crops such as pulses, oilseed, and coarse grains.
- Policies of Government:** Marketing policies adopted by the government that **suppress farmers' incomes**.
- For instance, the ban on exports of wheat or the 20 percent export tax on rice, the suspension of several commodities from the futures markets, and the **imposition of stocking limits on certain commodities** from time to time.
- The recent **dumping of 2.5 MMT of wheat to bring down prices** in mandis just before the procurement so that the government can buy at the Minimum Support Price, which is lower than the market price.
- These are hidden policy instruments of "implicit taxation" of farmers' incomes.
- Fragmentation of land holdings:** Fragmentation of land holding decreases agricultural productivity and diminishes the economic opportunities available.
- Area under Irrigation:** The irrigated area in India is still limited to 34.4 percent which is less than the wholly unirrigated area of 38.6 percent.
- Climatic factors:** Rising temperatures along with increased occurrences of extreme weather conditions have made climate change a major threat to Indian agriculture and productivity loss.
- Poor usage of machinery:** In India, the average farm size is less than two hectares. It is difficult for farmers to use heavy equipment on such small farms.
- Agricultural waste management:** Burnings of agricultural residue in the northern states increase air pollution levels, create health hazards and contribute to global warming.
- Supply-side issues:** low public investments, inadequate cold storage capacity, and the nascent food processing industry are partly responsible for volatility in food prices in India.
- Policy paralysis:** As agriculture marketing is a state subject, there is no consensus and coordination among central and state governments to address the marketing issues as a holistic approach.

### Monthly income of agriculture households (₹)\*



\*Situation Assessment Survey of Agricultural Households, NSS 77<sup>th</sup> round (Jan 2019 to Dec 2019)  
Source: Lok Sabha April 2022

### Steps taken by the government to support farmers

- The price of urea in India stayed **constant at about \$70 per metric tonne** despite the fact that **global price reached \$1,000**. There is also the additional Rs 60,000 crore from PM Kisan.

- Also, through the **PM Garib Kalyan Anna Yojana**, many small and marginal farmers receive free rations of at least 5 kg per person every month.
- In addition, there are **subsidies for finance, irrigation (drip), and crop insurance**.
- States also dole out power subsidies in abundance, especially on irrigation.
- All this if combined, would easily cross Rs 4 lakh crore per annum.

### Negative Impact of subsidies

- The policy of heavy subsidisation of input subsidies, especially fertilisers and power, along with assured and open-ended procurement of paddy and wheat at least in some selected states, is affecting the environment negatively.
- Depletion of groundwater levels.
- Overconsumption of fertilisers and pesticides.

### Steps to be taken

- Increasing total output across the agricultural sub-sectors through realising **higher productivity**
- Rationalizing/reducing the **cost of production**
- Ensuring **remunerative prices** in the agricultural produce
- Effective **risk management**
- Adoption of **sustainable technologies**
- Audit of agricultural subsidies:** CAG should take up the audit of all subsidies given by the Centre and by the states to examine their outcomes in terms of the incomes of farmers and environmental consequences. The results of such an audit can induce us to streamline these policies
- Ecofriendly policies:** Supporting policies are to be realigned keeping environmental outcomes for instance Millets, pulses, oilseeds, and much of horticulture could perhaps be given carbon credits to incentivise their cultivation. They consume less water and fertilisers.
- Crop neutral subsidies:** Subsidies/support should be in favour of those crops that are benign to the planet's basic resources.
- Contract farming:** It is an agreement between farmers and processing and/or marketing firms for the production and supply of agricultural products under forward agreements, frequently at predetermined prices.
- For instance, a corporate in Madhya Pradesh is buying soybean at Rs 6,000/quintal, way above the MSP of Rs 4,300/quintal to make tofu, soya milk powder, soya ice cream, and even frozen soya yoghurt.

### Way forward

- According to experts the government schemes will not help farmers double their income unless the government policies on agriculture are comprehensive, grant freedom of technology and market, and infuse more money into infrastructure development.
- Ad hoc policies and schemes will not help farmers as long as the government intervenes in the market to control prices to keep the consumers happy at the cost of farmers.
- Innovations in technologies, products, institutions, and policies for more diversified high-value agriculture that is also planet friendly are needed for doubling farmers' income.
- Additionally, diversifying to high-value crops, and even putting solar panels on farmers' fields as a third crop will be needed. It is only with such a concerted and sustained effort one hopes to double farmers' incomes.

### Doubling of Farmers Income (DFI)

- Government had constituted an Inter-Ministerial Committee in April, 2016 led by **Ashok Dalwai** to examine issues relating to "**Doubling of Farmers Income (DFI)**" and recommend strategies to achieve the same.
- The Committee submitted its final report to the Government in September, 2018 containing the strategy for doubling of farmers' income through various policies, reforms & programmes.
- The DFI strategy recommends recognition of agriculture as a value-led enterprise, identifying 7 major sources of income growth viz.,
  - improvement in crop productivity;

- improvement in livestock productivity;
- resource use efficiency or savings in the cost of production;
- increase in the cropping intensity;
- diversification towards high value crops;
- improvement in real prices received by farmers; and shift of surplus manpower from farm to non-farm occupations

## A Sweet Export Story: How India's Sugar Shipments To The World Are Surging

Priority: **Medium**



Primary Source: Indian Express

**Prepp Prelims Booster:** Indian Economy

**Prepp Mains Booster:** Indian Economy and issues relating to planning, mobilization, of resources, growth, development and employment, transport and marketing of agricultural produce and issues and related constraints

### Context:

- Recently, India has become the world's second-largest exporter of sugar with expected exports of \$5.5 billion in the 2022-23 fiscal.
- The major reason behind the rise in sugar exports was the shift in focus from white to raw sugar

### How have Indian Sugar Exports performed?

- Sugar exports from India have risen from \$810.9 million in 2017-18 to \$4.6 billion in 2021-22.
- Reports have indicated that **Indian sugar exports could rise beyond \$5.5 billion or ₹45,000 crores in the present fiscal year.**
- In terms of quantity, India exported 0.46 lakh tonnes of sugar in 2016-17 and 6.2 lakh tonnes in 2017-18. It rose to 110 lakh tonnes in 2021-22.
- **India has risen to second place in the world, with exports of 110.58 lt in 2021-22 behind Brazil (255.40 lt) and far ahead of Thailand (79.86 lt) and Australia (25.67 lt).**
- The European Union, which manufactures sugar from beet, as opposed to India and Brazil, which solely crush cane, has seen the greatest fall in exports: from 39.74 lt in 2017-18 to 8.02 lt in 2021-22.
- India exported 110 lt of sugar in total in 2021-22, of which 56.29 lt were raws. **Indonesia (16.73 lt), Bangladesh (12.10 lt), Saudi Arabia (6.83 lt), Iraq (4.78 lt), and Malaysia were the top importers of Indian raw sugar (4.15 lt).**
- 53.71 lt of white, refined sugar was also exported from the country, with the top recipients being Afghanistan (7.54 lt), Somalia (5.17 lt), Djibouti (4.90 lt), Sri Lanka (4.27 lt), China (2.58 lt), and Sudan (1.08 lt).

To know more about the [Indian sugar industry](#) click the link.



### Raw Sugar

- **Raw Sugar** is the commodity produced by sugar mills after the first crystallisation of the juice obtained by crushing sugarcane.
- This sugar which was brown in colour and rough in texture had an ICUSMA value of 600-1,200 or higher.

- **ICUSMA or the International Commission for Uniform Methods of Sugar Analysis was a measure of the purity of sugar.** It was based on colour, with value lowering with whitening.
- The Raw sugar was processed in refineries where impurity removal and decolorization activities were performed.
- The end product of the refining process was the refined white cane sugar, which had a standard ICUSMA value of 45 while the sugar used in pharmaceuticals had an ICUSMA value of less than 20.

### Shift to Raw Sugar

- **Prior to 2017-18, India primarily exported white sugar** (ICUSMA value of 100-150) which was also called low-quality-whites or LWQ in the international markets.
- In 2018, a team of officials from the Ministry of Consumer Affairs, Food and Public Affairs visited Indonesia, Malaysia, South Korea, China and Bangladesh in order to promote the exports of raw sugar from India.
- An increase in domestic stocks of sugar with the 2017-18 closing stocks measuring around 105 lt, which was equal to five months' worth of domestic consumption.
- This led to a shift in focus from whites to raw sugar among Indian exporters.

CHART 1

### INDIA'S SUGAR EXPORTS IN VALUE

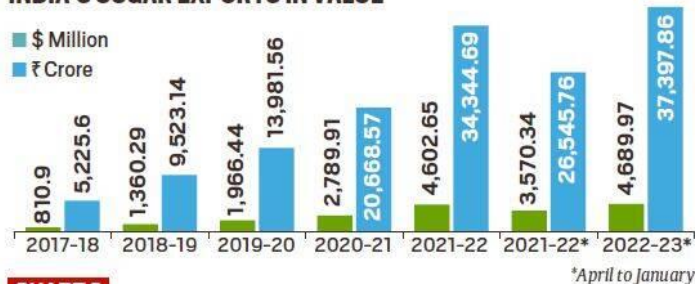


CHART 2

### INDIA'S SUGAR EXPORTS IN LAKH TONNES

Sugar Year	Raw Sugar	White Sugar***	Total
2016-17	0	0.46	0.46
2017-18	0.47	5.73	6.2
2018-19	13.13	24.87	38
2019-20	17.84	41.56	59.4
2020-21	28.16	43.74	71.9
2021-22	56.29	53.71	110
2022-23**	19.13	30.91	50.04

Note: Sugar Year is from Oct-Sept  
\*\*As on March 15; \*\*\*Includes refined sugar

### Advantages of Raw Sugar

- **Ease of Transport:** Raw sugar did not require bagging or containerisation unlike whites which were usually packed in 50 Kg polypropylene bags.
- **Quantity:** Raw sugar could be loaded in bulk (40,000 - 70,000 tonnes) while white sugar was transported in smaller quantities (12,500 - 27,000 tonnes).
- **Scale:** The purchaser was the refiner and not the consumer which allowed for sales to be conducted at scale.
- **Availability:** Previously refiners in Indonesia, Malaysia, South Korea, China and Bangladesh exported raw sugar from Brazil. Indian mills could supply stocks in the Brazilian off-season, at cheaper rates and were also available in 15-18 days compared to the 43-45 days from Brazil.

### What are India's advantages?

- India offered the Asian refiners quicker access to raw sugar and savings in freight costs.

- **Purity:** Indian raw sugar was free from dextran, a bacterial compound formed from sugarcane staying in the sun for too long as Indian raw sugar was produced from fresh stocks.
- Indian raw sugar was crushed within 12-24 hours of harvesting whereas in Brazil it was done after around 48 hours.
- **Polarisation:** Indian mills could also offer sugar with a high degree of polarisation (98.5-99.5%) versus Brazilian mills (96-98.5%).

**Polarisation refers to the percentage of sucrose present in a raw sugar mass. The higher the polarisation, the easier and cheaper it was for sugar to be refined.**

### Sugar trade between India and Indonesia

- **India raw sugar obtained a 4% premium over the global price** as compared to the \$40/tonne discount provided on Indian LWQs.
- Indian exports of raws were boosted by Indonesia tweaking its ICUMSA norms to enable imports from India in 2019. Indonesian imports of sugar from Thailand were reduced significantly to enable the import of high-quality raws from India.
- Indonesia also reduced the import duty on Indian raws from 15% to 5% in a retaliatory move for the large palm oil exports from Indonesia to India.

### Why has the government introduced an export limit?

- In 2018-19, annual sugar stockpiles with Indian mills peaked at around 143 lt.
- The coordinated export campaign and the **promotion of ethanol production from sugarcane juice** to make **ethanol for gasoline blends** have contributed to a reduction in closing stocks to roughly 70 lt by 2021-22.
- The available amount has thus decreased from being adequate for 6-7 months to a little over 3 months of home consumption.
- The government has limited India's exports in the current year to 61 lt due to decreased stockpiles and production falling to an expected 334 lt from 359.25 lt in 2021-22.
- Currently, mills in Maharashtra make about Rs 32 for each kilogramme of sugar that is sold on the domestic market whereas the ex-mill realisations from exports come out substantially higher, at Rs 42-42.5/kg, even after taking into account the LQW discount and the ₹ 2,500-3,000/tonne of internal transport and port costs.

### Conclusion

- Indian sugar exports have increased over the recent past, primarily due to an increase in raw sugar exports instead of the previously popular LWQs.
- Lowered production has forced the government to introduce export limits as domestic prices were still lower than export prices which could lead to an artificial shortage of sugar in the country.

## Unseasonal Rains, Hailstorms Damage Over 18,000 Hectares Of Agricultural Land In Maharashtra

Priority: **Medium**  
Primary Source: Down To Earth

**Prepp Prelims Booster:** Hailstrom

**Prepp Mains Booster:** Environment; Major crops-cropping patterns in various parts of the country, transport and marketing of agricultural produce and issues and related constraints; e-technology in the aid of farmers.

### Context:

- Recently, thousands of farmers have been affected by the unseasonal rains and hailstorms that led to complete harvest losses in Marathwada and the north Maharashtra regions.
- Hail is a form of precipitation consisting of solid ice that forms inside thunderstorm updrafts. Hail can damage aircraft, homes and cars, and can be deadly to livestock and people.



### Impact

- At least four villages in the Nanded district were affected after hail storms destroyed wheat, vegetables, gram and other crops.
- Other areas damaged by the hailstorms include Bharad, Neuga, and Mutkhed.
- Besides Marathwada, northern Maharashtra, comprising Nashik, Jalgaon, Nandurbar and Dhule, also received heavy rains.
- An area of over 1,500 hectares (ha) — including 860 ha in Dhule, 565 ha in Jalgaon, 119 ha in Nashik and the remaining in Nandurbar and neighbouring areas have suffered losses.
- The crops like ready-to-harvest wheat, gram, jowar, maize, vegetables, grapes, pomegranate, banana have been damaged due to the heavy rain.
- These **losses cascade to over 17,000 ha of harvest destroyed** due to unseasonal rains between March 4 and March 8.
- The socio-economic conditions of the farmers may be impacted.
- The **income of farmers declines** whereas the **indebtedness may rise**.
- India Meteorological Department's daily report stated that widespread and moderate rainfall, accompanied by thunderstorms, lightning and gusty winds, will likely affect Gujarat, Madhya Pradesh, Chhattisgarh and Maharashtra until March 19.
- Similar hailstorms are likely to occur in Telangana, while rains with thunderstorms are predicted in Tamil Nadu, Andhra Pradesh, Telangana and Karnataka.

### Challenges

- **Relief estimation** could also be a very tiresome process, adding to farmer Distress.
- Actual payment to farmers is **chronically delayed**, due to bureaucratic procedures.
- **Corruption** in relief is pervasive across states
- Inadequate **technical capacity** of patwaris to make estimations leads to delays and frequently revised estimates.
- **Lack of transparency.**
- Relief is dependent on "political goodwill," which is really just a basic kind of **vote-bank politics** that starts at the village level and extends upward via a set political heirarchy.

### Suggestions

- **Use of technology:** Use technologies to efficiently and precisely assess crop damage. This is crucial for the implementation of assistance and farmer-friendly crop insurance programmes
- **Estimation and Delivery of Relief:** Undertake wholesale reform in the way aid is estimated and distributed. The majority of farmers are currently receiving relief payments that aren't even enough for the upcoming sowing season. Currently, relief is more of a political tokenism than a protection against harsh weather disasters.
- **Crop Insurance:** Make crop insurance an attractive and a feasible compensation mechanism for farmers. Presently, agricultural insurance schemes cater to very few farmers in a few states and there, too, largely function as insurance for crop loans taken by farmers from banks.
- Sharecroppers and farmers taking land on lease/rent should also be protected
- Minimizing political interference in relief estimation and delivery

### Hail

- Hail is defined as hard ice pellets with a diameter of 5 mm or more that fall from Cumulonimbus clouds and are commonly connected with thunderstorms.
- They are generated as moist air rises quickly; the water drops freeze, and the pellets grow in size as additional water vapor freezes on their surface.
- When the pellets get heavy enough to overcome the resistance of rising air currents, they drop throughout their descent, but they can still develop by assuming new layers of ice from super-cooled water drops in the moist air.

### Why Are Index Makers Attracting Attention From Sebi?

Priority: **Medium**



Primary Source: The Hindu

**Prepp Prelims Booster:** Capital Markets

**Prepp Mains Booster:** Effects of liberalization on the economy; Indian Economy and issues relating to planning, mobilization, of resources, growth, development and employment

#### Context:

- Recently, a report by the United States-based Hindenburg Research leveled several allegations against the Adani group.
- Global index providers such as MSCI are reviewing the inclusion of some of these stocks in their indices, which are replicated by many foreign portfolio managers.

#### News Summary

- The National Stock Exchange of India (NSE) has announced that the stocks of five Adani group companies will be added to 14 different indices managed by a subsidiary called NSE Indices, while the group's flagship Adani Enterprises and Adani Ports and SEZ will remain in the Nifty 50.
- NSE Indices owns and manages over 350 indices, with 117 ETFs listed in India and 12 ETFs listed abroad, and these products are not regulated by the Securities Exchange Board of India (SEBI).
- SEBI has proposed bringing the "growing dominance of Index Providers due to proliferation" of passive funds that drive capital flows towards assets that are part of a specific market index under its regulatory purview.

#### About National Stock Exchange

- The National Stock Exchange is the largest financial market in India established in 1992.
- The Securities Contracts (Regulation) Act, 1956, designated it as a stock exchange, and it began operations in 1994.
- It was the country's first completely computerized electronic trading exchange.

#### What are Index Funds?

- With thousands of stocks traded in stock markets around the world, and their prices often moving in opposite directions, most observers assess a market's overall trajectory by looking at broader benchmark indices.
- The Sensex, for example, represents the 30 largest and most actively traded stocks on the Bombay Stock Exchange (BSE).
- While economists and governments use market indices to gauge economic confidence, individual investors and fund managers use them to compare the performance of their own portfolios.
- Mutual funds and portfolio managers frequently tell prospective investors that their investment strategies have outperformed the Sensex or other relevant benchmarks.
- Choosing individual stocks or mutual fund schemes has always been difficult for retail investors.
- In 1976, American fund industry veteran and Vanguard Group founder John Bogle attempted to address this by launching the world's first index fund.

#### Index Funds in India

- While index funds and exchange-traded funds (ETFs) have been available to Indian investors for nearly two decades, their assets have increased exponentially since 2015.

- Index funds and ETFs now account for roughly 16% of the roughly Rs.41 lakh crore assets managed by India's mutual funds, up from eight in 2008.

#### Making Indices

- Indices can be based on different industry sectors, company sizes (small-cap, mid-cap, etc.), and quantitative parameters like liquidity and trading volumes, and the weightage assigned to each stock in an index can vary based on their market capitalization or other gauges that index providers use.
- NSE Indices owns and manages over 350 indices, with 117 ETFs listed in India and 12 ETFs listed elsewhere using these products as benchmarks.
- Similarly, Asia Index Pvt Ltd, a joint venture of the BSE and S&P Dow Jones Indices, provides a variety of indices used by both global and domestic investors.
- Each index is reviewed on a regular basis and uses a methodology to add or remove stocks based on periodic trading data and other defined parameters.
- MSCI and other global providers create indices that are used by international fund managers to allocate assets to stocks in various markets.
- The methodologies typically provide for a review of the index composition or the discontinuation of specific indices due to factors such as 'exceptional circumstances,' market disruptions,' or difficulty in replicating the indices; however, they are not regulated by the Securities Exchange Board of India (SEBI).

#### Proposal of SEBI

- SEBI has proposed bringing the "growing dominance of Index Providers due to proliferation" of passive funds that drive capital flows towards assets that are part of a specific market index under its regulatory purview.
- While there is an element of transparency in their functioning, SEBI believes it is possible for index makers to exercise discretion through changes in methodology resulting in exclusion or inclusion of a stock in the index or change in the weights of the constituent stocks.
- Their decisions affect not only the volume, liquidity, and price of such stocks, but also the returns to investors from index funds.
- Concerned about the possibility of conflict of interest in the governance and administration of indices, SEBI has proposed instituting an accountability mechanism for them.
- The plan, which is expected to be implemented soon, includes requiring SEBI registration for index providers and subjecting them to eligibility criteria, compliance, disclosures, and periodic audits.
- SEBI plans to impose penalties for noncompliance and incorrect disclosures, among other things.

### India Plans New Security Testing For Smartphones, Crackdown On Pre-Installed Apps

Priority: **Medium**



Primary Source: The Hindu

**Prepp Prelims Booster:** Data Security

**Prepp Mains Booster:** Awareness in the fields of IT, Computers; Challenges to internal security through communication networks, Cyber security; Changes in industrial policy and their effects on industrial growth

#### Context:

- According to a report by the News agency Reuters, under proposed new security rules, India plans to force smartphone makers to allow the removal of pre-installed apps and mandate screening of major operating system updates.
- The IT ministry is considering these rules amid concerns about spying and abuse of user data.

#### What is the reason behind the move?

- Pre-installed apps can be a weak security point, therefore as a matter of national security the IT Ministry is considering these new rules amid concerns about spying and abuse of user data.
- After a border dispute between the two neighbors in 2020, India has increased its surveillance of Chinese companies, banning more than 300 Chinese apps, including TikTok. Also, it has increased scrutiny of Chinese investments.
- Currently, most smartphones come with pre-installed apps that cannot be deleted, such as Chinese smartphone maker Xiaomi's app store GetApps, Samsung's payment app Samsung Pay mini and iPhone maker Apple's browser Safari.

### New Security Testing For Smartphones

- Manufacturers of smartphones will be required to provide an uninstall option, and new devices will undergo compliance testing in a lab approved by the **Bureau of Indian Standards**.
- The government is also considering **mandatory screening of every major operating system update** before it is handed out to customers.
- While European Union regulations require allowing removal of pre-installed apps, it does not have a screening mechanism to check for compliance like India is considering.
- The government has decided to give smartphone makers a year to comply once the rule comes into effect, the date for which has not been fixed yet.
- Globally, many nations have imposed restrictions on the use of technology from Chinese firms like Huawei and Hikvision out of concern that Beijing would use it to spy on citizens of other countries.

### Impact

- The new rules **could extend launch timelines** in the world's No.2 smartphone market and **lead to losses in business from pre-installed apps** for players including Samsung, Xiaomi, Vivo, and Apple.
- Currently it takes about 21 weeks for a smartphone and its parts to be tested by the government agency for safety compliance.
- It's a **massive hindrance to a company's go-to market strategy**.
- An industry executive said some pre-installed apps like the camera are critical to user experience and the government must make a distinction between these and non-essential ones when imposing screening rules.
- Smartphone players often sell their devices with proprietary apps, but also sometimes pre-install others with which they have monetisation agreements.



### Way forward

The government must distinguish between essential pre-installed apps like the camera and non-essential ones while enforcing screening laws.

### Lessons Learnt: On The Silicon Valley Bank Episode

Priority: **Medium**

Primary Source: The Hindu

Prepp Prelims Booster: Silicon Valley Bank

**Prepp Mains Booster:** Indian Economy and issues relating to planning, mobilization, of resources, growth, development and employment, Effects of globalization on Indian society

### Context:

- Recently, the collapse of the Silicon Valley Bank in the USA triggered fears of a failure of the global market with banking stocks declining and investors switching to safe-haven assets such as gold.
- The Federal Deposit Insurance Corporation, one of the regulators of the US economy, has taken over the bank in order to restore calm to the volatile market.

### What is the Silicon Valley Bank?

- The **Silicon Valley Bank was a California-based financial institution** founded in 1983 that focussed on providing multiple services to venture capital and private equity firms in addition to offering high net-worth individuals banking services.
- The depositor base of SVB was mostly geographically and sectorally concentrated and mostly made up of start-ups and venture capitalists.
- The bank had business with around half of all the USA's venture-based startups and 44% of the venture-backed tech and healthcare that went public in the last year.
- As of December 31st, the SVB had \$212 billion in assets and clients like Shopify and Pinterest.



### What led to the collapse of the SVB?

- SVB had **collected large deposits worth around \$189 billion during the funding boom of 2021** where investors were willing to invest freely in new ventures. This amount would later rise to around \$198 billion.
- The bank used a majority of the deposited cash to **invest in US Treasury and Mortgage bonds** with the bank owning \$91.3 billion worth of securities by the end of 2022.
- **Bonds were seen as an attractive investment as they were being issued at low-interest rates.**
- In 2022, the US Federal Reserve in response to the rise in inflation began to increase the interest rates which resulted in a fall in the value of the bonds that were issued at lower rates.
- Interest rate increases also led to venture capital firms reducing their investment as the funding boom transformed into a **funding winter**.
- Deposits made by venture-backed startups in the bank began to decrease as investment fell which forced the bank to sell the acquired securities at a loss in order to fulfill the demands of the depositors.
- On 8th March 2023, SVB announced that it had sold securities worth 21 billion at a loss of \$1.8 billion.
- The bank suffered from a **bank run, where multiple depositors withdraw their deposits simultaneously as a result of fears of insolvency**. Bank runs usually occur due to customer panic and not actual insolvency, but in most cases lead to insolvency.

### Present Situation

- The fall of the SVB led to fears in the US markets of a **Lehmann redux or repeat of the situation faced by the Lehmann brothers in 2008**

which exposed the poor quality of mortgages and debt in the US economy.

- In order to boost public confidence in the sector the **Federal Deposit Insurance Corporation, a regulator of the US economy took over the SVB and the Signature Bank in association with the Federal Reserve and the Treasury Department.**
- Depositors were assured that their deposits would be repaid in full while stakeholders would not be compensated.
- The FDIC also created a new bank, the National Bank of Santa Clara to hold the assets and deposits of the failed bank.
- The US President assured the domestic and global markets that the USA was committed to maintaining a resilient banking system and that new regulations would be introduced to prevent further occurrences of similar failures.
- The New York-based Signature bank had exposed itself to highly volatile cryptocurrencies by providing services to those investing in digital assets.

### Impact on India

- The monetary tightening of the Fed cannot be blamed solely for the collapse of the banks as the banking system was based on the balancing of risks with holdings that could be used to meet any withdrawal demands in case of a bank run.
- Around 21 Indian start-ups, mainly those in the SaaS (Software As A Service) sector have been depositors as well as borrowers from the bank.
- The failure of the bank could affect the exposed **Indian firms which would have to adopt cost-reduction measures such as hiring freezes and employment cuts.**
- The Indian financial system could also be affected by **US-dependent exporters experiencing a slowdown in their business and further impacting their growth and ability to repay debt.**
- In 2018, the RBI issued guidelines advising banks to create an **Investment Fluctuation Reserve** as a countercyclical tool to insulate Indian lenders from interest rate risks.
- The RBI would still have to remain on guard to ensure that no Indian lenders were threatened by similar mismanagement or global shocks.

### Tested But Tired, This Force Could Be In Distress

Priority: **Medium**



Primary Source: The Hindu

**Prepp Prelims Booster:** Central Armed Police Force

**Prepp Mains Booster:** Various Security forces and agencies and their mandate.

#### Context:

- K.V. Madhusudhanan, a former Inspector General of the North Eastern Sector of the Central Reserve Police Force has written an article titled *'Tested But Tired, This Force Could Be In Distress'* published in The Hindu on 17th March.
- The author said that lessons from the deadliest attack on Central Reserve Police Force (CRPF), like the Pulwama attack should be analysed and genuine grievances of the forces needed to be addressed.



### Issues faced by Central Armed Police Forces

- The internal security scenario in the country has been showing marginal improvement, especially in insurgency-affected northeast India and there has been 'insignificant improvement' in left-wing extremism areas and also terrorist-affected Kashmir.
- **Overstretching of forces:** It is here that the point about deployment levels is of relevance. The deinduction of the Indian Army has taken place, with the void filled mainly by the CRPF.
- Overstretching these forces without adequate rest or respite can compromise their training and tactical skills.
- This can have **adverse effects on their operational capabilities** and make them vulnerable to surreptitious attacks by anti-national forces.
- CRPF is often entrusted with **risky assignments** because of its versatility and flexible operational procedures.
- The huge and continuous deployment of the regular army may attract negative attention from the international press and impact the perspective of other nations.

### Steps to be taken

- The higher casualty rates suffered by the paramilitary in the recent past point out that forces can attain and maintain the optimum level of performance only if the **training and the morale of their personnel** are addressed.
- Without addressing these aspects, any induction or introduction of any potent weaponry or technology would hardly bring about desired change.
- **Need for parity :** Recently, former personnel and their families turned up in large numbers in different parts of the country to demand the old pension scheme to serving members of the fraternity.
- The old pension scheme was stopped for personnel joining service after December 31, 2003.
- They cited the Delhi High Court order of December 2022 that reiterated their status as a force under the category of 'Armed Forces of the union'.
- The fraternity is grieved that despite facing a war-like situation on a daily basis the paramilitary forces are denied benefits on par with the military.

### Way forward

- The main objective of Pulwama Day should be to prevent a recurrence of such event in future by analysing and by taking corrective measures.
- The government should take concrete steps to address the concerns of the paramilitary personnel and ensure that they are treated with the respect and dignity they deserve.
- Addressing the genuine concerns of these forces and ensuring that they are being treated on a par with defence forces personnel will not only keep **morale of these forces high but** also help the security environment of the nation.

#### Central Reserve Police Force

- Central Reserve Police Force is the largest Central Armed Police Force of India.
- The Central Reserve Police Force came into existence as Crown Representative's Police on 27th July 1939. It became the Central Reserve Police Force on enactment of the CRPF Act on 28th December 1949.

#### Duties

- Crowd control
- Riot control
- Counter Militancy / Insurgency operations.
- Dealing with Left Wing Extremism
- Overall co-ordination of large scale security arrangement specially with regard to elections in disturbed areas.
- Protection of VIPs and vital installations.
- Checking environmental de-gradation and protection of local Flora and Fauna
- Fighting aggression during War time
- Participating in UN Peace Keeping Mission
- Rescue and Relief operations at the time of Natural Calamities.

## Clean-Tech As The New Big Thing In Rural India

Priority: **Medium**



Primary Source: The Hindu

Prepp Prelims Booster: Clean tech

Prepp Mains Booster: GS3- Growth & Development

### Context:

- In this article, written by Prachi Singhal, a gender specialist consultant and Mousumi Kabiraj, a research analyst at the Council on Energy, Environment, and Water (CEEW), has discussed 'Clean-tech as the next big thing in rural India'.
- Clean energy solutions are transforming women's livelihoods at the grassroots level, but they must be scaled up.
- Many rural Indian women have used clean energy-based livelihood technologies to boost their businesses.
- **Distributed renewable energy (DRE)** is transforming women's livelihoods at the grassroots level, with products ranging from solar refrigerators to silk-reeling machines and biomass-based cold storage to bulk milk chillers.

### What does the recent study say?

- According to a recent study by the **Council on Energy, Environment, and Water (CEEW)**, more than 80% of the 13,000 early adopters of clean tech livelihood appliances are women.
- **Distributed renewable energy (DRE)** powered technologies give women farmers and microentrepreneurs an additional advantage by increasing income opportunities through mechanization. They also liberate women from several laborious gender-assigned manual activities.
- **By 2030, India is expected to have 30 million female-owned micro, small, and medium-sized enterprises (MSMEs)** employing approximately 150 million people.
- DRE livelihood technologies have the potential to transform rural livelihoods, with women at the forefront of this transition.

### About Council on Energy, Environment, and Water (CEEW)

- The Council on Energy, Environment, and Water, or CEEW, is a non-profit think tank and policy institution based in New Delhi, India.
- It was founded to provide policymakers with independent research-based insights for building a sustainable India.
- The Council also has an office in Lucknow, Uttar Pradesh. It is involved in numerous research projects in 22 Indian states and other parts of the world.
- CEEW's research areas include energy and resource efficiency and security; power sector reforms, industrial decarbonisation, sustainable mobility and cooling, sustainable food systems, climate risks and adaptation, air quality, water resource management, sustainability finance, energy-trade-climate linkages, and climate geoengineering governance.

### What is Distributed Renewable Energy (DRE)?

- DRE is the generation and distribution of electricity from renewable energy sources such as solar, wind, hydro, geothermal, and biomass via small-scale, decentralized systems.
- These systems are frequently installed in remote or rural areas where connecting to a centralized power grid is difficult or costly.
- DRE systems can range from individual rooftop solar panels to small-scale wind turbines, mini-hydro systems, and biomass generators.
- They are typically designed to serve a single household or community rather than a large urban or industrial center.
- DRE systems are also known as off-grid or mini-grid systems, and they can operate independently or in conjunction with a larger power grid.

### Challenges Faced by Women

- **Perception of high risk:** The high starting price and newness of DRE appliances can create a perception of high risk, particularly for female users who may have a lower risk appetite due to socioeconomic factors.

- **Low belief:** Due to historical barriers to women's access to new information, people prefer to physically touch and see high-tech, high-priced DRE products before believing in their ability and promised benefits.
- **Limited Network:** Women frequently struggle with established market linkages due to their limited mobility and networks outside of their villages.

### Steps toward reaching rural women as a part of Powering Livelihoods Initiative

#### Experience of early women adopters:

- DRE appliances are perceived as high-risk purchases due to their novelty and high starting price, particularly by women users who have a lower risk appetite due to socioeconomic factors.
- To overcome the challenge, technology providers must leverage early users to share their experiences with potential customers, becoming demo champions/sales agents to market these products based on their first-hand product experience and local credibility.

#### Live Events:

- People want to touch and see a high-tech, high-ticket-size product before believing in its ability and promised benefits, especially when it comes to women, who have historically had limited access to new information.
- These events also provide opportunities for women to network, learn about the product, and connect with people who can assist them in obtaining, financing, and using these machines.
- **For example:** At an event in Hamirpur, Uttar Pradesh, more than 200 women purchased seven appliances on the spot, including solar sewing machines and multi-purpose food processors.

#### Easy Finance to Purchase Products:

- The limited financing options for these clean technology products continue to be a bottleneck. Financiers who help women farmers and micro entrepreneurs should consider using the technologies as collateral while making the loan application process easier.
- **For example:** Samunnati Finance, an agri-value chain financier, for example, provided an 80% first-loan default guarantee to six women-led FPOs in Andhra Pradesh that purchased 100-kg solar dryers.
- Technology manufacturers and promoters should also provide adequate after-sales services and buy-backs. To reassure financiers, evidence on the economic viability of these technologies should be shared, and promoters should offer partial default guarantees.

#### Encourage backward and forward market linkages:

- In some cases, simply having access to technology is insufficient.
- Many rural products have a larger market potential.
- Finding and connecting producers to consumption hubs in urban areas is thus equally important for generating higher incomes.
- Women frequently struggle with established market links due to their limited mobility and networks outside of their villages.
- Collectivizing women or developing business models that allow them to sell to an intermediary can ensure a consistent revenue stream in this case.
- Reshamsutra, a manufacturer of solar silk-reeling machines, is collaborating with local procurement organizations to establish silk cocoon banks and equipment training for women reelers in Chhattisgarh.

#### Facilitate convergence:

- As no private sector entity has the kind of reach and scale that government institutions do, leveraging their reach is critical to exponentially scaling up.
- Several Ministries are working to promote women's livelihoods, including state rural livelihood missions, horticulture and agriculture departments, the Ministry of Micro, Small, and Medium Enterprises, and the Ministry of Textiles. They should embrace clean energy solutions to advance their respective programs and outcomes.

#### Conclusion

Scaling the impact of clean energy solutions on women's livelihoods requires policymakers, investors, financiers, technology promoters, and other ecosystem enablers, much like raising a child. Only then will we be able to



truly unleash the potential of rural women and clean technologies at the same time. DRE livelihood technologies have the potential to transform rural livelihoods, with women at the forefront of this transition.

## IMF Approves \$3-Billion Bailout For Sri Lanka; Tackling Corruption A Key Condition

Priority: **Medium**

Primary Source: The Hindu

Prepp Prelims Booster: IMF

**Prepp Mains Booster:** Important International institutions, agencies and fora- their structure, mandate, Bilateral, regional and global groupings and agreements involving India and/or affecting India's interests

### Context:

- Recently, the International Monetary Fund cleared a \$3 billion Extended Fund Facility for Sri Lanka that could improve the debt-ridden country's access to credit.
- Sri Lanka had defaulted on its foreign debt repayment last year following a shortage of dollars.

### IMF clearance

- The **International Monetary Fund** cleared a **\$3 billion-Extended Fund Facility** for Sri Lanka which could unlock new sources of credit for the debt-ridden island nation.
- Sri Lanka has struggled to recover from the economic crisis of 2022 following the foreign debt default and later resignation of President Gotabaya Rajapaksa.
- Six months ago the IMF and Sri Lanka reached a staff-level agreement which was a formal arrangement between Sri Lanka and IMF staff for the funds.
- The EFF-supported programme had the major objectives of **restoring macroeconomic stability and debt sustainability, safeguarding financial stability, and implementing structural reforms** that would potentially unleash Sri Lanka's economic potential.
- The deal which was the 17th agreement between the IMF and Sri Lanka had focussed on identifying corruption as a key part of the agreement.
- The IMF had already delegated a governance diagnostic mission to assess the governance and anti-corruption framework in the country.
- This was the first time such an exercise had been undertaken by the IMF in an Asian country.
- The IMF also stated that a property and inheritance tax had been planned to be implemented in 2025.



### Sri Lanka's Response

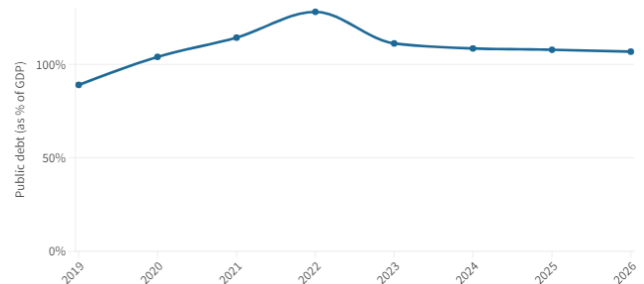
- The Prime Minister of Sri Lanka had announced that was no longer a bankrupt country as the EFF would allow Sri Lanka to prove to the international community that Sri Lanka was capable of servicing its debt.
- The IMF package enabled Sri Lanka to access **up to \$7 billion in funds** from the IMF and International Financial Institutions.

- Sri Lanka's top three creditors - India, Japan, who was a member of the **Paris Club group of creditors**, and China - had provided financial assurances to the IMF which was crucial in obtaining IMF funding.
- Sri Lanka has assured its bilateral creditors of transparency in the debt restructuring process and would ensure equal treatment of all its creditors.

### What have critics claimed?

- Critics have expressed concern that the \$3 billion in funding received from the IMF over four years would not constitute an economic recovery.
- The country still had a long way to go before its actual recovery as its **fundamental economic challenges - large debt burden, persistent trade deficit, and a balance of payments crisis** - remained.
- According to a Sri Lankan think tank, as of December 2022 Sri Lanka had a total outstanding public debt of \$84 billion and had to serve around \$2 billion of its debt in the first half of 2023.

\*Values from 2023 to 2026 are projected estimates, 2022 value is preliminary



### Protests and Dissent

- Over the last year, Sri Lanka instituted a series of policy measures including raising taxes and bank interest rates, floating the rupee, and tripling electricity tariffs.
- The public which had already been burdened with the high costs of living had to now face the highly increased electricity bills.
- In protest of the economic hardships, the worker's unions in the country went on strike. The government has been criticized for its violent attempts to quell the protests.
- However, the IMF has stated that as a primarily economic institution, the Fund did not have the mandate to interfere with how the government interacted with its citizens.
- The IMF also stated that it had not recommended the postponement of local elections in Sri Lanka.

### Reasons for the Sri Lankan crisis

- Decades of political and economic mismanagement by the Sri Lankan political establishment have led to the financial crisis in the small island state.
- Tourism which was a major source of revenue for the state dropped significantly in the aftermath of the Easter bombings.
- Migrant remittances fell as a result of the pandemic while the Ukraine crisis led to a rise in import bills and oil costs.
- The government enacted unscientific measures such as the unplanned shift to organic farming and populist tax cuts which furthered the domestic crisis.
- Sri Lanka was also heavily indebted to China (around 10% of the country's total debt) while infrastructure investments made by China in the country had been severely underutilized.

### Conclusion

- The IMF bailout of Sri Lanka was a positive step in global efforts to manage the Sri Lankan economic crisis. However, this was alone not sufficient to solve the crisis as Sri Lanka's issues were deep-rooted and needed significant domestic reform to produce the needed results.

#### International Monetary Fund

- The IMF and the World Bank were established during a summit in Bretton Woods following World War II to help assist in the economic reconstruction of countries affected by the conflict.

- 190 countries are members of the IMF.
- India formally joined on December 27, 1945.
- The major objective of the IMF is the maintenance of the stability of the global financial system, which includes the international payments and exchange rates that allow nations to conduct business.
- In 2012, the mandate of the Fund was revised to include all macroeconomic and financial sector challenges that have an impact on global stability.
- The unit of account of the Fund is the Special Drawing Rights or SDR whose value is determined by a basket of five currencies - the dollar, pound, yen, euro and yuan.

To know more about the [IMF](#), click the link.

## GENERAL STUDIES 4

### Global Governance

**Prepp Mains Booster:** Governance, International Ethics

#### Why in the news?

In the absence of a global state or global government, international relations are regulated by multiple institutions of global governance that include treaty-based organizations and many formal and informal bodies in global civil society, Such as the UN, WTO, ASEAN, SCO etc.

#### What ethical constraints are applicable to them?

- The actors who construct global governance bodies are either states or individuals. Both are subject to rigorous ethical constraints because they are constituted as the actors in two key global practices: the society of sovereign states and global civil society.
- The values that constrain them in these practices are liberty and diversity. As states and individuals build the institutions of global governance, they are required to promote these two ethical values.
- At present there is no global state and thus no global government. Instead, in the contemporary world there are 194 sovereign states that coexist in a globalizing world order.
- They coexist in a world in which there is a myriad of transnational interactions that have led over time to the creation of a huge number of international organizations of one kind or another.
- The whole practice is based on the mutual recognition that states give one another.

#### What are the Shortcomings?

- First, all such bodies are *limited* in that they are confined to specific areas of competence—they make rules covering very specific functions and activities (banking, environmental preservation, energy production and distribution, and so on). The jurisdictions of governance bodies are limited to particular functions and often to specific geographical areas.
- Second, many governance bodies overlap in their fields of operation.
- Third, none of them possess the sovereignty that is the primary feature of states.
- Fourth, these organizations come into being at different times for different purposes.
- Finally, fifth, the world of governance bodies is in a state of perpetual flux: new ones come into being as old ones fall into disuse. An implication of this is that there are often disputes about who is entitled to make rules, about what, in which areas.

#### Ethical Dimensions of Global Governance

##### Technological Interdependence

- Technological interdependence is a fundamental driver of global integration. Artificial intelligence, 5G, semiconductors, and the necessary cybersecurity accompanying the spread of the Fourth Industrial Revolution require cross-border cooperation and global governance.

- Both the public and private sectors must regularly deal with issues like encryption, data privacy standards, and the regulation of digital content.
- At the same time, supply chain risks - aggravated by the COVID-19 pandemic and geopolitical competition - are pushing governments to claim digital sovereignty; that is, to develop policies and actions controlling how the internet works within their borders, and how data and digital assets are treated.
- Global governance institutions lag behind on developing common frameworks and standards, due to differing views and interests among member states.
- So, it can be assumed that two conflicting trends will impact global governance for the foreseeable future. One is that efforts will continue to increase cross-border cooperation in order to leverage the benefits of a digital economy, especially at a regional level.

##### Accountability Problem

- Participants in global governance do not have duties under international laws or rules. The lack of universal accountability procedures worldwide makes this situation worse. For instance, despite the existence of numerous international organisations, the arms race and wars continue.
- More authority should be granted to global governance organisations so they can impose accountability and develop monitoring systems.
- Audits of the accountability procedures may be conducted by neutral parties.

##### Justice and Fairness

- Developing nations frequently assert that global trade accords, such as WTO processes, give wealthy nations' interests precedence over those of developing nations.
- Global commons issues include unequal and unjust resource access, a disproportionately negative impact of climate change on disadvantaged people, etc.
- Recent demonstrations in Iran, the Rohingya crisis in Myanmar, and other places have seen cases of human rights violations.
- The UN Human Rights Council is frequently criticized for giving membership to nations with a dismal record of upholding human rights.

##### Actors and Discretion problem

- The United Nations Security Council (UNSC) has highlighted various instances when developed and poor countries are subject to differing rules.
- Each is not subject to the same rules. The interests of those who make the rules and those to whom they are applied make a significant distinction.
- The rule of law should be the foundation of global entities' governance, and decisions should be made by consensus and with broad participation.

##### Upholding Human Rights

- Recent demonstrations in Iran, the Rohingya crisis in Myanmar, and other places have seen cases of human rights violations.
- The UN Human Rights Council receives criticism frequently for admitting nations with a dismal record of upholding human rights.
- Because of varying points of view and conflicts of interest, abuse of human rights is frequently disregarded.
- Global governance organizations also lack the enforcement mechanisms necessary to put a universal set of human rights into effect.
- With a strong enforcement mechanism, the UDHR's protection of human rights can become a requirement for UN members.
- It is possible to create a standard minimum code of conduct for human rights.

##### Conclusion

Moving forward, it is crucial that global governance evolves to meet the changing needs and challenges of our world. This will require a commitment to multilateralism, cooperation, and collective action. It will also necessitate addressing the power imbalances and inequities that exist in the current global governance system. Ultimately, effective global governance is essential for achieving a more peaceful, prosperous, and sustainable future for all.

## PRELIMS

### What Are 'Bio-Computers' And How Do They Function?

Priority: **Medium**

Primary Source: The Hindu

**Prepp Prelims Booster:** Bio-computers

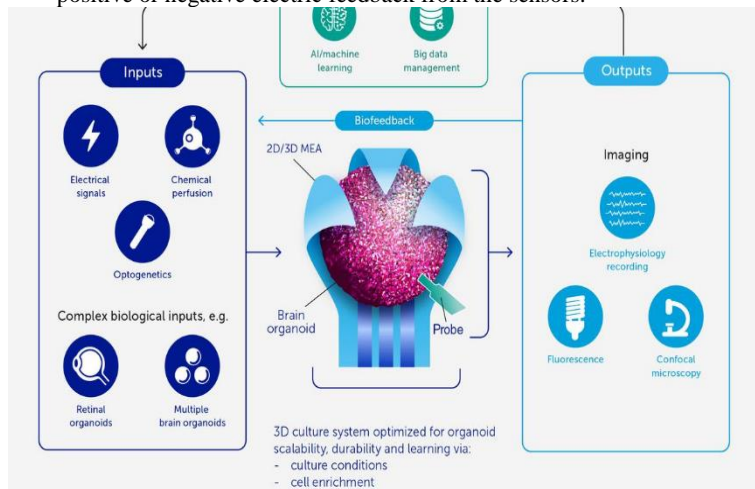
**Prepp Mains Booster:** Awareness in the fields of Computers, Bio-technology; Science, and Technology- developments and their applications and effects in everyday life.

#### Context:

- Recently, scientists at Johns Hopkins University (JHU) recently outlined a plan for a potentially revolutionary new area of research called “**organoid intelligence**”, which aims to create “**biocomputers**” where brain cultures grown in the lab are coupled to real-world sensors and input/output devices.
- Scientists expect the technology to harness the **processing power of the brain and understand the biological basis** of human cognition, learning, and various neurological disorders.

#### What are "bio-computers"?

- In the framework developed by JHU researchers, "bio-computers" will be produced using brain organoids and modern computing techniques. They intend to grow the organoids inside flexible structures attached with several electrodes, where they will be combined with machine learning (similar to the ones used to take EEG readings from the brain).
- In order to replicate sensory sensations, these structures will be able to both give electrical stimulation and record the neuronal firing patterns. Machine learning techniques will then be used to analyse the neuron response pattern and how it affects human behaviour or biology.
- A microelectrode array that could record and stimulate human neurons was recently grown on top of by scientists.
- They were able to train the neurons to produce an electrical pattern that would be produced if the neurons were playing table tennis by using positive or negative electric feedback from the sensors.



#### What is the need of this technology?

- Traditionally rat brains are used to study various human neurological disorders however there are several differences in structure and function and obvious differences in the cognitive capacities of rodents and humans.
- Scientists are building 3D cultures of brain tissue in the lab in a quest to develop systems that are more relevant to humans also called brain organoids.
- These “mini-brains” (with a size of up to 4 mm) are built using human stem cells and capture many structural and functional features of a developing human brain.
- Researchers are using them to study human brain development and test drugs to see how they respond.

- Limitations:** However, the human brain also requires various sensory inputs (touch, smell, vision, etc.) to develop into the complex organ it is, and brain organoids developed in the lab **aren't sophisticated enough**.
- The organoids currently also **don't have blood circulation**, which limits how they can grow.
- Recently, scientists transplanted these human brain organoid cultures into rat brains, where they formed connections with the rat brain, which in turn provided circulating blood.
- Scientists have touted such a system as a way to study brain diseases in a human context.
- However, human brain organoids are still nested in the rat-brain microenvironment, including the non-neuronal cells that we know play a critical role in some neurological diseases.

#### How bio-computers will be useful?

- Stem cells from individuals with neurodegenerative diseases or cognitive problems can also be used to create brain organoids.
- It is possible to **determine the biological underpinnings of human cognition**, learning, and memory by comparing the information on brain anatomy, connections, and signalling between "healthy" and "patient-derived" organoids.
- Also, they might aid in the pathophysiology analysis and treatment development for severe **neurodevelopmental and degenerative disorders including Parkinson's disease and microcephaly**.

#### Way forward

- The typical cell count of brain organoids is less than 100,000, and their average diameter is less than 1 mm, making them around three millionths the size of a real human brain.
- So, expanding the brain organoid and adding non-neuronal cells involved in **biological learning will be crucial in enhancing the brain's computing capacity**.
- The researchers will also need to create microfluidic devices, to circulate oxygen and nutrients as well as eliminate waste.
- These hybrid systems will produce enormous volumes of data (i.e., recordings of the brain activity in each neuron and its connections), which scientists will need to store and analyse utilising 'Big Data' infrastructure.
- They will also **need to develop and use advanced analytical techniques** (with help from machines) to correlate the structural and functional changes in the brain organoids to the various output variables.
- There is also a proposal to have an ethics team to parallelly identify, discuss, and analyse ethical issues as they arise in the course of this work.

### ISRO Successful In Key Test For India's Third Moon Mission

Priority: **Medium**

Primary Source: The Hindu

**Prepp Prelims Booster:** Chandrayaan 3

**Prepp Mains Booster:** Awareness in the field of Space; Indigenization of technology and development of new technology

#### Context:

- Recently, the Indian Space Research Organisation (ISRO) successfully conducted the flight acceptance hot test of the CE-20 cryogenic engine that will power the Cryogenic Upper Stage of the LVM3 launch vehicle for the Chandrayaan-3 mission.

#### Key tests

- The CE-20 cryogenic engine underwent a flight acceptance hot test, which is a crucial step in preparing it for launch. Additionally, the Chandrayaan-3 lander completed an EMI-EMC test at the U.R. Rao Satellite Centre in Bengaluru.
- Given the mission's complexity, it is necessary to establish radio-frequency communication links between these modules.
- The mission itself consists of three major modules -

- the Propulsion module,
- Lander module, and
- Rover.

### Chandrayaan-3

- Chandrayaan-3 is a follow-on mission to Chandrayaan-2 to demonstrate end-to-end capability in safe landing and roving on the lunar surface.
- It consists of Lander and Rover configuration.
- Chandrayaan-3 consists of an **indigenous Lander module (LM), Propulsion module (PM), and a Rover with the objective of developing** and demonstrating new technologies required for Interplanetary missions.
- The Lander will have the capability to soft land at a specified lunar site and deploy the **Rover** which will carry out **in-situ chemical analysis** of the lunar surface during the course of its mobility.
- The Lander and the Rover have scientific payloads to carry out experiments on the lunar surface.

### The mission objectives of Chandrayaan-3 are:

- To demonstrate Safe and Soft Landing on Lunar Surface
- To demonstrate Rover roving on the moon and
- To conduct in-situ scientific experiments.



### Way forward

- India is interested in examining the Moon's surface, particularly in regions that haven't seen sunlight in a billion years. These darker regions of the lunar surface may contain ice and rich mineral deposits, according to scientists and astronomers. The success of Chandrayaan-3 will be critical for ISRO as it will demonstrate India's capabilities to make landings for further interplanetary missions.

### Proton Beam Therapy Out Of Reach For Many With Cancer

Priority: **Medium**



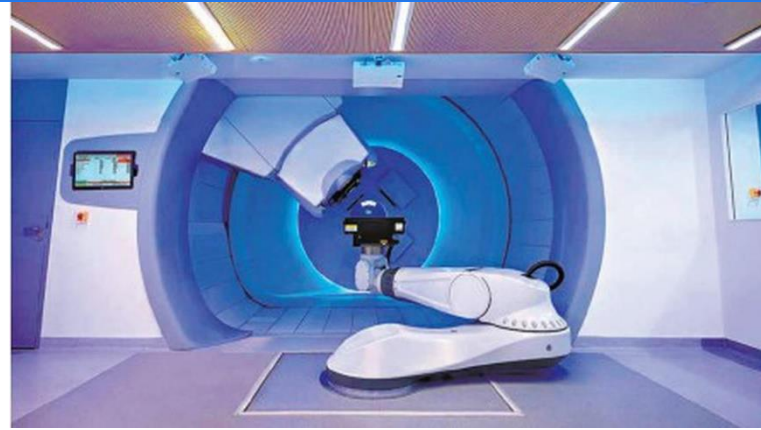
Primary Source: The Hindu

**Prepp Prelims Booster:** Proton Beam Therapy

**Prepp Mains Booster:** Awareness in the field of biotechnology; Science and Technology- developments and their applications and effects in everyday life

### Context:

- Recently, the privately-run Apollo Hospital said that it has treated up to 900 patients in its **Chennai-based Proton Cancer Centre**, of which 47% of cases are brain tumors.
- Patients with cancers of the prostate, ovaries, breast, lungs, bones and soft tissues have also seen promising results in terms of recovery through proton beam therapy.
- Apollo Hospital is the only center in South and West Asia offering PBT.



### Proton Beam Therapy

**Radiation therapy and proton beam therapy** are two types of cancer treatments that use high-energy radiation to kill cancer cells. However, there are some key differences between the two treatments.

### Differences between Radiation therapy and Cancer-beam therapy

Radiation Therapy	Proton Beam Therapy
<ul style="list-style-type: none"> <li>● Radiation therapy, also known as radiotherapy, uses <b>high-energy X-rays or other types of radiation</b> to kill cancer cells.</li> <li>● This treatment is effective for many types of cancer, including breast, lung, prostate, and brain cancer.</li> <li>● Radiation therapy can be delivered from outside the body (external beam radiation therapy) or from inside the body (brachytherapy).</li> </ul>	<ul style="list-style-type: none"> <li>● Proton therapy, on the other hand, is a more precise form of radiation therapy that uses <b>protons (positively charged particles)</b> to deliver radiation to the tumor.</li> <li>● Protons have a unique physical property that allows them to deposit their energy in the tumor with <b>minimal damage</b> to the surrounding healthy tissues.</li> <li>● This makes proton therapy a particularly effective treatment for tumors that are located near <b>sensitive organs or tissues, such as the brain, spinal cord, or eyes</b>.</li> <li>● Compared to conventional radiation therapy, proton therapy may have <b>fewer side effects</b> because it can spare healthy tissues from radiation.</li> <li>● However, proton therapy is not appropriate for all types of cancer, and it is typically more <b>expensive</b> than conventional radiation therapy.</li> <li>● Additionally, proton therapy requires <b>specialized equipment and expertise</b>, which may limit its availability in some areas.</li> </ul>

### Why India needs PBT?

- The International Association of Cancer Registries estimates that over 24,000 people lose their lives to brain tumors each year.

- In India, the estimated number of cancer incidence cases in 2022 was over 14 lakh.
- Another estimate provided by **Tata Memorial Hospital** states that up to 1,40,000 children in India are given cancer diagnoses each year and could possibly benefit from the PBT.
- There are currently 42 PBT machine installations in the United States, 35 in Europe, 26 in Japan, seven in China, three in Taiwan, two in South Korea, and just one in India.
- In the United States, each proton beam therapy unit treats 7.9 million people, whereas, in India, each unit treats 1.4 Billion people.
- It has a very skewed ratio.
- The PBT unit in the AIIMS was meant to benefit poor patients as the treatment would have been free of cost.
- Currently, Apollo Hospital has been able to reduce the cost from nearly ₹1.2 crore (as charged in the U.S.) to between ₹5 lakh and ₹30 lakh.

### Challenges faced by Cancer patients in India

- Cancer patients in India face **twin challenges** in accessing PBT:
  - there are not **enough facilities offering the treatment, and**
  - the cost can run into tens of lakhs of rupees.
- With the Indian government shelving a project to install a PBT unit in the All India Institute of Medical Sciences (Jhajjar), there is a huge unmet need for access to the treatment.
- The proposed PBT unit at the National Hadron Beam facility of Tata Memorial Hospital in Navi Mumbai is also yet to be established.
- Setting up a PBT centre is fraught with infrastructural and regulatory challenges stemming from safety concerns from the Department of Atomic Energy.
- A PBT machine is a huge contraption, up to three storeys tall and costs nearly ₹500 crore.
- In addition to the infrastructural and financial challenges, there are also safety concerns that need to be addressed.
- **Hydrogen, which is used in PBT machines**, is a highly volatile element and requires strict safety protocols to prevent leaks or other accidents.

### Railway Ties Up With ISRO For Train Tracking

Priority: **Medium**



Primary Source: The Hindu

**Prepp Prelims Booster:** Science and Technology

**Prepp Mains Booster:** Government policies and interventions for development in various sectors; Achievements of Indians in science & technology; Indigenization of technology and developing new technology.

#### Context:

- It was stated that **Centre for Railway Information Systems (CRIS)** has **collaborated with the Indian Space Research Organization (ISRO)** for live tracking to assist railways in running trains efficiently.
- Under the **Real Time Train Information System (RTIS)** project, it has begun a project that will now enable real-time tracking of train movements using **satellite imagery** which will help **Indian Railways to leverage the power of data analytics for integrated transportation.**

#### What is RTIS?

- The **Real Time Train Information System (RTIS)** was **jointly developed by Indian Railways and the Indian Space Research Organization (ISRO).**
- It is currently being carried out by the Centre for Railway Information Systems (CRIS), an organization within the Railways Ministry that designs, develops, implements, and maintains the majority of the Indian Railways' important information systems.
- The RTIS-enabled trains are outfitted with application software that can determine train movement events such as arrival, departure, run-through stations, and so on, based on predefined logic applied to spatial coordinates.

- The train speed is continuously received from GSAT satellites equipped with a GPS Aided Geo-Augmented Navigation System (GAGAN) receiver.

#### ISRO's Navigation System

- ISRO has created its own regional navigation satellite system called **Navigation with Indian Constellation (NavIC) and Bhuvan**, a web-based utility that allows users to explore a set of map-based content being deployed for tracking.
- Every locomotive is outfitted with a device and SIM card that communicates the train's true location to a satellite and receives feedback. The movement is updated every three seconds.



#### Use of Real Time Tracking

- Train Control can now track the location and speed of RTIS-enabled locomotives/trains more closely, without the need for manual intervention.
- Real-time train tracking is also useful during accidents, floods, and landslides, when it is necessary to pinpoint the train's exact location in order to render assistance. 4,000 locomotives have already been outfitted with the technology, and new locomotives are being manufactured with the tracking devices pre-installed.
- The use of Artificial Intelligence (AI) and quantum tech for railways was emphasized.

#### What is NavIC?

- Similar to the American GPS, the European Galileo, and the Russian GLONASS, the **Indian Regional Navigation Satellite System (IRNSS), also known as NavIC (Navigation with Indian Constellation)**, is a constellation of seven satellites that can be used to track the location.
- These satellites were first launched (IRNSS-1A) in 2013 and the latest in 2018.

#### Role of Data Analytics

- The railways is using data analytics to improve passenger experience, map out empty seats, and allow more passengers to receive confirmed tickets.
- Every day, nearly 2.3 crore passengers use Indian Railways, with 30 lakh using reserved tickets and about two crore using the unreserved ticketing system.
- The CRIS has now developed a handheld device that can help reduce queues by providing tickets on platforms to unreserved passengers.
- CRIS has identified 90 use cases where AI can be used to improve Railways services, such as seat allocation, prediction analysis on when freight trains will be emptied, and balancing medicine stocks across the Railways health infrastructure.

### Indian Institute Of Astrophysics Researchers Develop Low-Cost Star Sensor

Priority: **Medium**



Primary Source: The Hindu

**Prepp Prelims Booster: Star Berry-Sense**

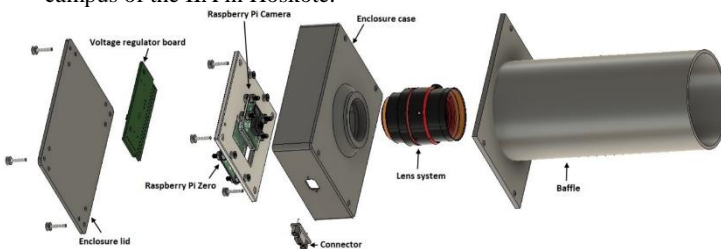
**Prepp Mains Booster:** Science and Technology, Achievements of Indians in science & technology; indigenization of technology and developing new technology, Awareness in the fields of IT, Space, Computers

**Context:**

- Recently, researchers at the Indian Institute of Astrophysics have developed a low-cost star sensor, named **StarBerry-Sense**, that could be used in astronomy and on small **CubeSat satellites**.
- The sensor proved that space-worthy instruments could be effectively built from easily accessible low-cost components.

**What is the StarBerry-Sense?**

- A new low-cost star sensor, named **StarBerry-Sense**, has been developed by researchers at the **Indian Institute of Astrophysics**.
- The sensor could be used in astronomy and on small CubeSat satellite missions to help the satellites find their orientation in space.
- The brain of the device was a Raspberry Pi, a single-board Linux computer which was popular among electronic hobby enthusiasts. In addition to the Raspberry Pi, it also contained a camera module with the whole setup housed inside a protective aerospace-grade aluminium enclosure.
- The StarBerry-Sense captures images of the sky and identifies the stars by comparing their location with its catalogue of stars.
- The information is then used to identify the section of the sky the star sensor is looking at which helps calculate the orientation of the satellite.
- According to the Department of Science and Technology, the StarBerry-Sense was ready to be used on the ISRO's PS-4 Orbital Platform.
- The StarBerry-Sense has successfully completed the vibration and thermal vacuum test that qualified it for space launch and operations, which were conducted at the environmental test facility at the CREST campus of the IIA in Hoskote.

**What is a star sensor?**

- A star sensor is an instrument that was used by a satellite to help identify its location in space.
- The position of the stars in the sky is fixed relative to each other and can therefore be used as a stable reference in the calculation of the orientation of a satellite in orbit.
- The **star sensor acts as a celestial compass** by correctly identifying the stars in the sky towards which it is pointed.

**What are the advantages of the new Sensor?**

- The StarBerry-Sense, which has been built using easily available commercial or off-the-shelf components, was estimated to cost less than 10% of similar devices available on the market.
- The device had a short development cycle.
- The modular design of the Sensor enabled the device to be easily customized for various requirements. A modified version of the Sensor would be developed for the Major Atmospheric Cherenkov Experiment (MACE) at the **Indian Astronomical Observatory (IAO), Hanle, Ladakh**

**Indian Institute of Astrophysics**

- The IIA was established in 1971 with its headquarters in Bengaluru.
- It is an autonomous Research Institute wholly financed by the Department of Science and Technology of the Government of India.

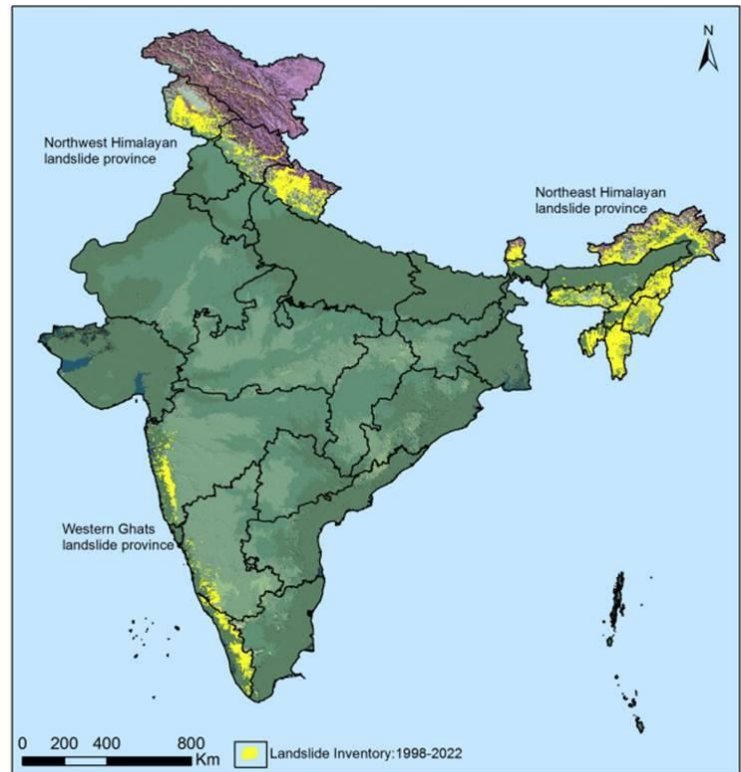
The primary areas of research of the institute include astronomy, astrophysics and related fields.

**Indian Astronomical Observatory**

- The **Indian Astronomical Observatory (IAO)**, located at a height of 14.8k feet in Hanle, Ladakh. is one of the world's highest observatories.
- It was located within the **Changthang Wildlife Sanctuary**.
- The site was chosen as Ladakh was ideal for long-term observatories and **dark-sky reserves** because of its large arid area, high elevation, and sparse population.
- The Department of Science and Technology and the Indian Institute of Astrophysics (IIA) in Bengaluru oversee the facility.

**Landslide Atlas of India: ISRO****Priority: High****Primary Source:** Indian Express**Prepp Prelims Booster:** Landslide Atlas**Prepp Mains Booster:** Disaster and Disaster Management**Context:**

- Recently, ISRO released the Landslide Atlas of India, a detailed guide identifying landslide hotspots in the country.
- According to India Meteorological Department heavy rain, floods and landslides claimed 835 lives in the country.
- A sudden movement of rock, boulders, earth or debris down a slope is termed as a landslide.

**Landslide and its Causes**

- Landslide is a sudden movement of rock, boulders, earth or debris down a slope.
- It occurs mainly in mountainous terrains where there are conducive conditions of soil, rock, geology and slope.
- Landslides are considered among the most frequent natural disasters
- They are extremely hazardous, posing a threat to human and animal lives, damaging property, roads and bridges, disrupting communication lines and snapping power lines.

**Causes**

- **Natural causes:** Heavy rainfall, earthquakes, snowmelting and undercutting of slopes due to flooding.
- **Anthropogenic causes:** Excavation, cutting of hills and trees, excessive infrastructure development, and overgrazing by cattle.

#### What are the factors that influence landslides?

- The main factors that influence landslides are **lithology, geological structures like faults, hill slopes, drainage, geomorphology, land use and land cover, soil texture and depth, and weathering of rocks.**
- In India, rainfall-induced landslide events are more common.
- All these are factored in when a landslide susceptibility zone is earmarked for planning and making predictions.

#### How are landslides classified and mapped?

- Landslides are broadly classified based on the
  - type of materials involved (rock, debris, soil, loose mud),
  - type of movement of the material (fall, topple, slide, rotational slide or translational slide), and
  - type of flow of the material. ]
  - Another category is of landslides that spread laterally.
- ISRO atlas mapped landslides based on event-based and season-based.
- A database of India's landslide-prone areas has been developed by ISRO's National Remote Sensing Centre (NRSC), Hyderabad, based on events that occurred between 1998 and 2022, especially in the Himalayas and the Western Ghats.
- In addition to aerial photographs, high resolution satellite photos were also employed to investigate the landslides that occurred over the previous 25 years.
- These images were taken using the Indian Remote Sensing (IRS-1D) PAN + LISS-III camera, the satellites ResourceSat-1 and 2, etc.
- The pan-India landslide database divides landslides into three categories: and event-based and route-based (2000 – 2017), and seasonal (monsoon seasons of 2014 and 2017).

#### Landslides in India

- India is one of the top five landslide-prone nations in the world, with at least one landslide-related mortality per 100 square kilometres reported year.
- Rainfall variability pattern is the single biggest cause for landslides in the country, with the Himalayas and the Western Ghats remaining highly vulnerable.
- Around 12.6% of the nation's geographical land area, or 0.42 million sq km, is susceptible to landslides, excluding snow-covered areas.
- Up to 66.5% of the reported landslides come from the North-Western Himalayas, followed by the North-Eastern Himalayas (18.8%) and the Western Ghats (14.7%).
- The states of Assam, Arunachal Pradesh, Sikkim, Meghalaya, Mizoram, Manipur, Tripura, and Nagaland include about half of the nation's landslide-prone territory.
- Maharashtra, Goa, Karnataka, Kerala, and Tamil Nadu account for 0.09 million sq km of the entire area that is prone to landslides, while Uttarakhand, Himachal Pradesh, and Jammu & Kashmir make up 0.14 million sq km.
- The Araku region in Andhra Pradesh along the Eastern Ghats also reports landslide episodes, but in a very limited area (0.01 million sq km).
- In the Western Ghats, despite fewer events, landslides were found to be making inhabitants significantly vulnerable to fatalities, especially in Kerala.

#### Findings by Landslide Atlas

- The highest number of landslides were recorded in Uttarakhand, Kerala, Jammu and Kashmir, Mizoram, Tripura, Nagaland, and Arunachal Pradesh between 1998 and 2022.
- The most landslides were recorded in Mizoram (12,385) during the course of the past 25 years, with 8,926 of those incidents occurring in 2017 alone.

- Similarly, 2,071 of the 2,132 landslides reported in Nagaland during this time period—out of a total of 2,132—took place during the 2017 monsoon season.
- A similar pattern was also evident in Manipur, where the wet season of 2017 was the cause of 4,559 out of 5,494 landslide disasters. Tamil Nadu saw 603 landslide events in total in 2018, out of a total of 690.
- Among these states, Kerala and Uttarakhand are experiencing an alarming trend.
- **Districts exposed to landslides:** Arunachal Pradesh (16), Kerala (14), Uttarakhand (13), Jammu and Kashmir (13), Himachal Pradesh (11), Assam (11), Maharashtra (11), Mizoram (8) and Nagaland (7) are the states having the highest number of districts at risk for landslides.
- Kerala has been consistently reporting massive landslides since it suffered the century's worst floods in 2018. The year-wise landslide events here are 2018 (5,191), 2019 (756), 2020 (9) and 2021 (29).
- The NRSC identified 147 susceptible districts, and based on the events and images gathered, Rudraprayag in Uttarakhand was placed first. It has the highest landslide density in the country, along with having the highest exposure to total population and number of houses.

### ISRO's LVM-3 To Launch Second Fleet Of 36 Satellites, Completing OneWeb Constellation

Priority: Medium



Primary Source: Indian Express

**Prepp Prelims Booster:** Science and technology

**Prepp Mains Booster:** Science and Technology- developments and their applications and effects in everyday life, Achievements of Indians in science & technology; indigenization of technology and developing new technology, Awareness in the field of Space

#### Context:

- Recently, ISRO announced that it would launch the second fleet of **OneWeb** satellites on its heaviest launch vehicle, the **LVM-3** on March 26th 2023 from Sriharikota.
- **OneWeb** is a global communications network in space which would enable seamless connectivity between governments, businesses and citizens.



#### What is the new launch project?

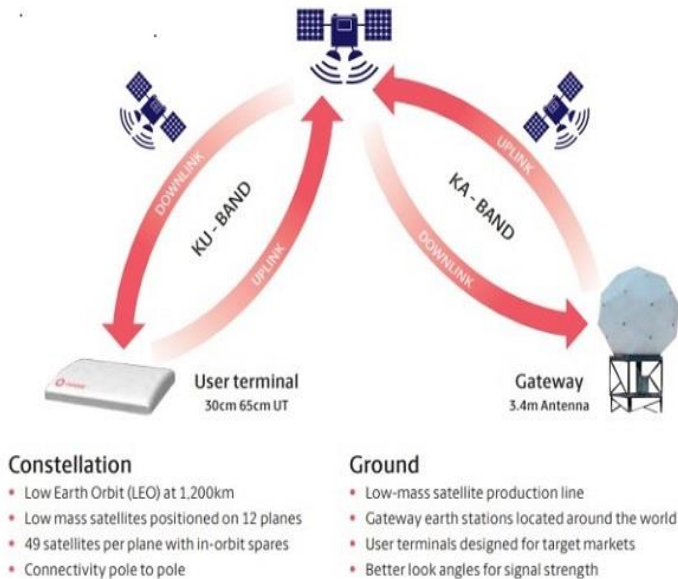
- The ISRO has announced that the country's **heaviest launch vehicle LVM-3 would be used to launch a fleet of 36 OneWeb satellites.**
- The broadband constellation would now be completed after the earlier launch of the 36 satellites in October 2022.
- The launch would take place at India's only spaceport, Sriharikota's launch pad.
- The satellites and launch vehicle have been integrated and prepared for launch at the spaceport.

#### What is the LVM-3?

- The Launch Vehicle Mark 3 was the heaviest launch vehicle to be developed by ISRO.

- The rocket was capable of launching 4,000-kilogram class satellites into GTO (Geosynchronous Transfer Orbit) and 8,000 kgs of payloads into LEO.
- The LMV was a three-stage launch vehicle that consisted of two solid propellant S200 strap-ons and a core stage comprising the L110 liquid stage and the C25 cryogenic stage.
- It was earlier called the **GSLV MARK-III** but was renamed by ISRO because it offered the ability to go to Geostationary Earth Orbits(GEO), Middle Earth Orbits (MEO) and Lower (LEO) Earth Orbits.

### How our connectivity works



### OneWeb fleet

- **OneWeb** is a London-based global communications company backed by the Government of the UK and India's Bharti group.
- The project has aimed to set up a **588-satellite strong constellation that would have high-speed low-latency global connectivity**.
- OneWeb already has active connectivity solutions in key geographies and has been adding new areas actively.
- The global communications network would allow communities, enterprises and governments across the world to be connected via a high-speed broadband network.
- OneWeb would provide secured solutions to towns, villages, municipalities, enterprises and schools even in the remotest locations across India.
- The opportunity to launch the satellites which were to be conducted by Russia was granted to India as a result of the war in Ukraine.
- Until the launch of the first fleet of the OneWeb satellites, the LVM-3 has only carried a single satellite into space on its previous two development flights and one operational flight.
- The LVM-3 had been used to launch the Chandrayaan-2 satellite into space.

### How does OneWeb work?

- OneWeb has teamed up with **NewSpace India Limited (NSIL), the Indian Space Research Organisation's commercial arm** to facilitate the launch.
- The OneWeb Constellation would operate in an **LEO Polar Orbit**.
- The satellites would be placed in 12 rings of 49 satellites with each satellite orbiting the earth in 109 minutes.
- As the earth was rotating below the path of the satellites, they would always be flying over new locations on the ground.
- The company has so far completed 17 launches of its satellite fleet.
- The previous mission in October 2022 saw 36 satellites being launched in a 600 Km circular orbit around the earth.

- The satellites have been arranged in space in a way that there was a 137-metre distance between satellites.

### Indian space sector

- According to SpaceTech Insights, **India was home to 3.6% of the world's space-tech businesses as of 2021**, making it the sixth-largest player internationally.
- 56.4% of all businesses in the space-tech ecosystem were based in the US which was the largest space-faring nation in the world.
- The U.K. (6.5%), Canada (5.3%), China (4.7%), and Germany (4.1%) are the other significant players in the sector.
- The Indian space industry was estimated to be **worth \$7 billion in 2019 and was projected to reach \$50 billion by 2024**.
- India has the distinction of being the first nation to orbit Mars on its initial attempt at a cost of \$75 million, which was significantly lesser than the costs involved with Western efforts.
- The Indian Government launched **IN-SPACe** as an autonomous body under the Department of Space to promote private participation
- The opening of the space sector to private enterprises would allow for new and advanced launch capabilities to be displayed.

### Conclusion

- Experts on the space sector in India have stated that India should seize this opportunity to expand its commercial space operations.
- India accounted for only 2% of the commercial space market despite being one of the world's larger space-faring nations and having large untapped potential which if tapped could make India a global leader in the space sector.

### National Institute Of Ocean Technology To Set Up Green, Self-Powered Desalination Plant In Lakshadweep

Priority: **Medium**

Primary Source: The Hindu

**Prepp Prelims Booster:** Low-Temperature Thermal Desalination (LTTD)

**Prepp Mains Booster:** Science and Technology- developments and their applications and effects in everyday life; Achievements of Indians in science & technology; Indigenization of technology and development of new technology.

### Context:

- The Chennai-based National Institute of Ocean Technology (NIOT) is working on making the Low-Temperature Thermal Desalination (LTTD) technology emission-free for providing drinking water in Lakshadweep.
- Currently, the desalination plants, each of which provides at least 100,000 litres of potable water every day, are powered by diesel generator sets as there being no other source of power in the islands.
- Low-temperature thermal desalination (LTTD) is a Desalination technique that uses the availability of a **temperature gradient** between two water bodies or flows to evaporate the warmer seawater at low pressures and condense the resultant vapor with the colder seawater to obtain fresh water.

### What is the Low-Temperature Thermal Desalination (LTTD)?

- The LTTD is a process under which the warm surface seawater is flash evaporated at low pressure and the vapour is condensed with cold deep seawater.
- The LTTD technology does not require any chemical pre and post-treatment of seawater and thus the pollution problems are minimal and suitable for island territories.
- However, the desalination plants currently rely on diesel generator sets for power, which means that the process is not fossil-fuel-free and also consumes diesel, a precious commodity in the islands.
- This is a serious problem because it requires shipping diesel from the mainland, which can be time-consuming and expensive.
- Currently, there are five desalination plants in operation in the Lakshadweep islands. Four more were expected to be functioning in the coming months.



- The proposed self-sustaining plant is expected to be ready later this year.
- Ocean thermal energy conversion (OTEC)**
- The NIOT, an institute under the aegis of the Ministry of Earth Sciences (MoES), has worked for years on harnessing energy from the ocean.
  - Ocean thermal energy conversion (OTEC) harnesses the temperature difference between warm surface waters and cold deep waters to generate electricity.
  - Ocean thermal technology requires a large temperature gradient [difference in temperature between the surface and the ocean depths] which is plausible for islands like Lakshadweep, however, it is unlikely to be useful for supplying power onshore (off Chennai coast).



#### NIOT

- The National Institute of Ocean Technology (NIOT) was established in November 1993 as an autonomous society under the Ministry of Earth Sciences, Government of India.

#### Lakshadweep Islands

- The Lakshadweep Islands, located in the Arabian Sea, is a group of 36 islands with a total size of 32 square kilometers and a latitude range of 8 to 12 degrees north.
- The Lakshadweep Islands are made up of the following main islands:
  - Kavaratti
  - Agatti
  - Minicoy
  - Amini
- It is India's tiniest Union Territory.
- The Lakshadweep Islands' administrative capital is Kavaratti. It's also the largest city in the Union Territory.
- It consists of 12 atolls, three reefs, five submerged banks, and 10 inhabited islands and is a single-district Union Territory.
- In Malayalam and Sanskrit, the term Lakshadweep means "a hundred thousand islands."
- The Lakshadweep Islands are located between 280 and 480 kilometres off the coast of Kerala.
- These islands are part of the **Reunion Volcanic Hotspot**.
- **Coral deposits** cover the whole Lakshadweep island group.
- Many people depend on **fishing as their primary source of income**.
- **Storm beaches** of the Lakshadweep islands are made up of unconsolidated pebbles, shingles, cobbles, and boulders.
- The biggest island in the Lakshadweep group is Minicoy Island, which is located to the south of the nine-degree canal.

- **Minicoy and the Maldives are separated by the 8 Degree Channel** (8 degrees north latitude).
- The island of Minicoy is separated from the main Lakshadweep archipelago by the **9 Degree Channel (9 degrees north latitude)**.
- Forests are non-existent in the Lakshadweep area.
- Pitti Island is home to sea turtles and a variety of pelagic birds, including the brown noddy, lesser crested tern, and larger crested tern. **The island of Pitti has been designated as a bird sanctuary.**
- The majority of the islands are low-lying, rising hardly more than five meters above sea level.
- Their landscape is flat, with no relief features like hills, streams, or valleys.

### Scientists Devise 'Gloscope' To Bring Fluorescent Microscopy To Schools

Priority: Medium



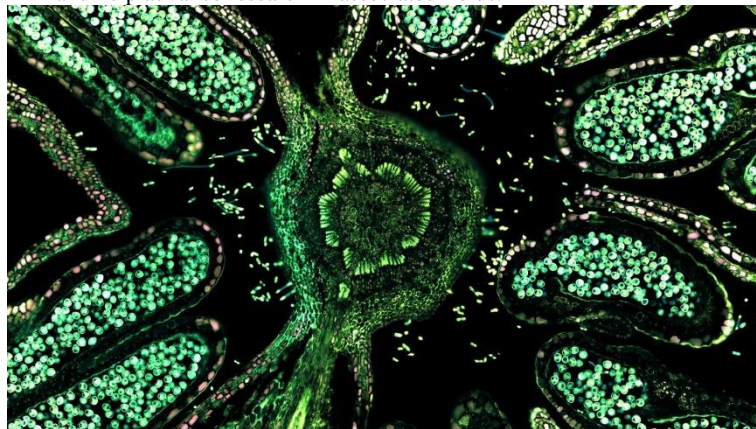
Primary Source: The Hindu

**Prepp Prelims Booster:** Science and Technology

**Prepp Mains Booster:** Science and Technology- developments and their applications and effects in everyday life.

#### Context:

- Recently, researchers at Winona State University, Minnesota have designed a **cost-effective gloscope** which could be used to study an object and how it reemits light.
- The device could improve students' access to **fluorescence microscopy** and help advance research in associated fields.



#### What is fluorescence microscopy?

- **Fluorescence microscopy** is the study of how an object reemits light that it has absorbed, which is known as its fluorescence.
- When an object is illuminated with light of a particular wavelength, it is absorbed by the particles in the object and then reemitted at a higher wavelength i.e another colour.
- The objects are infused with these particles also known as **fluorophores** prior to being studied under the microscope.
- Fluorescence microscopes are capable of tracking the movement of fluorophores inside the object which reveals the object's internal shape and other characteristics.
- Fluorescence microscopy differs from optical microscopy as the latter studies how an object absorbs, reflects and scatters visible light.

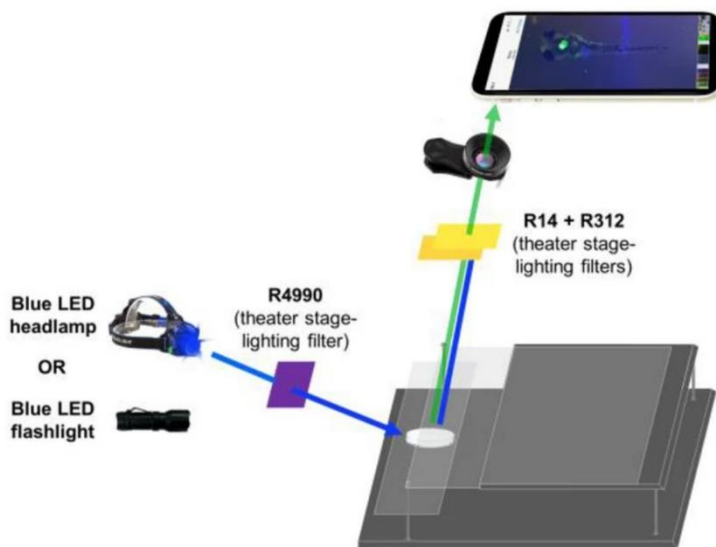
#### What are the applications of fluorophores?

- An example of a fluorophore is the **Hoechst stain which binds to DNA and has been discovered to be excited by ultraviolet light**.
- If a tissue sample injected with the Hoechst stain is placed under a fluorescence microscope, the stain will reemit the absorbed UV light at a different wavelength.
- This will indicate the location of DNA in the cells i.e. the nuclei which would help in further study.

- Various kinds of fluorophores have been developed by scientists which have been used in the study of various compounds from DNA to protein complexes.
- In addition to its use in biochemistry and immunohistochemistry (identifying antigens through staining), fluorophores are also used in industrial applications such as
  - The formulation of cosmetics,
  - Textile dyeing and in laundry detergents,
  - Development of organic LEDs,
  - In posters and paintings and highlighter dyes,
  - Solar panels to collect light of different wavelengths.
  - As sea dyes to help in airborne and seaborne rescue operations

#### What is the new device?

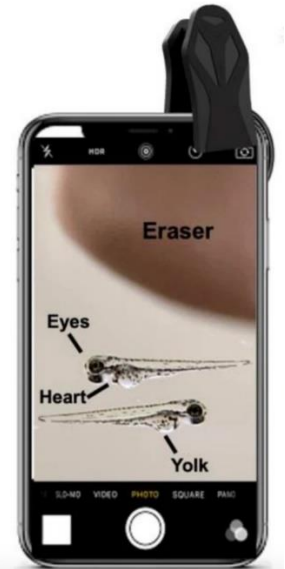
- Scientists at Winona State University, Minnesota have created a **glowscope or a rudimentary fluorescence microscope** which would only cost around \$30-50 or ₹2,50-4100.
- In comparison, fluorescence microscopes used by researchers cost anywhere between a lakh to crores of rupees.
- As such, schools and universities in less developed countries would be able to afford these glowscopes which would encourage research in those nations.
- The new device consisted of two plexiglass surfaces, an LED flashlight, three theatre stage-lighting fillers, a clip-on macro lens, and a smartphone.
- The lens was attached to the smartphone which was then placed on one of the surfaces that was suspended at a height while the other surface was placed below and contained the object.
- The researchers conducted a study of zebrafish embryo which were injected with different fluorophores depending on the area of study while LED flashlights emitting light of corresponding wavelengths was used as the source of illumination.
- One stage-lighting filler was placed between the object and the flashlight while the other two were placed between the object and the smartphone.
- The filters ensured that light of the right frequency reached the object and that light of a suitable frequency was reemitted post-fluorescence.
- The study demonstrated that the devices were capable of detecting green and red fluorophores and detecting and monitoring the changes to heart rate and rhythmicity in embryonic zebrafish.



**Live display**  
No clip-on lens  
(smartphone camera only)



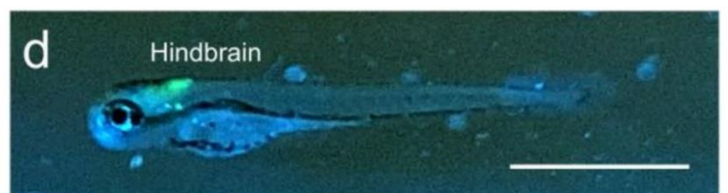
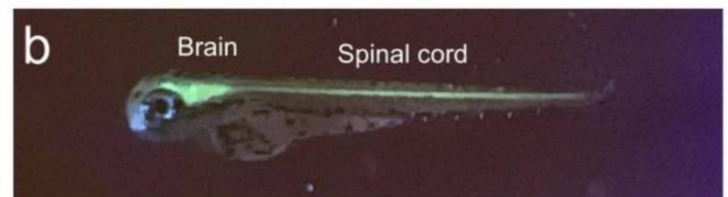
**Live display**  
+ Clip-on lens



#### Observations of the study?

- Researchers were able to successfully image the **spine, brain (using the Ds Red fluorophore), heart (mCherry) and head and jaw bones (mRFP)**.
- It was noted that the smartphone camera and macro lens allowed them to zoom in and out as necessary and adjust the distance between the sample and the smartphone.
- The total cost of the apparatus was estimated to be around \$30-50.

#### Green fluorescence viewing



#### How accessible is the device?

- Although the device is cheap and can easily be assembled by purchasing required parts over the internet, other factors like acquiring the fluorophores and biological samples as well as the need for an understanding of physics to choose the ideal wavelength of light have complicated the glowscope.

- In comparison, the Foldscope, released by Stanford University in 2014 which was made wholly of paper and took only 30 minutes to assemble enabled even children access to cell research,
- The Glowscope was more complicated than the Foldscope but the availability of a fluorescence microscope has enabled more universities to acquire them, opening new avenues of research.
- Resource-poor labs can use the Glowscope and Foldscope together to better understand the microbial world and apply it for human gain.

### Scrub Typhus: Combination Therapy Can Save More Lives

Priority: Medium



Primary Source: The Hindu

Prepp Prelims Booster: Scrub Typhus

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

#### Context:

- Recently, a trial conducted in India has concluded that **combination therapy of azithromycin and doxycycline** showed faster resolution of complications in **scrub typhus** patients than monotherapies of either drug.
- Scrub typhus was prevalent in India, reporting at least 25% of the total disease burden.



#### What is scrub typhus?

- Scrub typhus or Bush typhus is a bacterial disease caused by the bacteria **Orientia tsutsugamushi**.
- The disease spreads through bites of **Larval mites of the trombiculid family**, which are also known as **Chiggers**.
- The mites typically breed in July-March and require a blood meal only during the larval stage which is usually acquired from rodents.
- It typically occurred in the rural areas of Southeast Asia, Indonesia, China, Japan, India and northern Australia.
- People affected by the life-threatening disease display symptoms such as fever, headaches, rashes and body aches.
- In complicated cases, this vector-borne disease may cause pneumonia, meningoencephalitis, gastrointestinal bleeding, acute renal failure, and acute respiratory distress syndrome. It also affects the central nervous system, cardiovascular system, respiratory system, renal system, and gastrointestinal system.

#### Disease Burden

- The disease is a major public health concern in South and Southeast Asia, with over 1 million cases reported from the region with a 10% mortality.
- **India was also a hotspot of the disease, carrying over 25% of the total disease burden.**
- A seroprevalence study conducted five years ago by CMC Vellore discovered that the community surveyed showed over 30% antibody

positivity for the bacteria, indicating a significant number of people had been exposed to the pathogen.

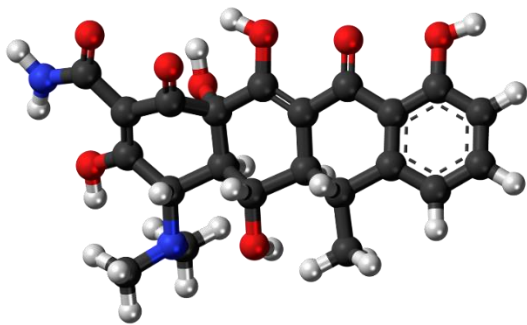
- Scrub typhus has emerged as a major public health concern because of the **high mortality rate in severely affected patients** despite timely diagnosis and treatment.
- A 2014 study published by researchers from CMC Vellore indicated that scrub typhus patients with multiple-organ dysfunction had a 24% mortality rate.
- The usual treatment procedure for scrub typhus consisted of **monotherapies of either azithromycin or doxycycline**.
- The infection does not cause typical symptoms which has made early and accurate diagnosis difficult.
- Despite the high disease burden and mortality, awareness about the disease, its spread and its symptoms was very low.
- According to the researchers, awareness building and early diagnosis by CMC helped reduce the disease burden by half in 10 years even with monotherapies.

#### Combinational therapy

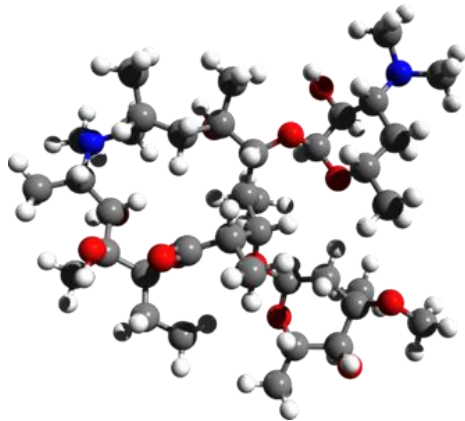
- A random trial conducted in seven centres in India has shown that patients who received a combination of the two drugs resolved disease-related complications quicker than patients who received either one.
- The trial consisted of 800 patients of which 265 were administered doxycycline, 263 azithromycin, and 266 combination therapy.
- The 28-day mortality rate was 12.1% in all three groups under the trial, but the quicker resolution of complications could potentially save thousands of lives.
- Patients in the combinational group also showed **lower renal, respiratory, hepatic and central nervous system complications** but researchers have claimed that a larger number of patients was required to conclusively prove if lives could be saved.
- However, it would be unethical to continue the trial since the benefits of the combinational therapy had been clearly established.
- The study also showed that **patients with multiple organ dysfunction who arrived late have a higher risk of mortality** and treatment may not be effective. 50% of the patients who died during the study, died within 48 hours of arrival.
- The researchers believed that the reduced complications would prove especially beneficial in underdeveloped regions where scrub typhus was endemic and advanced support care was limited.
- Although doxycycline was routinely administered as a monotherapy for scrub typhus patients, it had to be done so intravenously in severe patients.
- Azithromycin was widely available in its intravenous formulation, making the combination therapy an attractive option.
- The combination therapy was able to achieve faster clearance of the bacteria compared to monotherapies due to the complementary effect of the drugs.
- **The concentration of azithromycin was 100 times greater inside the cell where the bacteria were present than in the plasma, where the concentration of doxycycline was greater.**
- The complementary mechanism of the two drugs which prevent the bacteria from producing proteins at two different sites was considered the main reason for the quicker bacterial clearance.

#### Conclusion

- India was a hotspot for the scrub typhus disease and the use of the combinational therapy that produced faster and more efficient treatment would help reduce the mortality rate, especially in less developed regions of the country.
- Increased awareness among the general public and early diagnosis of patients needs to be encouraged in order to tackle the disease that accounted for around 500-1000 patients at CMC Vellore alone.



- **Doxycycline** is a broad-spectrum antibiotic used in the treatment of some bacterial and parasitic infections such as bacterial pneumonia, acne, chlamydia infections, Lyme disease, cholera, typhus, and syphilis.



- **Azithromycin** is an antibiotic used to treat bacterial infections, such as bronchitis, pneumonia, sexually transmitted diseases, and infections of the ears, lungs, sinuses, skin, throat, and reproductive organs

- The project was estimated to be worth around \$8 billion dollars with construction set to begin in the winter months as ice roads were required for the rest of the facilities to be constructed.



#### Why has it been opposed?

- According to a report by the BBC, the project was estimated to produce around 180,000 barrels of oil a day, generating nearly 278 million tonnes of CO<sub>2</sub>, which was equal to the emissions produced by adding 2 million gas-powered cars to the road.
- An environmental impact assessment by the US government's Bureau of Land Management-Alaska highlighted that the project could prove to be dangerous to the atmosphere, freshwater sources, migratory birds and endemic animals like whales and caribou.
- The project would accelerate the warming of the Arctic leading to rising sea levels and global warming.
- The construction of the project could disturb the natural wildlife of the region and lead to the pollution of a pristine stretch of land.
- Oil drilling projects posed threats of emissions, warming and leakages which would be toxic to the area.
- More than one million letters of protest have been written to the White House while a Change.org petition demanding the project be stopped has been signed by over three million people.
- Approval granted to the project was seen as a violation of the electoral promises made by the Biden government to not permit any new gas or oil exploratory projects.
- Politicians like former President Al Gore have expressed concern that the project could undermine the USA's efforts to combat the climate crisis and its commitments under various international agreements.



#### What measures have been taken to limit the effects?

- The Inflation Reduction Act, of 2022 contained provisions worth thousands of dollars in tax credits that would enable a quicker transition from fossil fuel-based energy.
- The International Energy Agency has stated that governments must stop approving new oil and gas drilling projects in order to limit the damage to the environment.

### Biden Approves The Willow Project — What Is It And Why Has It Invited So Much Backlash?

Priority: **Medium**



Primary Source: Down To Earth

**Prepp Prelims Booster:** Project Willow

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

#### Context:

- Recently, the Government of the USA formally approved **Willow, a large-scale oil drilling project in Alaska**.
- The controversial project which was expected to produce thousands of jobs and generate additional revenue for the region has been opposed over concerns about its impact on the environment and the USA's climate change commitments.

#### What is Project Willow?

- The **Willow Project** is a decades-long drilling venture in the US government-owned **National Petroleum Reserve in Alaska**.
- The area where the project has been proposed would be capable of holding up to 600 million barrels of oil.
- Houston-based energy company ConocoPhillips, which is the only firm permitted to drill in the National Petroleum Reserve had proposed the project which had been approved in 2020 as a five-pad project but was later reduced to a three-pad project under the Biden government.
- The drilling project would be situated inside the reserve, which is located around **320 Km north of the Arctic Circle** and is the USA's largest stretch of pristine land.

- The government has also imposed limits on the mining of oil and gas in sixteen million acres of Alaska and the Arctic Ocean as a part of the transition from fossil fuel with the construction of facilities like roads, pipelines and gravel mines to be built on Native allotments in the region.
- Oil and Gas leasing has been prohibited in the entire Arctic Ocean region controlled by the USA which would protect around 16 million acres from drilling projects.
- The Protected areas include the **Teshkepuk Lake, Utukok Uplands, Colville River, Kasegaluk Lagoon and Peard Bay** which are the habitats of animals such as the grizzly bear, caribou, polar bears and migratory birds.
- The Government was also expected to introduce new rules which blocked oil and gas leases on more than 13 million of the 23 million acre-wide National Petroleum Reserve and restrict offshore oil leasing in the Arctic Ocean and the North Slope of Alaska.

### Conclusion

Gas and Oil projects could lead to environmental damage in the form of increased emissions and in the case of an oil spill adversely impact the lives of marine flora and fauna. New gas and oil drilling projects must not be sanctioned in line with the commitments of various countries towards transitioning from fossil fuel-based economies to renewable and cleaner sources of energy.

#### International Energy Agency

- The **International Energy Agency (IEA)** was established in 1974 as the principal international forum for cooperation on a range of energy-related issues, including supply security, long-term policy, information transparency, energy efficiency, sustainability, research and development, technology collaboration, and international energy relations.
- The IEA is an **independent intergovernmental organisation operating within the OECD** that collaborates with governments and businesses to create a safe and sustainable energy future for everyone.
- It has 31 member nations, 11 association nations, and 4 accession nations.
- The **IEA only admits countries that are also OECD members.**
- The IEA mandates that its member nations keep enough oil on hand to cover their net imports for at least 90 days.
- In **2017, India joined the IEA as an Associate Member**, but has been invited to become a full member by the IEA.

### NASA Hands Over NISAR Satellite To ISRO

Priority: **Medium**



Primary Source: The Hindu

**Prepp Prelims Booster:** NISAR

**Prepp Mains Booster:** Awareness in the field of Space

#### Context:

- Recently, the Indian Space Research Organisation (ISRO) received the **NASA-ISRO SAR (NISAR)** satellite from the U.S. space agency.
- NISAR is a Low Earth Orbit observatory jointly developed by NASA and ISRO.

#### About NISAR

- NISAR is a joint **Earth-observing mission** between NASA and the Indian Space Research Organization (ISRO) with the goal **to make global measurements of the causes and consequences of land surface changes** using advanced radar imaging.
- NISAR will be the **first radar of its kind in space to systematically map Earth**, using two different radar frequencies (L-band and S-band) to measure changes in our planet's surface less than a centimeter across.
- Synthetic aperture radar (SAR) refers to a technique for **producing fine-resolution images** from a resolution-limited radar system.

#### Significance

- **Earth Science:** NISAR will map the entire globe in 12 days, according to ISRO, and provide spatially and temporally consistent data for

understanding changes in Earth's ecosystems, ice mass, vegetation biomass, sea level rise, groundwater, and natural hazards, such as earthquakes, tsunamis, volcanoes, and landslides.

- It will also add to our understanding of our planet's hard outer layer, called its crust.
- **Disaster Management:** NISAR's global and rapid coverage will provide unprecedented opportunities for disaster response, providing data to **assist in mitigating and assessing damage**, with observations before and after disasters in short time frames.
- **Accessible data:** NISAR's data will be open access, and more policymakers worldwide will be able to use them to meet scientific, societal, and commercial goals.
- The satellite is expected to be launched in 2024 from Satish Dhawan Space Centre in Andhra Pradesh, into a near-polar orbit.



### Small Debris Orbiting Earth Pose Threats To Space Assets

Priority: **Medium**



Primary Source: The Hindu

**Prepp Prelims Booster:** Science and technology

**Prepp Mains Booster:** Achievements of Indians in science & technology; Indigenization of technology and developing new technology; Space Technology

#### Context:

- Recently the **Indian Space Research Organization (ISRO) successfully carried out a controlled re-entry for the decommissioned Megha-Tropiques 1 (MTI).**
- The satellite, launched more than a decade ago, was designed **to study clouds in the tropical region of the world.** It was expected to make a final impact in the Pacific Ocean.



News Summary

- It was stated by ISRO that the satellite was brought down as a part of its commitment to reduce space debris, especially in the much crowded Lower Earth Orbit.
- Orbital debris is not just India's problem. All the countries and several private companies which have invested billions of dollars in space assets need innovative solutions to tackle this issue.

#### What is the concern?

- The surging number of rocket launches and the increasing number of payloads carried in recent years have made the space junk problem acute, especially after private companies such as SpaceX launch thousands of satellites to provide Internet access.
- In 2022, over 2160 objects were launched into space, about 300 more than 2021 and 900 more than 2020.

#### About Megha-Tropiques

- Megha-Tropiques is an **Indo-French Joint Satellite Mission** that studies the water cycle and energy exchanges in the tropics.
- **Objective:** Its objective is to comprehend the life cycle of convective systems that influence tropical weather and climate, as well as their role in the associated energy and moisture budget of the tropical atmosphere.
- It provides scientific data on the contribution of the water cycle to the tropical atmosphere, including information on condensed water in clouds, water vapour in the atmosphere, precipitation, and evaporation.
- The Megha-Tropiques satellite, with its circular orbit inclined 20 degrees to the equator, is a one-of-a-kind climate research satellite that should also help scientists refine prediction models.
- The Megha-Tropiques has day, night, and all-weather viewing capabilities; it passes over India nearly a dozen times per day, providing scientists with an almost real-time assessment of cloud evolution.

#### India's Contribution to the threat

- India's contribution is 0.5%. India added to the problem in 2019 by testing the ASAT missile which targeted a live satellite in Lower Earth Orbit (LEO).
- It resulted in 400 pieces of orbital debris and invited criticism. It was termed as a terrible thing as it posed threats for astronauts aboard the International Space Station (ISS).
- While all the trackable debris from India's test have re-entered earth in the subsequent years, over 50 pieces from a breakup event in the fourth stage of PSLV C3 in 2001 are still in orbit.

#### Measure Taken

- Debris has the potential to cause serious accidents, the cost of maneuvers to avoid collision is high.
- In 2022, the International Space Station (ISS) had to conduct two such collision avoidance maneuvers due to threats posted by debris from Russia's ASAT test in 2021.
- Such maneuvers are costly as they require hours of monitoring, fuel for movement and also result in loss of data as instruments are turned off during such operations.
- India conducted 21 such corrections for its satellite in 2022, the highest ever for the country.
- In 2021 ISRO monitored 4,382 events in Lower Earth Orbit (LEO) and 3,148 events in Geostationary orbit (GEO) in which debris or other space objects came close to India's space assets.

#### Conclusion

ISRO has taken proactive measures in recent years to improve compliance with internationally accepted guidelines on space debris mitigation. Efforts are being made to develop indigenous capabilities for tracking and monitoring space objects in order to protect Indian space assets. The ISRO System for Safe and Sustainable Space Operations Management (IS4OM) has been established to spearhead such activities. The controlled reentry exercise is yet another testament to India's ongoing efforts to ensure the long-term viability of outer space activities.

## The Piezoelectric Effect In Liquids

Priority: **Medium**



Primary Source: The Hindu

**Prepp Prelims Booster:** Piezoelectric effect

**Prepp Mains Booster:** Science and Technology- developments and their applications and effects in everyday life.

#### Why in the news?

- Recently, according to a study published in the latest edition of the Journal of Physical Chemistry Letters for the first time, scientists have reported evidence of the **piezoelectric effect in liquids**.
- For 143 years, the effect has been recognized and **only observed in solids**, but a recent discovery challenges the theory behind the effect and opens up possibilities for unforeseen applications in electronic and mechanical systems.
- The effect was found in pure 1-butyl-3-methyl imidazolium bis(trifluoromethyl-sulfonyl)imide and 1-hexyl-3-methyl imidazolium bis(trifluoromethylsulfonyl)imide — both ionic liquids (**liquids which are made of ions instead of molecules**) at room temperature.

#### What is the piezoelectric effect?

- The piezoelectric effect is a phenomenon in which certain materials, such as quartz, generate an electric charge in response to applied mechanical stress.
- **Example:** Quartz is the well known piezoelectric crystal.
- Quartz is used in analog wristwatches and clocks.
- Such crystals are also used in cigarette lighters, electric guitars, TV remote controls, audio transducers, and other instruments where **converting mechanical stress to a current is useful**.

#### How Piezoelectric effect is generated in Quartz?

- Quartz is silicon dioxide (SiO<sub>2</sub>) and has a crystal structure where silicon and oxygen atoms are positioned at the vertices of three-sided pyramids. The pyramids repeat in a pattern to form the crystal.
- The charge of each pyramid is located slightly away from center.
- When pressure **is applied to the crystal**, the **charge shifts even further** from the center, resulting in the **generation of a small voltage**. This is the origin of the **piezoelectric effect in quartz**.



#### Why is the effect in liquids surprising?

- The piezoelectric effect has traditionally been observed in solid materials due to **their organized structures**, which allow for a predictable response to mechanical stress.
- The **effect is explained** by a combination of **Hooke's law** and the properties of **dielectric materials**, which are affected by an electric field despite not conducting electricity. However, Hooke's law is not as clear in materials that are not very compressible.
  - Hooke's law states that for small deformations the stress and strain are proportional to each other. (stress  $\propto$  strain).
- According to the researchers, the observation of the effect in ionic liquids "appears on the surface to be **inconsistent with the present model**."

- The findings suggest that ionic liquids may have some sort of organisation that is not present in "normal" liquids.
- The discovery of the piezoelectric effect in ionic liquids will require specific modelling because normal liquids and ionic liquids of the kind tested in the study respond differently at the molecular level when an electric charge is applied to them.
- This is because the molecular structure of ionic liquids is different from that of normal liquids.
- According to the present understanding of the piezoelectric effect, a certain degree of structural order in the material is required in order to see the effect.
- In other words, the effect needs the atoms or molecules in the substance to remain in their consistent configuration.
- Normal liquids and gases, do not have structural order, hence they don't show the piezoelectric effect.

#### What new applications are possible?

- The discovery of the piezoelectric effect in room-temperature ionic liquids opens up new possibilities for applications that were previously inaccessible with solid-state materials.
- Compared to traditional piezoelectric materials, the ionic liquids are more **recyclable and environmentally friendly**.
- In addition to the piezoelectric effect, the room-temperature **ionic liquids also exhibit the inverse piezoelectric effect**, meaning they become distorted when an electric charge is applied.
- The inverse piezoelectric effect converts electrical energy to mechanical energy.
- This property can be **utilized to control how the liquids bend light passing through** them by varying the current passing through them.
- This suggests the possibility of creating lenses with dynamic focusing abilities using vials of these liquids.
- Developing a theory to describe how these liquids act could help scientists understand the behaviour, which could lead to the discovery of more effective techniques to manipulate them and the creation of novel applications.

### RBI's New Pilot Project On Coin Vending Machines

Priority: **Medium**



Primary Source: The Hindu

**Prepp Prelims Booster:** QR code-based Coin Vending Machine

**Prepp Mains Booster:** Indian Economy; Growth and Development

#### Context:

- Recently, RBI Governor Shaktikanta Das had stated during the most recent **Monetary Policy Committee (MPC)** address that the apex banking regulator, in collaboration with banks, **would launch a pilot project to evaluate the operation of a QR-code based coin vending machine**.
- The pilot project is initially planned to be rolled out at 19 locations in 12 cities across the country.

#### What is the project about?

- The vending machines would dispense coins, with the appropriate amount debited from the customer's account via the **Unified Payments Interface (UPI)**, instead of physically tendering banknotes.
- Customers would be able to withdraw coins in the desired quantities and denominations.
- The central concept here is to make coins more accessible.

#### QR code-based Coin Vending Machine (QCVM)

- The QCVM is a cashless coin dispensing machine that will dispense coins against a debit to the customer's bank account via the Unified Payments Interface (UPI), eliminating the need for physical tendering of banknotes and their authentication.
- Customers will also be able to withdraw coins in required quantities and denominations from QCVMs.



#### What Is Unified Payments Interface (UPI)?

- It is an enhanced version of Immediate Payment Service (IMPS), around-the-clock funds transfer service that enables faster, easier, and more seamless cashless payments.
- UPI is a technology that enables the consolidation of several bank accounts into a single mobile application (of any participating bank), combining different banking services, seamless fund routing, and merchant payments under one hood.
- UPI is currently the largest of the systems operated by the National Payments Corporation of India (NPCI), which also includes the National Automated Clearing House (NACH), the Immediate Payment Service (IMPS), the Aadhaar-enabled Payment System (AePS), the Bharat Bill Payment System (BBPS), and RuPay.

#### What is the purpose?

- **Departure from traditional machines:** The proposed mechanism for coin dispensation would be a departure from traditional machines that relied on banknotes to facilitate coin exchanges.
- **Eliminate the need for physical banknote:** The proposed machine would eliminate the need for physical banknote tendering and authentication.
- **Fake notes:** It was discovered that the currency fed into the machines (for coin exchange) was frequently found to be fake and could not be checked at the time. As a result, the mandate to eliminate physical tendering of banknotes.

#### Installation of Machines

- The pilot will initially be launched in 19 locations across the country in 12 cities.
- The machines are designed to be installed in public places such as railway stations, shopping malls, and marketplaces, with a particular emphasis on ease of use and accessibility.

#### Recent Status of Coins

- **Circulation of Coins :** As of December 30, last year, the total value of circulation of rupee coins was Rs.28,857 crore. The figure is an increase of 7.2% from the previous year.
  - The circulation of small coins remained constant at Rs.743 crore. Coins in India are issued in denominations of 50 paise, one rupee, two rupees, five rupees, ten rupees, and twenty rupees.
  - Small coins are those worth less than 50 paise, while rupee coins are those worth one rupee or more.
- **Volume of digital payments:** According to the Digidhan Dashboard, the volume of digital payments until December 2022 was approximately Rs.9,557.4 crore. The number includes mobile banking, internet banking, IMPS, BHIM-UPI, and NEFT, among other services.

#### Conclusion

UPI is a system that integrates multiple bank accounts into a single mobile app, combining several banking features, seamless fund routing, and merchant payments under one hood. The reliance on UPI for coin dispensing is

particularly noteworthy. The payments interface for feature phones was launched in March of last year. The apex regulator is also running a pilot program for the Central Bank Digital Currency (CBDC).

## RBI Has Permitted Banks From 18 Countries To Trade In Rupee

Priority: **Medium**



Primary Source: The Hindu

**Prepp Prelims Booster:** Vostro Rupee Accounts

**Prepp Mains Booster:** Government policies and interventions; Indian Economy; Effects of liberalization on the economy; Inclusive growth

### Context:

- Recently, the Government announced that the **Reserve Bank of India (RBI) has authorized banks from 18 countries to open Special Vostro Rupee Accounts (SVRAs)** for settling payments in Indian rupees.

### News Summary

- SVRAs could be set up by banks of partner countries by approaching Authorized Dealer (AD) banks in India that may get permission from the RBI after the due procedure.
- The RBI had granted approval to “domestic and foreign AD Banks in 60 cases for opening SRVAs of banks from 18 nations — Botswana, Fiji, Germany, Guyana, Israel, Kenya, Malaysia, Mauritius, Myanmar, New Zealand, Oman, Russia, Seychelles, Singapore, Sri Lanka, Tanzania, Uganda and the United Kingdom.
- Of the 18 countries mentioned, Russia has been vociferous in employing commerce in local currency for the broader goal of “de-dollarisation”.



### Background

- In February 2023, the government announced that 20 Russian banks including Rosbank, Tinkoff Bank, Centro Credit Bank, and Credit Bank of Moscow had opened **Special Vostro Rupee Accounts** in partnership with Indian banks.
- It will help facilitate **global trade** and reduce the **demand for foreign currencies** like the US dollar to help settle **current account-related trade flows**.

### What are Special Vostro Rupee Accounts (SVRAs)?

- SVRA is an account that domestic banks hold for foreign banks in the former's domestic currency, the rupee, allowing domestic banks to provide international banking services to their clients who have global banking needs without having to be physically present abroad.
- It is a supplement to the existing system that employs freely convertible currencies.
- They are used by domestic banks to gain wider access to financial markets and provide international banking services to clients without being physically present.
- It is an integral component of correspondent banking, which involves a bank or intermediary conducting transactions, facilitating wire transfers, accepting deposits and gathering documents on behalf of the other bank.

### How did it come into being?

- It came against the backdrop of the commodities crisis caused by Western sanctions imposed on Russia when President Vladimir Putin started the so-called “special military operation” against Ukraine on February 24, 2022.
- Trading with local currencies has been proposed as a way to escape the current wave of wartime international sanctions that are impeding supply chains and global trade flows.

### Need of SVRAs

- The Economic Survey (2022-23) pointed out that SRVA would reduce the net demand for foreign exchange, for the settlement of current account-related trade flows.
- It would also reduce the need for holding foreign exchange reserves and dependence on foreign currencies, making the country less vulnerable to external shocks.
- Indian exporters could get advance payments in INR from overseas clients and in the long-term promote INR as an international currency once the rupee settlement mechanism gains pull.

### What is the Eligibility Criteria?

- Banks must include clearance from the apex banking regulator (e.g. RBI).
- The correspondent bank is not from a nation identified in the latest FATF Public Statement on High Risk & Non-Co-operative jurisdictions.
- The reporting of cross-border transactions has to be done in accordance with the prevailing rules under the Foreign Exchange Management Act (FEMA), 1999.

### Conclusion

In the recent year, India has finalized trade treaties with partner nations such as the UAE and Australia and initiated negotiations with others such as the United Kingdom and the European Union, all while making gains for the national currency in bilateral and global commerce.

## Moody's Raises GDP Growth Forecast For India To 5.5% In 2023

Priority: **Medium**



Primary Source: Indian Express

**Prepp Prelims Booster:** GDP

**Prepp Mains Booster:** - Indian Economy and issues relating to planning, mobilization, of resources, growth, development and employment

### Context:

- Recently, the global credit rating firm Moody's Investors Services raised India's projected growth rate from 4.8% to 5.5% in 2023 and 6.5% in 2024.
- According to Moody's India had the highest growth rate among the G-20 countries followed by China (5%) and Indonesia (4.8%).

### What has Moody's projected?

- According to Moody's Investors Services, India's **GDP was projected to grow at a rate of 5.5% in 2023 and 6.5% in 2024**.
- The firm had in November 2022, projected a growth rate of 4.8% for India.
- India had the highest growth rate of all G-20 countries** followed by China at 5% and Indonesia at 4.8%.
- Among the developed states, Japan was projected to grow by 7.5%, the US by 0.9%, the Euro area by 0.5%, and the UK by (-)0.4%.
- Further rate hikes of 50-75 basis points in the USA were expected, with the terminal rate rising to around 5.25 - 5.50% after the next two or three meetings of the Federal Open Market Committee (FOMC).

### On Emerging Markets

- According to data released by the Indian Government, the GDP growth rate was lowered to 4.4% in the December 2022 quarter from 6.3% in the previous quarter.
- The upward revisions made in India's estimates by Moody's have accounted for the **increase in capital expenditure budget allocation**



from 7.5 Lakh Crores in FY22-23 to 10 Lakh Crores(3.3% of Budget) in FY23-24.

- India along with other **emerging market countries** like Brazil, and Mexico have proved to have been more resilient than expected to the global and domestic financial environment tightening in the last year.
- An eventual easing of the USA's monetary policy tightening will help stabilize and improve capital inflow to emerging markets.
- However, if demand conditions did not weaken and inflation remained elevated, this could lead to another round of monetary tightening which would impact economic growth.
- Moody's also cautioned that **emerging market countries would remain vulnerable to heightened financial market volatility as long as inflation was not brought under control in the developed countries.**



### On Developed Economies

- Oil prices were expected to remain volatile in 2023 as China reopened after the pandemic. A surge in prices could adversely affect inflation control measures across developed and developing economies and strain household finances.
- Economic activity in Europe was boosted by a warm winter, fully stocked gas reserves and increased supply of LPG from non-Russian sources, and government assistance supported the European economy amid the tensions on the continent.
- The energy outlook remained uncertain as governments had to find ways to ensure energy security for this and the next year.
- In the US, the Fed had slowed the hike rates but they were expected to remain high amid tensions in the labour markets and weaknesses in the financial market.

### Conclusion

- Strong data from the second half of 2022 created large carry-over effects for the Indian economy in 2023. As a result, Moody's has raised India's projected growth rate making it the fastest-growing country among the G-20.

### GDP

- **Gross Domestic Product**, also known as GDP, is the aggregate of the final prices of all goods and services produced over a given time period in an economy.
- It is regularly estimated as a measure of the value of a nation's economic activity.
- A nation's GDP increases when the total value of goods and services exported to foreign countries surpasses the entire value of goods and services imported by local consumers.
- GDP can be classified as
  - **Nominal GDP**: This is calculated on the basis of current prices.
  - **Real GDP**: This measure is calculated using base/fixed prices.
- GDP in India is majorly calculated in two ways:
  - Using **factor cost** which is based on economic activity
  - Using **market prices** which is based on spending in the economy.
- The formula for calculating GDP is  

$$GDP = C + I + G + IX$$

where, C = Consumption, I = Investment, G = Government Expenditure, and IX = Export - Import.

## India Scores 74.4 In World Bank Index On Life Cycle Of Working Women

Priority: **Medium**



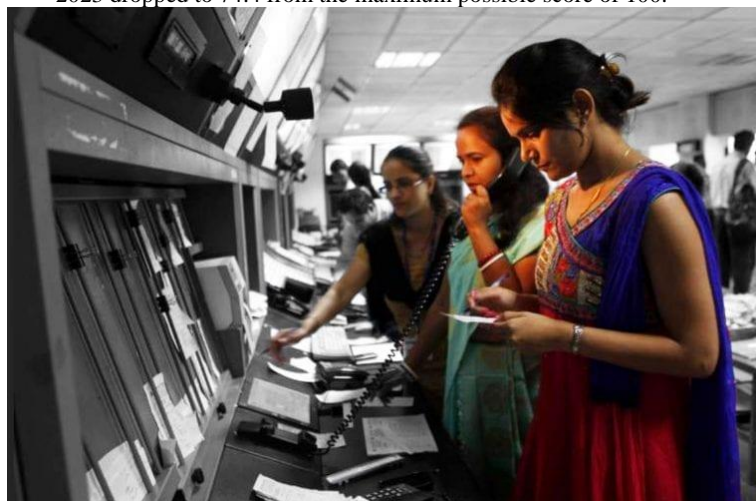
Primary Source: The Hindu

**Prepp Prelims Booster:** World Bank index

**Prepp Mains Booster:** Role of women and women's organization, population and associated issues, poverty and developmental issues, urbanization, their problems and their remedies; GS2 - Welfare schemes for vulnerable sections, Important International institutions, agencies and fora

### Context:

- Recently, a report by the **World Bank** indicated that the **laws affecting the wages and pensions of India's working women do not provide for equality with Indian men.**
- India's score on the World Bank's Women, Business, and the Law Index 2023 dropped to 74.4 from the maximum possible score of 100.



### What is the Women, Business and the Law Index?

- The Index is an annual study conducted by the **World Bank** that measures the laws and regulations affecting women's economic opportunities across 190 economies.
- The Index considers eight indicators measuring women's interactions with the Law during their business. These are:
  - Mobility
  - Workplace
  - Pay
  - Marriage
  - Parenthood
  - Entrepreneurship
  - Assets
  - Pension.

### Women, Business and the Law Index 2023

- India's score on the index that assesses the life cycle of the working woman dropped to 74.4.
- The primary reason for this was that the laws concerning wages and pensions were not providing equality among men and women.
- **India's score was above the regional average for South Asia (63.7) but lower than that of Nepal (80.6)**, which was the highest in the region.
- Of the total 190 countries that were assessed, only 14 i.e Belgium, Canada, Denmark, France, Germany, Greece, Iceland, Ireland, Latvia, Luxemburg, The Netherlands, Portugal, Spain and Sweden scored 100.
- A score of 100 indicated that women were on equal standing with men on all the eight indicators measured on the Index.

### Where are reforms necessary?

- The Index considered the laws and regulations applicable in Mumbai, India's major business city, as the basis for assessing India.
- The report stated that **India achieved a perfect score on constraints to freedom of movement, laws affecting women's decisions to work, and constraints related to marriage.**
- However, India scored poorly on the indicators related to
  - laws affecting women's pay,
  - laws affecting women's work after having children,
  - constraints on women starting and running a business,
  - gender differences in property and inheritance
  - laws affecting the size of a woman's pension.
- **India's worst performance was on the indicator assessing the laws affecting women's pay (25 out of 100).**
- According to the **World Inequality Report 2022**, men earn 82% of the labor income in India while women only earned 18%.
- The report recommended that India consider reforms to improve legal equality for women such as
  - Mandating equal remuneration for equal work
  - Permitting women to work at night similar to men
  - Permitting women to work in industrial sectors

- **Article 39(d)** of the Indian Constitution provides for equal pay for equal work for both men and women.
- **Article 14** provides that the State shall not deny to anyone equality before the law or equal protection of the law.
- **Article 15** has forbidden discrimination on the basis of sex.
- **Article 16** declares equality of opportunity to all citizens in matters relating to employment.

### Reforms Taken by India

- India adopted the **Minimum Wages Act of 1948** and the **Equal Remuneration Act, 1976**.
- The **Maternity Benefits Act, 1961** was amended in 2017 to increase the maternity leave available to women to 26 weeks.
- Employment and upskilling missions such as the **Skill India mission** have been deployed to provide women with professional training and enable them to acquire fruitful employment.
- The **MNREGA scheme** helped reduce the gender pay gap in rural areas by raising the pay provided to women workers and indirectly raising the wages in the agricultural and non-agri sectors.

### Conclusion

- The **UN Sustainable Development Goal 8** aimed to achieve equal pay for equal work and full, productive and decent employment for women.
- Reducing the gender gap and enabling women to participate actively in the economy would add around **\$770 billion or 18% of India's GDP by 2025**.
- However, the present pace of progress is insufficient and requires targeted and evidential action by the Union and State governments.

### World Inequality Report

- It is published by the World Inequality lab, under the Paris School of Economics.
- It assesses the distribution of wealth and income across countries and the world.

## Drugs For Rare Diseases Get Customs Duty Relief

Priority: **Medium**



Primary Source: The Hindu

**Prepp Prelims Booster:** Rare Diseases

**Prepp Mains Booster:** Issues relating to the development and management of Social Sector/Services relating to Health.

### Why in the news?

- Recently, the Central Government has given **full exemption from basic customs duty** on all drugs and food for special medical purposes

imported for personal use for the treatment of **all Rare Diseases** listed under the National Policy for Rare Diseases 2021 through a general exemption notification.

- WHO defines a rare disease as a health condition or disorder with a prevalence of 1 or less, per 1000 population, which is often debilitating and lifelong.
- However, different countries may have their own definitions of rare diseases that are tailored to their specific needs and contexts, including their population size, healthcare system, and available resources.
- The definition of rare disease varies from country to country.

## Easing health costs

The government has announced policy changes in import duties to ease the healthcare costs of rare diseases. A lowdown:

- Full exemption from basic customs duty on imported drugs and special medical foods for personal use in treating rare diseases
  - Certificate from health authorities required for individuals to get the exemption
  - Previously, drugs/medicines attracted customs duty of 10%, with some lifesaving drugs having concessional rates
  - **Pembrolizumab**, used in cancer treatment, also fully exempted from basic customs duty
- Annual treatment costs for rare diseases can range from ₹10 lakh to over ₹1 crore per year
- 

### What needs to be done to get an Exemption?

- The individual importer has to produce a certificate from the Central or State Director of Health Services or District Medical Officer/Civil Surgeon of the district to get an exemption
- Drugs/medicines typically incur a basic customs duty of 10%, however, several categories of life-saving medications and vaccinations are subject to a reduced rate of 5% or no duty.
- While there are already exemptions for specific medications needed to treat Duchenne muscular dystrophy or spinal muscular atrophy, the government has received several requests for customs tax relief for medications used to treat other rare diseases.

### Need

- **Expensive:** The cost of medications or specialized foods needed for the treatment of rare diseases might be exorbitantly high; in many circumstances, these medications must be imported.
- The annual cost of therapy for some rare diseases, for a child weighing 10 kg, may, for instance, range from 10 lacks to more than 1 crore.
- **Cost of medication increases with age and Weight:** These costs can increase significantly with age and weight, and in many instances, patients may need to get therapy for the rest of their lives.

### Impact

- **Reduce Financial Burden:** The recent move may result in significant financial savings for the patients and provide much-needed relief to the patients.
- **Increase Accessibility:** This exemption can help to ensure that patients have access to the treatments they need.
- The Government has also fully exempted Pembrolizumab (Keytruda) used in treatment of various cancers from basic customs duty.

### Challenges- Rare Disease

- **Lack of awareness** not only among the general public but also among healthcare providers and policymakers.
- In a developing country like India, the major focus is on accessing the drugs, little or **no attention is** given to developing registries, **genetic screening, access to therapy, health insurance coverage**, and public perception about such diseases.

- Healthcare services for rare diseases are **largely inaccessible** to the majority of patients in India, both due to their high cost and the difficulty of finding the right expertise.
- Diagnosis of almost all rare diseases** takes place only at tertiary health centers, which are concentrated in urban areas. This leaves many cases undiagnosed and is also a loss of accessible resources for advanced testing tools.

### National Policy for Rare Diseases, 2021

- 'National Policy for Rare Diseases, 2021' was launched by the Ministry of Health and Family Welfare on March 30, 2021, to save the lives of patients suffering from rare diseases.
- The rare diseases have been identified and categorized into 3 groups namely Group 1, Group 2 and Group 3.
- Group 1:** Disorders amenable to one-time curative treatment. Financial support upto Rs. 20 lakh under the Umbrella Scheme of Rashtriya Arogya Nidhi shall be provided by the Central Government for treatment.
- Group-2:** Diseases requiring long-term/lifelong treatment having relatively lower cost of treatment and benefit has been documented in the literature and annual or more frequent surveillance is required.
- Group 3:** Diseases for which definitive treatment is available but challenges are to make optimal patient selection for benefit, very high cost and lifelong therapy.
- Provision for **financial support of up to Rs. 50 lakhs** to the patients suffering from any category of Rare Diseases and for treatment in any of the Centre of Excellence (CoE) mentioned in NPRD-2021, **outside the Umbrella Scheme of Rashtriya Arogya Nidhi.**
- Rashtriya Arogya Nidhi (RAN) was set up to provide financial assistance to patients, living below poverty line and who are suffering from major life threatening diseases, to receive medical treatment at any of the super speciality Hospitals/Institutes or other Government hospitals.
- In order to receive financial assistance for the treatment of rare diseases, the patient of the nearby area may approach the nearest Centre of Excellence to get assessed and avail of the benefits.
- The NPRD, 2021 has provisions for the promotion of research and development for the diagnosis and treatment of rare diseases;
- promotion of local development and manufacture of drugs and creation of a conducive environment for indigenous manufacturing of drugs for rare diseases at affordable prices.

### Jerdon's Narrow-Mouthed Frog: After 89 Years, Frog Endemic To The Higher Altitudes Of Western Ghats 'Rediscovered'

Priority: **Medium**



Primary Source: Down to Earth

**Prepp Prelims Booster:** Bio-diversity

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

#### Context:

- Recently, a group of researchers have observed **Jerdon's narrow-mouthed frog**, a species of montane frog in the wild in the Western Ghats.
- The species was last observed in 1934 by a British scientist and is classified as **Near Threatened** by the IUCN.

#### What have researchers discovered?

- A group of researchers from the Breeding Behaviour and Bioacoustics Lab of the Department of Zoology, Karnatak University and the Zoological Survey of India observed **Jerdon's narrow-mouthed frog** in the upper reaches of the Western Ghats.
- The species was last seen in 1934 by a British scientist and has been wrongly identified as other species frequently
- 40 tadpoles of the species were discovered in the biodiverse **Western Ghats** in a similar development stage as was observed 89 years ago.

### Jerdon's narrow-mouthed frog

- The Jerdon's narrow-mouthed frog, scientifically known as **Uperodon Montanus** is a montane species restricted to the higher altitudes of 800-1,700 metres according to the Journal of Threatened Taxa.
- The species were distributed across the Palghat and Shencottah gaps between Wayanad and the Agasthyamalai hills.
- The frog has a distinctive long snout that gives its name and shiny brown skin with darker brown, red and gold spots on its back and head.
- Its normal habitat was tree pools or rock pools filled with rainwater.
- The **International Union for Conservation of Nature (IUCN)** has classified it as "**Near Threatened**" under the **Red List of Threatened Species**.
- The tadpoles of this species are free-swimming and exotrophic, meaning they feed on other species.



#### What are the other findings of the study?

- The study has extended the altitude limit for the frog from the previously believed 1,700 m to 1,916 m indicating that the species were restricted to a specific area and elevation within the Western Ghats.
- The tadpoles were observed in rock pools filled with organic debris, leaf litter and aquatic insects in the post-monsoon season.
- Changes in the colour of the body of the tadpole were observed with the skin looking darker during the day and slightly transparent at night.
- The species has two different life stages - a water-independent adult stage and the aquatic larval stage known as tadpoles.
- Tadpoles or larvae were found to be completely different in their appearance, feeding, habitat and ecology from adults.
- The habitat and ecosystem preferences of the species which have been revealed through the study are expected to aid efforts to conserve and protect the species.

#### Western Ghats

- The Western Ghats are a **block mountain range** that runs along the southwest coast of India that is believed to have been formed from the erosion of the Gondwana supercontinent.
- It crosses through Gujarat, Maharashtra, Goa, Karnataka, Kerala and Tamil Nadu.
- It has been recognized as a **World Heritage Site by UNESCO** and is also called the Great Escarpment.
- They are also known as the **Sahyadris in Maharashtra**, the **Nilgiri hills in Karnataka and Tamil Nadu** and the **Annamalai and Cardamom Hills in Kerala**.
- The mountains are interspersed with important passes or ghats such as Palghat, Thalghat and Borghat.
- It is a continuous range made up of **evergreen forests, moist deciduous forests, Shola, scrub jungles and savannas**.
- It is the origin of numerous peninsular rivers that supply fresh water to over 245 million inhabitants of South India.

- Fauna in the region include the Nilgiri marten, brown palm civet, stripe-necked mongoose, Indian brown mongoose, small Indian civet, the Nilgiri Tahr and lion-tailed macaque.

#### IUCN

- The **International Union for Conservation of Nature** or IUCN, is a global organisation that studies the state of the natural world and steps to safeguard it.
- The IUCN was founded in 1948 in Fontainebleau, France.
- The IUCN works in partnership with civil society and government organisations to protect the environment.
- It seeks to encourage worldwide cooperation and disseminate knowledge that supports conservation efforts.
- The IUCN's members, which include decision-makers, members of civil society, leaders of indigenous communities, corporate executives, and academics, come together to determine the direction of the organization's work.
- The framework for conservation and sustainable development is formed by the six commissions that make up the IUCN. These commissions are the **CEESP** (Commission on Environmental, Economic, and Social Policy), **CEC** (Commission on Education and Communication), **CEM** (Commission on Ecosystem Management), **SSC** (Species Survival Commission), **WCEL** (World Commission on Environmental Law), and **WCPA** (World Commission on Protected Area).
- The IUCN also maintains the **Red List** which is an indicator of the health of the world's biodiversity.

### Can The Cheetahs Help India's Grasslands?

Priority: **Medium**



Primary Source: The Hindu

**Prepp Prelims Booster:** Cheetah reintroduction program

**Prepp Mains Booster:** Conservation; Environment

#### Context:

- Recently, India translocated eight African cheetahs from Namibia and 12 from South Africa. This is part of a long-term conservation plan to reintroduce the wild cat into the country after it became extinct in the 1950s, primarily due to hunting.
- The aim is to build a self-sustaining population, centered at **Madhya Pradesh's Kuno National Park**, which will also contribute to the global survival of the cheetah as a species.

#### Can The Cheetahs Help India's Grasslands?

Environment Minister Bhupender Yadav has said that the cheetah reintroduction program has a larger goal of improving India's grasslands.

#### Arguments for

- **Health of grasslands:** Cheetahs can serve as an indicator of the health of the grasslands, as they require open areas and meadows for their survival, and their presence can indicate the presence of ungulate populations (hoofed animals like chinkara and deer).
- **Conservation:** India started with nine tiger reserves and at present India has 53 reserves making up 2.3% of the country's geographical area.
- These areas used to be destinations for game hunting and dogs. While they had a good diversity of flora and fauna, their surroundings were poorly managed. It took a lot of work by scientists to establish source and sink dynamics.

#### Arguments against:

- **Categorization of grasslands as wastelands:** The Wasteland Atlas of India still categorizes **large stretches of open natural ecosystems as wasteland**. Renewable energy projects are granted large tracts of open natural ecosystems, including grasslands, to establish solar panels. The arrival of the cheetahs is not going to change that.
- It is well known that the Great Indian Bustard, the Indian wolf, and the blackbuck, which are all native species and Schedule 1 species (protected

species), face declining populations and a **diminishing distribution range**.



#### What is the Cheetah Reintroduction Action Plan?

- In 2022, the Ministry for Environment, Forests and Climate Change has launched the 'Action Plan for Introduction of Cheetah in India' under which 50 of these big cats will be introduced in the next five years.
- Around 8–12 cheetahs will be relocated from South Africa, Namibia, and Botswana by the ministry with assistance from the Wildlife Institute of India and the Wildlife Trust of India.
- Due to its ideal environment and sufficient prey base, Kuno Palpur National Park (Madhya Pradesh) would be home to the big cats.
- According to the terms of the agreement, an initial batch of 12 cheetahs will be flown in from South Africa to India in February 2023. The cats will join eight cheetahs introduced to India from Namibia in 2022.

#### What does the Cheetah Action Plan Say?

- Reports indicate that roughly 20 cheetahs are going to be introduced annually for the next 8-10 years and the official Cheetah Action Plan states that in 15 years the project will be considered a success if Kuno reaches an established population of 21 adults.
- Thus, in 7-8 years, we will introduce about 160 cheetahs.
- The Action Plan also states that if the larger habitat of 3,000-5,000 sq km, which is larger than the 748 sq km where they are based, is reasonably protected, the numbers can go up to a maximum of 40.
- Hence, this is a very long-term investment, and many animals will frequently travel here from Africa.
- Also, the outcomes [are expected to be] between 21 in 15 years and 36 in 30–40 years. That is the Action Plan's assumed best-case scenario.

#### Challenges

- **Different terrain:** It will be a little difficult for Cheetahs to acclimatize to Indian conditions as they are in a completely different terrain.
- **Need larger tracts of terrain:** Cheetahs are coursers (they run to hunt) and not stalkers like the tiger or leopard, which means they need large tracts of terrain.
- The success of reintroducing cheetahs will depend on the survival and reproduction of Cheetahs.
- A better indication of success is when they not only survive but start reproducing and there is a self-sustaining population.
- The average home range size for cheetahs in the best of habitats in East Africa is 750 sq km.
- Cheetahs are the weakest of the large cats. **They exist in low densities of less than one per 100 sq km.** Even the best-case estimate is 21 cheetahs, which is not a viable population.
- Human presence and engagement can affect the success of conservation efforts.
- **Conservation Vs Ecotourism:** Any tourism plan must be community-driven and it should be very specific about the kind of infrastructure which will crop up all around. According to the experts, if the cheetah project is really about conservation, then it should be given priority over tourism.

## Way forward

The Cheetah project is an experiment worth pursuing to improve forest and wildlife management. Whether it succeeds or fails, the future will tell.

### Kuno National Park

- The Kuno National Park, the new home of the cheetahs, is situated on the northern side of the **Vidhyachal mountains** and is spread across more than 700 square km.
- Kuno National Park is a national park and wildlife sanctuary in **Madhya Pradesh, India**. It takes its name from the **Kuno River**.
- It was established in 1981 as a wildlife sanctuary with an initial area of 344.686 km<sup>2</sup> in the districts of Sheopur and Morena. It was designated a national park in 2018.
- Chital, sambar, nilgai, wild pig, chinkara, and cattle are all present in good numbers.
- The Kuno park was originally prepared for lions from Gir in Gujarat (On April 12, 2013, the Supreme Court said the lions should be translocated from Gir to Kuno within six months. However, even after ten years, the lions still haven't been moved.)

## Second Home For Gujarat Lions: 40 Big Cats To Be Moved To Barda From Overflowing Gir

Priority: High



Primary Source: Down to Earth

Prepp Prelims Booster: Asiatic lions

Prepp Mains Booster: GS3 – Conservation, Environment

### Context:

- Recently, a report by the Wildlife Institute of India revealed that the government of Gujarat has planned to translocate 40 adult and sub-adult lions to the **Barda Wildlife Sanctuary**.
- The translocation of the **Asiatic lions** was part of efforts to protect the species from becoming extinct due to environmental or genetic causes.



### What has the report by the Wildlife Institute discovered?

- The **Lion@2047: A Vision for Amrutkal Report** prepared by the **Wildlife Institute of India** had identified the **Barda Wildlife sanctuary** as a suitable habitat for the Asiatic Lions.
- On the basis of the report, the government of Gujarat has announced a proposal to translocate 40 Asiatic lions from the Gir Forest National Park to the Barda Wildlife Sanctuary in the state.
- The report has recommended the relocation of 40 lions but a 2014 paper by wildlife expert Y V Jhala stated that the Wildlife Sanctuary could only accommodate 26 lions due to a weak prey base and small geographical area (192 sq Km).

- The report directed the State Forest Department to identify further locations for the relocation of lions and encouraged the ex-situ conservation of the lions at other sites in the country.
- The report has recommended the creation of groves by planting small patches of evergreen trees like Vad (Banyan or Ficus benghalensis), Jamun (Syzgium jambolanum) and Karamada (Carissa carandas).
- The **Maldhari community** who resided in the area would have to be relocated in order to restore around 1,000 km of 'exclusive lion habitat' under **Project Lion** by incentivising the voluntary relocation of forest village communities through an attractive rehabilitation package.
- The Report also directed the augmentation of water works in Barda.

### Why has the relocation of lions been advised?

- As per the last census of lions in Gujarat which was conducted in 2020, there were 674 lions in the state while Gir was overflowing with lions.
- Experts have recommended translocation of the lions for the last two decades as lions have been geographically isolated in the Gir Forest.
- A **second home for the lions would help protect the species from the threat of extinction**, especially in the event of deadly diseases like the **Canine Distemper Virus (CDV)**.
- The **2014 Y V Jhala report** had also recommended relocation as carnivore populations faced the threat of extinction from genetic and stochastic environmental causes if they were restricted to single sites like at Gir.
- According to the **Assessment of Barda Landscape for Reintroduction of Asiatic Lions**, catastrophes such as epidemics, natural calamities, unexpected decline in prey populations, retaliatory killings, etc could lead to the extinction of the species when they were limited to single habitats.

### Is Barda a suitable alternative?

- The 2014 report identified habitat refuge patches in the Barda landscape which would be critical in supporting breeding lion nuclei and that the Barda Sanctuary could accommodate 26-35 lions following restorative inputs.
- The Lion@2047 report claimed that Barda would be a suitable lion habitat post activities to boost natural dispersal and increase the stock of prey animals in the sanctuary.
- The Gujarat Forest Department had identified centres such as Barda, Rampara Wildlife Sanctuary and Sakkarbaug Zoological Garden in order to diversify the gene pool and strengthen and maintain a heterozygous genetically diverse lion population.
- The Sakkarbaug Zoo would be upgraded and developed to implement breeding programmes and a reproduction registry with stud details would be maintained.
- The **Asiatic Lion: Ecology, Economics, and Politics of Conservation report** which was published in the Frontiers journal stated that Gir and Barda are geographically close enough that it would not be a suitable alternate lion habitat.
- Translocation of the lion population to Barda would not ensure the protection of the lions from epidemics due to the geographical proximity to Gir and the continuous presence of disease carriers such as feral dogs, cats, and livestock.
- The report thus concluded that the relocation of lions to Barda was not a suitable alternative to the relocation of lions to **Kuno**.

### Kuno Lion Relocation

- The Wildlife Institute of India proposed a second population of lions in order to protect the endangered species.
- A Population and Habitat Viability Assessment in 1993 identified the **Kuno-Palpur Wildlife Sanctuary (Madhya Pradesh), Sita Mata Wildlife Sanctuary (Rajasthan), Darrah – Jawahar Sagar Wildlife Sanctuary (Rajasthan), Kumbhalgarh Wildlife Sanctuary (Rajasthan) and the Barda Wildlife Sanctuary (Gujarat)**.
- The Kuno-Palpur Wildlife Sanctuary was later identified as the most suitable location for the translocation of lions but the project was

opposed by the Gujarat state government as it did not wish to share the Asiatic lions with the other states.

- The Supreme Court had in 2013 ordered the relocation of lions to Madhya Pradesh but the transfer has still not been completed and the Kuno-Palpur Sanctuary is now set to become the country's first cheetah sanctuary.

### Barda Wildlife Sanctuary

- Barda, located in Gujarat was **established as a wildlife sanctuary in 1979**, prior to which it was a private reserve for Porbandar and Jamnagar.
- The Sanctuary includes two rivers, the Bileshvay River and the Joghri River, as well as two dams, the Khambala and the Fodara.
- Several forest sub-types, such as southern tropical forest, southern dry mixed deciduous forest, and northern tropical thorn forest, as well as dry deciduous scrub and dry bamboo, make up the region's vegetation.
- 750 "maldhari" families live in the sanctuary area. **Maldharis are a pastoral community resident in the Gir and Barda forests.**
- The blue bull, chinkara, blackbuck, and wolf are among the major animal species that may be found in the area.
- Asiatic lions were once present in Barda, but by the end of the nineteenth century, it was thought that they had left the region.

### Project Lion

- **Project Lion** was envisioned as a landscape ecology-based conservation of the Asiatic lion in Gujarat through the integration of environmental protection and eco-development.
- The project is being carried out in Gujarat's Gir forest, the last remaining habitat for Asiatic lions.
- The project's goals consist of
  - Lion population control through habitat protection and restoration
  - Increased participation of local communities and creation of livelihoods.
  - Transform India into a centre for the diagnosis and treatment of big cat diseases.
  - To promote inclusive biodiversity conservation.
- The Asiatic Lion habitat is made up of nine districts in India: Junagadh, Gir Somnath, Amreli, Bhavnagar, Botad, Porbandar, Jamnagar, Rajkot, and Surendranagar. This endangered animal, according to the **IUCN Red List**, presently inhabits an area of about 30,000 square kilometres.

## Record 6.37 Lakh Olive Ridley Turtles Arrive At Odisha's Rushikulya Beach For Mass Nesting

Priority: **Medium**



Primary Source: The Hindu

**Prepp Prelims Booster:** Biodiversity

**Prepp Mains Booster:** Geographical features and their location-changes in critical geographical features (including water-bodies and ice-caps) and in flora and fauna and the effects of such changes; GS3 - Conservation, environmental pollution and degradation, environmental impact assessment.

### Context:

- Recently, about **6.37 lakh Olive Ridley turtles**, a record number, arrived at the **Rushikulya Beach** in Odisha for mass nesting.
- Olive Ridley turtles are also spotted on **Gahirmatha Beach** in Odisha, the world's largest rookery.

### What are the Olive Ridley Turtles?

- Olive Ridley turtles are a medium size species of sea turtles found abundantly across the world
- They have been named after their distinctive olive-coloured shell (carapace).
- They are famous for their unique mass nesting (arribada) along the shores of Odisha.

- The carnivorous reptiles were commonly found in the warmer sections of the Indian, Pacific and Atlantic oceans.
- The turtles have been included in **Schedule 1 of the Wildlife Protection Act 1972** and **Appendix 1 of CITES** and recognized as **vulnerable under the IUCN Red List**.



### Olive Ridley at Rushikulya

- Around 6.37 lakh Olive Ridley turtles have arrived at **Rushikulya beach** in Odisha's Ganjam district for mass nesting.
- According to Forest Department officials, the record number of turtles at the beach in the mass nesting period between February 23rd and March 2nd was primarily due to the emergence of new beaches in the region.
- In comparison, 5.5 lakh turtles arrived for mass nesting at the beach in 2022.
- The absence of heavy rain, cyclones and other extreme weather events meant that beaches were left unaffected and perfectly sloped, which was ideal for nesting unlike in previous years.
- Forest officers said that the number of turtles nesting at Rushikulya would increase as more turtles emerged sporadically after March 2nd.
- Other prominent nesting sites include the **world's largest rookery, Gahirmatha beach in Kendrapara district of Odisha** and the mouths of the Puri and Devi rivers.

### What is Arribada?

- Olive Ridley turtles display a unique form of mass nesting called **Arribada**, in which lakhs of female turtles came ashore to lay eggs.
- The turtles use their front flippers to dig holes on the beach, following which they use their rear flippers to create a cavity by scooping out sand.
- The eggs are laid in these cavities and then covered with sand, while the turtles return to the sea by sunrise.
- Hatchlings are expected to emerge from the eggs by March or April ie. within 40-60 days.

### What are the threats faced by the turtles?

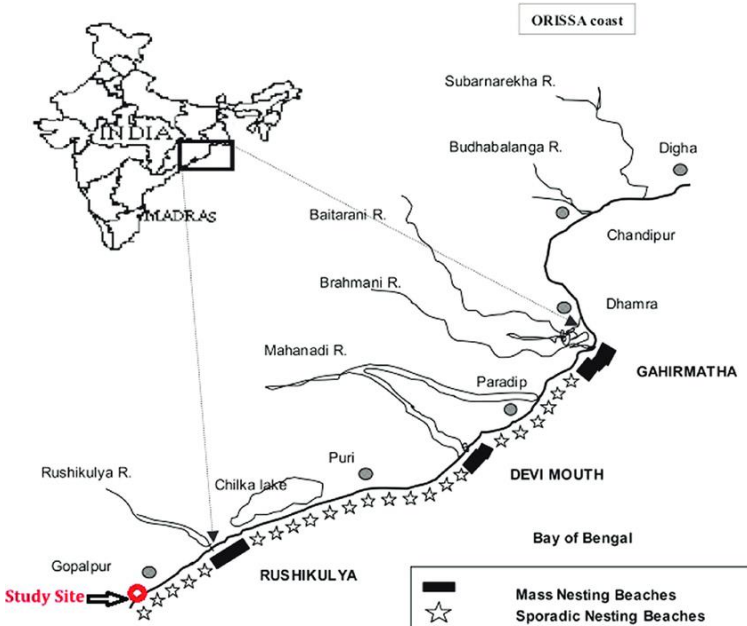
- **Anthropologic:** The species of turtles have been poached extensively for their meat, eggs, shell and leather. The shell and leather were used to make ornaments and traditional medicines.
- **Pollution:** The turtles have been severely affected by the increasing amount of debris, plastic waste, discarded nets and other waste disposed of by industries and tourism in the oceans and on beaches.
- **Trawlers:** Various NGOs have reported that many turtles had been found with injury marks indicating their inadvertent death due to being caught in trawling nets.
- **Climate change:** Global warming and the increasing occurrence of extreme weather events have made it difficult for these turtles to access their preferred nesting sites which has increased the risk of their becoming endangered.

### What are the conservation measures of the ZSI?

- The Zoological Survey of India has continued the tagging of Olive Ridley turtles at three sites - **Rushikulya, the Devi river mouth and**

**Gahirmatha** - as part of its long-term research and conservation initiatives.

- The uniquely numbered metal tags which contained data including the name of the organization, country code and email address are non-corrosive, do not harm the animal and can be removed later.
- The ZSI has proposed to tag 30000 turtles over a ten-year period to better understand their nesting patterns and the various factors affecting their movement.



#### What are the other initiatives?

- **Operation Olivia:** The scheme was initiated by the Indian Coast guard in the early 1980s as part of efforts to protect Olive Ridley turtles as they breed and nest on the Odisha coast.
- **TEDs:** Trawlers in Odisha have been ordered to mandatorily use **Turtle Excluder Devices**, whose nets have special exit holes for turtles in order to prevent accidental killings of the species.
- **Olive Ridley Turtle Conservation Programme:** The TATA group had set up a conservation programme that aimed at protecting the recognized turtle breeding sites along the country's coasts.

### Moth Found In Tirunelveli, Thoothukudi Districts After 127 Years; Photographed For First Time

Priority: **Medium**

Primary Source: The Hindu

Prepp Prelims Booster: Environment

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

#### Context:

- Recently, two researchers from Tamil Nadu observed the **Mimeusemia ceylonica** species of moth in the **buffer zone** of the **Kalakkad-Mundanthurai Tiger Reserve**.
- The species was last observed in Trincomalee in Sri Lanka and had not been photographed until now.

#### What have the researchers found?

- Two Researchers from the Ashoka Trust for Research in Ecology and the Environment and the Tamil Nadu Wetland Mission recently spotted a rare species of moth in the buffer zone of the **Kalakkad-Mundanthurai Tiger Reserve (KMTR)** in Tamil Nadu.
- The **Mimeusemia ceylonica** had last been observed around 127 years ago in Trincomalee, Sri Lanka in 1893.

- The moth, of which only an illustration was previously available was photographed for the first time by the researchers.



#### What is the Mimeusemia ceylonica?

- **Mimeusemia ceylonica** is a species of moth that belonged to the subfamily **Agaristinae** and family **Noctuidae**.
- **George Hampson**, an English etymologist was the first to illustrate and describe the species in 1893.
- It was rediscovered in 2020 as part of a moth survey conducted at the **Agasthyamalai Community-based Conservation Center** in the **KMTR** buffer zone.
- The moth was spotted again by the same researchers in the same region in 2021 and in the **Vallanaadu blackbuck sanctuary** in the **Thoothukudi** district in 2022.
- There was a deficiency of data about the species which had so far been only observed as a solitary individual and not in pairs.
- Over 300 species of moths had been observed in the region alongside the multiple sightings of the **Mimeusemia ceylonica** which indicated the rich biodiversity of the region.



#### Kalakkad-Mundanthurai Tiger Reserve

- The **Kalakkad and Mundanthurai Tiger reserve** was situated in the **Thirunelveli and Kanyakumari districts of South Tamil Nadu**.
- The area comprised of vegetation that graduated from dry deciduous to dry thorn forests while the slopes of the **Western Ghats** housed evergreen forests.
- The **Mundanthurai Tiger Sanctuary** was declared the Nation's first tiger sanctuary in 1962, much before the government began to focus on tiger conservation.
- The **Kalakkad Wildlife Sanctuary** was established in 1976 with the primary objective of protecting the **Lion-tailed macaque**.
- The two separate sanctuaries were combined in 1988 to form the **KMTR**.
- The Reserve is also known as the **River Sanctuary** because of the 13 rivers that originate from the **KMTR** including the river **Thamirabarani**.

- The Agasthyamalai is found in the core zone of the reserve which is part of the Kerala Tamil Nadu inter-state **Agasthyamalai Biosphere Reserve**.
- The Agasthyamalai Biosphere Reserve has been recognized as one of the five **centers of biodiversity and endemism in India by the IUCN**.
- Other species found in the region include leopards, elephants, Nilgiri Tahr, Nilgiri langur, wild boar, chital, jungle cats and sambar deer etc.

### Vallunaadu Blackbuck sanctuary

- The Vallunaadu Blackbuck Sanctuary is a protected area of south Tamil Nadu that was established in relation to the conservation of the **blackbuck antelope**.
- The vegetation of the area is mostly dry deciduous with thorny hardwoods and xerophytes.
- Other animals observed in the area include spotted deer, macaque, jungle cat, monkey, wild cat, black-naped hare, scaly anteater, viper, rat snake, mongoose and bird species such as peafowl, heron, stork, crested hawk eagle, black-winged kite, horned owl, etc.

### Eurasian Otter Raises Hope For J&K Stream

Priority: **Medium**



Primary Source: The Hindu

**Prepp Prelims Booster:** Eurasian Otter

**Prepp Mains Booster:** Environment; Conservation; Biodiversity

#### Context:

- Recently, a Eurasian otter was caught in the infrared camera along the Neeru stream in Jammu and Kashmir. Neeru is a Tributary of the Chenab river.
- The first photographic record of an elusive semi-aquatic carnivorous mammal has indicated that not all is lost for a Jammu and Kashmir stream.



#### What does the finding say?

- The findings have confirmed that some stretches of the Neeru remain unpolluted.
- These stretches are away from human habitations and comprise of stony beds and narrow valleys that are virtually unsuitable for sand and gravel mining, providing some hope for the otter's survival.

#### About Eurasian Otter

- Otters are mammals of the family Mustelidae with seven genera and 13 species.
- Otters are found in every continent except Australia and Antarctica.
- The Eurasian otter is regarded as a flagship species and indicator of high-quality aquatic habitats, its presence is encouraging for the health of the stream.
- A flagship species is a species selected to act as an ambassador, icon or symbol for a defined habitat, issue, campaign or environmental cause.
- **Protection Status:** Near Threatened on IUCN red list

- **Distribution:** The Eurasian otter covers the largest range of any **Palaearctic mammal**, covering parts of three continents – Europe, Asia, and Africa.
- The Palaearctic, also known as the Palaearctic, is the largest of the Earth's eight biogeographic realms.
- It encompasses all of Eurasia north of the Himalayan foothills, as well as North Africa.
- Biogeographic realms are large geographic areas where ecosystems share a broadly similar biota.
- **Threat:** The species is persecuted as a pest in countries such as India, China and Nepal, and its populations in Europe and Asia have declined in recent years due to hunting for food and pelt, habitat loss, pollution and climate change.

#### About Neeru

- Neeru is a 30-km perennial stream that originates in the Kailash Lake at 3,900 metres above mean sea level and drains into the Chenab at Pul-Doda.

### Horseshoe Crabs Disappearing Off Odisha's Coast

Priority: **Medium**



Primary Source: The Hindu

**Prepp Prelims Booster:** Horseshoe Crabs

**Prepp Mains Booster:** Environment; Conservation

#### Context:

- Recently, it was stated that **Horseshoe crabs**, a medicinally valuable and one of the oldest living creatures on the planet, appear to be disappearing from their familiar spawning grounds along the **Chandipur and Balaramgadi coasts in Odisha's Balasore district**.



#### News Summary

- Scientists have urged the Odisha government to develop a strong protection mechanism immediately, before the living fossil (Living fossil species are those species which were discovered first as a fossil and believed extinct, but which are later found living. Any living species which very closely resembles fossil relatives, that has remained essentially unchanged from earlier geologic times and whose close relatives are usually extinct. Eg. Horseshoe.) becomes extinct due to destructive fishing practices.
- It was requested that the Union Ministry of Environment, Forests, and Climate Change include Horseshoe crabs on the list of marine species for which a Species Recovery Plan must be developed.
- Horseshoe crabs were first discovered along the Balasore coast in 1987 and brought to the attention of the State government.
- Horseshoe crabs are found in two species in India, with the largest concentration in Odisha.

#### About Horseshoe Crabs

- Horseshoe crabs are marine and brackish water arthropods of the family Limulidae and the only living members of the order Xiphosura.



- Despite their name, they are not true crabs or crustaceans: they are chelicerates, which are most closely related to arachnids like spiders, ticks, and scorpions.
- Horseshoe crabs are found primarily in and around shallow coastal waters with soft, sandy, or muddy bottoms. They are typically found in the intertidal zone during spring high tides.
- Odisha is their largest habitat in India.
- **Conservation:** The catching and killing of a horseshoe crab is an offense under Schedule IV of the Wildlife Protection Act of 1972.
- **IUCN:**
  - The American horseshoe: Vulnerable
  - Tri-spine horseshoe crab: Endangered

### Threats to the Species

- Horseshoe crabs are threatened by two or three major issues.
- Their spawning activities are hampered by unregulated fishing.
- These crabs, like Olive Ridley Sea turtles, are deep sea creatures.
- They come to the coasts of Balasore in Odisha and Digha and Sundarban in West Bengal to breed.
- They choose an appropriate location for laying their eggs. Unfortunately, those eggs are also harmed by locals.

### Medicinal value:

- Horseshoe crab blood is essential for the preparation of rapid diagnostic reagents. Horseshoe crabs are used to test all injectables and medications.
- A molecule derived from a Horseshoe crab reagent has been developed to help treat pre-eclampsia, potentially saving the lives of many babies in the womb.
- According to the scientist, only a few countries in the world have Horseshoe crab populations, and India is one of them.
- The Odisha coast has the highest density of Horseshoe crabs, with Balasore being the largest spawning ground.
- Aside from the popular sites of Balasore and Balaramgadi in Odisha, sporadic nesting grounds have been observed on the coasts of Dhamra, Bhitarkanika, Hukitola, Barahajaria, Choudahajaria, and some villages.

### Conclusion

This is the world's oldest living thing. According to palaeontological studies, Horseshoe crabs are 450 million years old. The creature has lived on Earth without morphological change. Scientists are surprised to discover a strong immune system in an animal that has helped it survive for millions of years. The animal is vital to human health. Horseshoe crabs will not be found in India in the next few years unless we make efforts now. The Zoological Survey of India has proposed designating horseshoe crab habitat as Eco-Sensitive Zones in order to conserve and manage the species.

## With Overfishing, Great Seahorses Bolt From The Coromandel

Priority: **Medium**



Primary Source: The Hindu

**Prepp Prelims Booster:** Biodiversity

**Prepp Mains Booster:** Geographical features and their location-changes in critical geographical features (including water-bodies and ice-caps) and in flora and fauna and the effects of such changes; GS3 - Conservation, environmental pollution and degradation, environmental impact assessment

### Context:

- Recently, a study published in the Journal of Threatened Taxa revealed that extensive fishing off India's **Coromandel coast** had caused **great seahorses** to migrate to the **coast of Odisha**.
- However, the Odisha coast was relatively shallower and could prove unsuitable for the species.

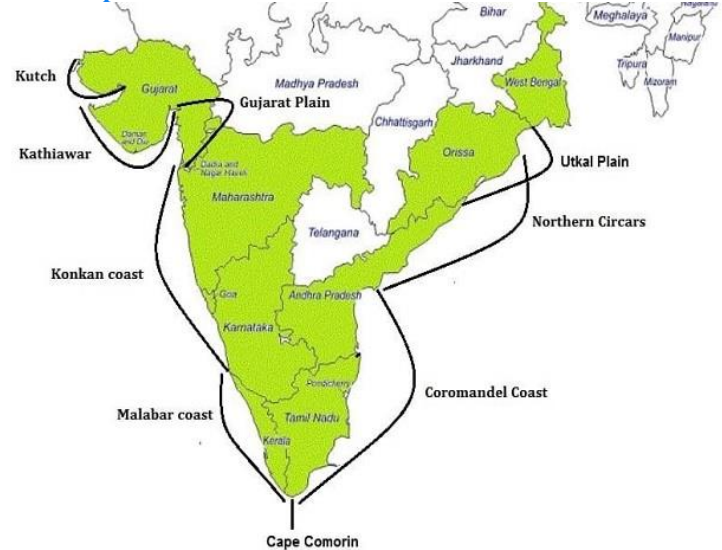
### What are the findings of the study?

- The study conducted by members of Berhampur University's Department of Marine Sciences and Bombay Natural History Society's Department of Marine Conservation was based on the discovery of a **juvenile**

**specimen of a great seahorse** from a ring net in the Ariyapalli fish landing centre in Odisha.

- **Extensive fishing off the Coromandel Coast** in south India is believed to have forced the great seahorse to migrate to the Odisha coast.
- Although fishing was less intense in the Bay of Bengal near Odisha, the **water was shallower** and may be uncomfortable for the horse-like head-possessing fish.

### Seahorse species in India



- Globally, 46 species of seahorses have been reported while **India houses nine out of the 12 species found in the Indo-Pacific**.
- The country's vast coasts are a seahorse hotspot across its diverse topography such as seagrass, mangroves, macroalgal beds and coral reefs.
- The sea horse population is distributed along eight of India's coastal states and five union territories excluding Andaman and Nicobar on both the East and West

### Great Seahorse

- The Great seahorse, also known as the **Hippocampus kelloggi** has been included in the '**vulnerable**' list due to its overexploitation.
- It was popular as an ornamental fish and as a constituent in Chinese medicines.
- Despite the ban on fishing or trading of seahorses since 2001, the illegal activities have placed extreme pressure on the species that was highly dependent on its normal habitat.

### Migration

- **Seahorses are poor swimmers and rely on rafting** to migrate. Rafting refers to the process of clinging to floating objects such as macroalgae and plastic debris and being dispersed by ocean currents.
- Rafting is used by numerous marine creatures to migrate and maintain populations successfully in new habitats.
- However, the 1,300 Km journey from the **Palk Bay** and the **Gulf of Mannar** to Odisha puts extensive pressure on the animal.
- The study claimed that the species, which was prevalent around the coast of Andhra Pradesh suffered from unregulated fishing with over 13 million individuals caught annually.
- However, the migration of the seahorse to Odisha was limited so far because of the lack of its natural habitat in the form of seagrass and coral reefs except in the **Chilika lake**.

### Way forward

- **Increased monitoring** of the coastal ecosystems on the Eastern coast of India is essential in order to conserve and protect the remaining seahorse populations of the area.

- The fishing nets used to catch seahorses need to be banned and rules enforced while also reconsidering existing trawling regulations in order to protect the species as their migration to the north will not be helpful due to the lack of a suitable environment.

## 246 Vultures Spotted In Synchronised Survey In Tamil Nadu, Kerala And Karnataka

Priority: **Medium**



Primary Source: The Hindu

Prepp Prelims Booster: Environment

Prepp Mains Booster: Environment; Biodiversity and Conservation

### Context:

- Recently, **246 vultures were spotted in the first ever synchronized survey conducted along the borders of Tamil Nadu, Kerala, and Karnataka.**
- The estimation was carried out in the **Mudumalai Tiger Reserve (MTR)** and the surrounding landscape, which included **Sathyamangalam Tiger Reserve (STR) in Tamil Nadu, Wayanad Wildlife Sanctuary (WWS) in Kerala, Bandipur Tiger Reserve (BTR), and Nagerhole Tiger Reserve (NTR) in Karnataka.**

### About Vultures in India

- It is one of 22 large carrion-eating bird species that live primarily in the tropics and subtropics.
- They play an important role as nature's garbage collectors, contributing to the cleanliness of the environment.
- Vultures are also important in controlling wildlife diseases.
- The Oriental white-backed, Long-billed, Slender-billed, Himalayan, Red-headed, Egyptian, Bearded, Cinereous, and Eurasian Griffon are the nine vulture species found in India.

### Significance of Vultures in India

- The scavenging lifestyle that has earned them a bad reputation is, in fact, what makes them so valuable to the environment, nature, and society.
- Vultures that feed on dead animals assist areas in getting rid of carcasses that would otherwise provide foul odours and scenery for a much longer period of time, and are thus known as nature's cleanup crew.
- Vultures also play an important role in the control of wildlife diseases.
- Helps in disposal of dead bodies in accordance with Parsi religious practises.
- Vultures are the primary carrion eaters in India and Africa.



### Protected Areas in the Recent Survey










- There were 98 vultures seen in **Mudumalai Tiger Reserve (MTR)**, 2 in **Sathyamangalam Tiger Reserve (STR)**, 52 in **Wayanad Wildlife Sanctuary (WWS)**, 73 in **Bandipur Tiger Reserve (BTR)**, and 23 in **Nagerhole Tiger Reserve (NTR).**

- White-rumped vultures (183), Long-billed vultures (30), Red-headed vultures (28), Egyptian vultures (3), Himalayan Griffon (1), and Cinereous vulture (1) was observed during the six-hour survey.

### Conservation of Vultures

- In 2004, India introduced a motion in the IUCN for vulture conservation, which was accepted in the form of an IUCN resolution.
- Action Plan for Vulture Conservation (APVC)** in India, 2020-2025, is a critical requirement for the country's vulture conservation.
- Vulture Care Center (VCC):** In order to investigate the causes of vulture deaths in India, a Vulture Care Centre (VCC) was established in Pinjore, Haryana, in 2001. Later, in 2004, the VCC was upgraded to become India's first Vulture Conservation and Breeding Centre (VCBC).
- Saving Asia's Vultures from Extinction (SAVE):** SAVE is a coalition of like-minded regional and international organizations formed to oversee and coordinate conservation, campaigning, and fundraising efforts to alleviate the plight of South Asia's vultures.

### IUCN Status of Vultures found in India

Sr. No.	Name of the Vulture Species	IUCN status	Pictorial Representation
1.	Oriental White-backed Vulture (Gyps Bengalensis)	Critically Endangered	
2.	Slender-billed Vulture (Gyps Tenuirostris)	Critically Endangered	
3.	Long-billed Vulture (Gyps Indicus)	Critically Endangered	
4.	Egyptian Vulture (Neophron Percnopterus)	Endangered	
5.	Red-Headed Vulture (Sarcogyps Calvus)	Critically Endangered	
6.	Indian Griffon Vulture (Gyps Fulvus)	Least Concerned	
7.	Himalayan Griffon (Gyps Himalayensis)	Near Threatened	
8.	Cinereous Vulture (Aegypius Monachus)	Near Threatened	
9.	Bearded Vulture or Lammergeier (Gypaetus Barbatus)	Near Threatened	

## Phytoplankton Blooms Increase In Size In 21st Century

Priority: **Medium**



Primary Source: The Hindu

**Prepp Prelims Booster:** Phytoplankton

**Prepp Mains Booster:** Environment; Conservation; Environmental Pollution and Degradation

#### Context:

- Recently, according to new research, **massive phytoplankton blooms-microscopic algae floating on the ocean's surface have grown larger and more frequent along the world's coastlines, benefiting fisheries but also potentially causing harm.**

#### News Summary

- Between 2003 and 2020, the extent of coastal phytoplankton blooms increased by about 13%, covering an additional 4 million square kilometers of the global ocean. And the blooms occurred more frequently, increasing by 59% during that time period.
- While marine animals like fish and whales consume phytoplankton, it can also be toxic in large quantities, depriving the ocean of oxygen and causing "dead zones" that disrupt the food chain and fisheries.
- A 2016 algal bloom near Chile, for example, cost salmon farms \$800 million.



#### What are Phytoplanktons?

- Phytoplankton, which is derived from the **Greek** words **Phyto** (plant) and **Plankton** (made to wander or drift), refers to **microscopic plant organisms** that dwell in freshwater and saltwater aquatic habitats.
- Protists, bacteria, and single-celled plants make up some phytoplankton.
- All phytoplankton have chlorophyll, which they use to absorb sunlight and convert it into chemical energy, just like land plants.
- They exhale oxygen while consuming carbon dioxide. All phytoplankton photosynthesize, but some also consume other species to gain additional energy.
- All seas and oceans, including the Polar Regions, have these microalgae in the littoral zones.
- They act as "pasture grounds" in the aquatic environment and have biomass that is several times bigger than the combined biomass of all plants on land.

#### Reason behind the boom:

- Increase in nutrient availability:** The primary cause of phytoplankton blooms is an increase in nutrient availability, particularly nitrogen and phosphorus.
  - These nutrients can come from a variety of sources, including agricultural runoff, wastewater discharge, and atmospheric deposition. When there is an abundance of nutrients in the water, phytoplankton can grow and reproduce rapidly, resulting in a bloom.
- Warmer sea surface temperatures:** Warm water temperatures, high light levels, and calm water conditions can all contribute to phytoplankton blooms by allowing phytoplankton to stay near the surface and access the light they need for photosynthesis.
- Climate change:** It can also disrupt ocean circulation, affecting mixing between ocean layers and how nutrients move around the ocean.

- Human development** also plays a role. Fertilizer runoff from agriculture can increase nutrient loads in the ocean, leading to blooms.

#### Impact of Phytoplankton Bloom

- Phytoplankton blooms can have both positive and negative effects on the environment.
- In some cases, they can help other organisms in the food chain grow and improve water quality by absorbing excess nutrients.
- In some cases, blooms can deplete oxygen levels in the water, resulting in fish kills and other negative effects on aquatic life.
- Some phytoplankton species can also produce toxins that are harmful to human health and the health of other animals that consume them.

#### Why Do Landfills Catch Fire During Summers?

**Priority:** Medium



**Primary Source:** The Hindu

**Prepp Prelims Booster:** Landfills

**Prepp Mains Booster:** Conservation, environmental pollution and degradation, environmental impact assessment; Disaster and disaster management.

#### Context:

- Recently, the fire at the **Brahmapuram waste treatment plant** and the landfill surrounding it in Kochi, Kerala has highlighted the threat faced by Indian cities during the summer months.
- Long-term mitigation measures through sustained efforts by all levels of government are required to prevent such instances which can result in **acid rain, smog, and respiratory problems among the population.**



#### What are landfills?

- Landfills are man-made pits which have been dug for the purpose of stacking, covering and storing waste before their disposal.
- Landfills handled both commercial and household waste across categories such as paper, food, tin, plastic, etc.
- A protective lining would be placed at the base of the landfill over which the waste is deposited to prevent dangerous chemicals from leaking** through into the soil, and further contaminating groundwater supplies.
- Once the pit is filled with waste, a **layer of compacted soil is laid on top to seal in the waste** in a manner that reduces the risk of leaking.
- Landfills were suitable for all areas except those vulnerable to flooding and possessing high levels of groundwater.

To know more about [landfills](#), click the link.

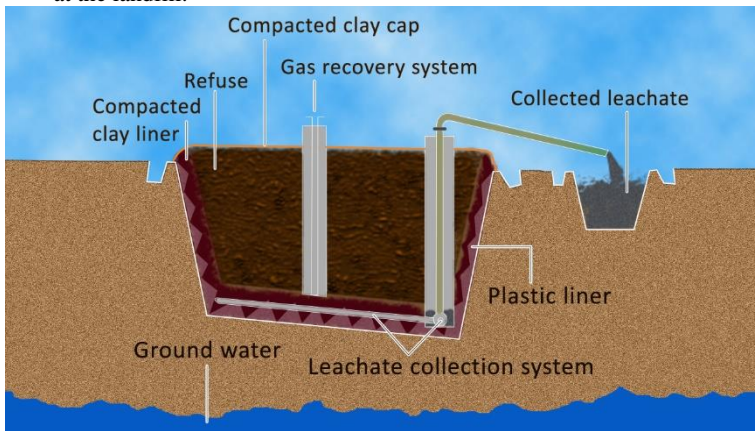
#### Why do landfills catch fire?

- Indian municipalities have been **collecting around 90% of the total waste generated within their jurisdictions but the efficiency of waste processing was much lower, around 30-40%.**
- Municipal Solid Waste normally comprised 60% biodegradable material, 25% non-biodegradable material, and 15% inert materials like silt and stone.
- The segregation of wastes and recycling of byproducts was the responsibility of the municipality.

- However, the rate of processing of waste in Indian cities was far lower than the rate of waste generation which has led to unprocessed waste lying in open landfills for long periods.
- There are flammable materials as well among this exposed waste which when ignited in any way could lead to vast fires.
- Low-quality plastics disposed of by households and industries have a relatively high calorific value of 2,500-3,000 kcal/Kg.

**High Calorific Value** refers to the total amount of heat released from the combustion of unit mass or volume of the fuel when its byproducts are allowed to cool at room temperature.

- **During the hot Indian summers, composting of the biodegradable materials in the waste occurs at a faster rate which results in an increase in the temperature of the heap to above 70-80 degrees Celsius.**
- The resultant **higher temperature along with the presence of flammable materials creates an ideal environment for a fire** to occur at the landfill.



### What is a permanent solution?

- Landfill fires can be managed on a permanent basis in two ways:
  - **Solution 1:** Carry out **complete sealing of landfills using soil** in a scientific manner.
  - **Solution 2: Bioremediation** can be practised to clear the waste which can then be recycled.
- However, the first solution was not suitable for the Indian context as the sealed landfill can not be used again for any purpose.
- Sealed landfills were also subject to specific standard operating procedures which were necessary to manage the risks involved such as methane emissions.
- The second solution was an attractive option for India as it allowed for the waste to be reused and recycled.
- Automated Sieving Machines could be used to segregate biodegradable material in the waste from **flammable refuse-derived fuel (RDF)** material such as plastics, rags, clothes, etc.
- **Cement kilns can reuse the RDF as a fuel** while the **biodegradable portions can be distributed to farmers in the form of bio-soil** to be used as an additive for their crops.
- The remaining inert portion of the waste can later be landfilled as it was of no particular use.
- However, bioremediation projects required around two-three years to be implemented, which has necessitated the development of an immediate solution.

### What are some measures that can be implemented in the short term?

- Landfills are typically vast sites ranging to around 20-30 acres and capable of handling different types of waste.
- The **site should be classified into separate blocks**, each handling a particular type of waste and separated by a drain or bund of soil.

- Flammable material containing blocks should be separated from blocks containing fresh waste at all sites.
- Blocks that have been capped with soil displayed a lower risk of catching fire, so they can be spread out across the site to reduce the risk of a vast fire. Therefore, as many of the blocks as possible should be capped with a layer of earth.
- **The blocks that contained materials like plastics and cloth were the most vulnerable and had to be sealed with soil while the fresh waste block need not be capped but consistently sprinkled with water and turned regularly to enable aeration**, which would reduce the risk of combustion greatly by cooling the heap.
- **Incoming waste should be classified on arrival** and disposed of in the designated sections immediately instead of dumping them as mixed fractions.
- Non-biodegradable and non-recyclable waste, if segregated, should be sent to the cement kilns at the earliest in order to avoid them accumulating while dry grass and trees, which would act as fuel in case of a fire, should be cleaned regularly.

### What are the other concerns associated with landfills

- **Health:** Improper collection and storage of wastes at landfills could lead to **communicable diseases like cholera due to groundwater contamination**. They also serve as breeding grounds for **disease-spreading insects and rats**. **Burning of waste in landfills can lead to respiratory problems, headaches, burning sensation in the eyes** etc.
- **Environmental:** Unscientific practices could lead to **groundwater contamination and loss of soil quality** while accumulated waste in landfills could also lead to the **release of toxic gases like methane, carbon dioxide etc which contribute to global warming**.
- **Economic:** An increase in the number of landfills would occupy useful land and lead to the wastage of resources. Poor strategies for waste collection could lead to **waterlogging on streets and urban flooding**. Waste stored in landfills could have **generated revenue for local bodies through recycling**. They also **reduce the tourism potential** of the region and thereby revenue to the state and residents.

### Conclusion

Landfills need to be operated in a holistic manner as short-term measures can only reduce the risk of fires, not eliminate them. Permanent solutions like bioremediation need to be adopted in Indian cities alongside global good practices such as early segregation of waste and treatment of byproducts.

### Waste Management in India

- Waste Management in India is governed by the Ministry of Environment, Forests and Climate Change, the Ministry of Housing and Urban Affairs, the Central and State Pollution Control Boards, and the local bodies.
- According to the Central Pollution Control Board (CPCB) around 160,000 metric tonnes per day (TPD) of solid waste is generated in India which is collected at a 96% efficiency. Of the total, 50% was treated, 18.4% was landfilled and the remaining 31% was unaccounted for.
- Various rules under the **Environment Protection Act 1986** such as the **Solid Waste Management Rules, E-Waste Management Rules, Plastic Waste Management Rules**, etc act as the framework for waste management in the country.
- The government has also undertaken campaigns such as:
  - **Swachh Bharat Mission (U)** - A cleanliness and sanitation campaign in urban bodes through door-door waste collection, segregation etc.
  - **Swachh Survekshan** - An annual survey on the sanitation and hygiene conditions in Indian cities by the Ministry of Housing and Urban Affairs under the SBM (U).
  - **Waste-to-Energy** - Projects that convert industrial, solid, municipal waste etc into energy sources such as RDF have been promoted by the government.

## Coral Breach: A Silent Catastrophic Invasion Has Happened In The Gulf Of Mannar

Priority: **Medium**

Primary Source: Down To Earth

Prepp Prelims Booster: Corals

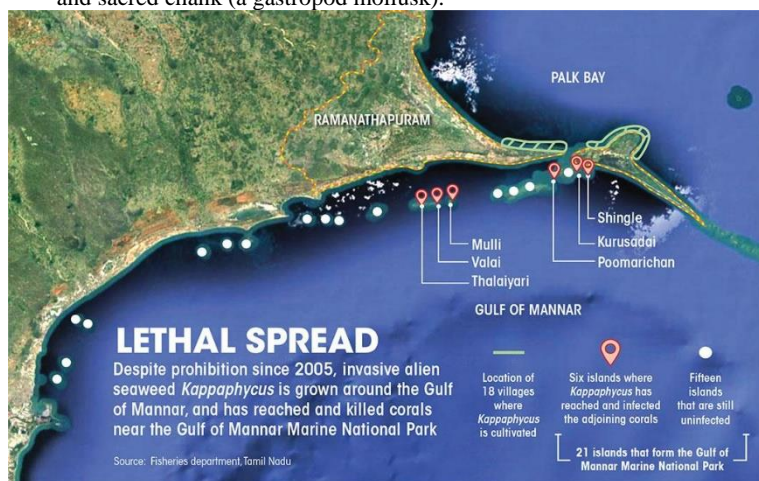
Prepp Mains Booster: Environment

### Context:

- Recently, in an investigation of three coral colonies adjacent to Kurusadai, one of the 21 uninhabited islands that comprise the **Gulf of Mannar Marine National Park along the Tamil Nadu coastline**, reveals corals to be dangerous.
- The Tamil Nadu government is planning a seaweed park, ignoring the threat that **Kappaphycus, a widespread invasive seaweed**, poses to corals in the Gulf of Mannar Marine National Park, which runs along the state's coastline.

### About Gulf of Mannar

- It is an inlet of the Indian Ocean located between southeastern India and western Sri Lanka. It is bounded to the northeast by Rameswaram (island), Adam's (Rama's) Bridge (a chain of shoals), and Mannar Island.
- The gulf is 80-170 miles (130-275 km) wide and 100 miles (160 km) long. It receives several rivers, including the Tambraparni (India) and the Aruvi (Sri Lanka).
- Tuticorin is located on the coast. The gulf is famous for its pearl banks and sacred chank (a gastropod mollusk).



### Marine National Park

- The Marine National Park was established in 1982 under the Wildlife (Protection) Act of 1972. The total area of the National Park is approximately 162.89 km<sup>2</sup>.
- The Marine (Gulf of Kutch) National Park contains 42 islands off the coast of Jamnagar, the majority of which are surrounded by reefs.
- Coral reefs, mangroves, mudflats, creeks, seagrass and seaweeds, estuaries, sandy strands to saline grasslands, marshy areas, and rocky shores are some of the major ecosystem types available.
- All ecosystems support diverse marine and bird life.

### What are the threats?

- The corals, which shelter a variety of marine life, protect against storms, and support livelihoods through fisheries and tourism, could have been the main attraction.
- Kappaphycus alvarezii**, a seaweed (alga) species deliberately introduced in Ramanathapuram for commercial cultivation some two decades ago, is one of the primary threats that killed the corals near Kurusadai.
- It is listed as one of the world's 100 most invasive species by the International Union for Conservation of Nature.

### Seaweed Park in Tamil Nadu

- Kappaphycus is likely to be cultivated in Tamil Nadu's proposed seaweed park. The Centre proposed this park in the Union Budget for 2021-22.
- The park will likely serve as two hubs: a seaweed bank in Ramanathapuram's Valamavoor village and a processing hub for factories producing seaweed products in Pudukottai.

### What is seaweed?

- The term "seaweed" refers to a variety of marine plants and algae that grow in the ocean, as well as rivers, lakes, and other bodies of water.
- Seaweeds are microscopic algae that grow in marine and shallow coastal waters as well as on rocky shores.
- These are plant-like organisms that live in coastal areas attached to rock or other hard substrates.
- They are an important food source for marine organisms.

### Seaweed farming in India

- Seaweeds are abundant along the coasts of Tamil Nadu and Gujarat, as well as around the islands of Lakshadweep and Andaman and Nicobar.
- Rich seaweed beds can be found near Mumbai, Ratnagiri, Goa, Karwar, Varkala, Vizhinjam, and Pulicat in Tamil Nadu, Andhra Pradesh, and Chilka in Orissa.
- Red Algae Gracilaria edulis, Gracilaria dura, and Kappaphycus alvarezii are highly suitable for cultivation on floating bamboo rafts or tube nets held in the sea.

### Cultivation of Seaweed in India

- According to the Indian Council of Agricultural Research-Central Marine Fisheries Research Institute, India cultivated approximately 34,000 tonnes of seaweed in 2021.
- The government has set aside Rs 600 crore to increase seaweed production to 11.85 million tonnes by 2025.
- In nine maritime states, researchers have launched surveys to identify suitable locations and seaweed species, including Kappaphycus and indigenous species, for cultivation.
- National research institutes and companies support increased cultivation of Kappaphycus to improve livelihoods, profits, and to reduce India's import of kappa-carrageenan, a polysaccharide extracted from the alga that is used in industrial gums and as a smoothing agent in ice cream, toothpaste, jellies, medicines, and paint.
- According to a paper published in Aquaculture International in May 2022, India produces 100-132 tonnes of carrageenan per year and imports 1,800-2,000 tonnes.

## Ornamental Fish Aquaculture To Help Lakshadweep Women

Priority: **Medium**

Primary Source: The Hindu

Prepp Prelims Booster: Biodiversity

Prepp Mains Booster: Role of women and women's organization; Government policies and interventions for development in various sectors and issues arising out of their design and implementation

### Context:

- Recently, **ornamental aquaculture** has been adopted by **Lakshadweep women** under the technical guidance of the **ICAR-National Bureau of Fish Genetic Resources**.
- The scheme was expected to help the islanders generate additional income as the islands are mostly dependent on fishing and limited in other natural resources.

### Ornamental Aquaculture

- Ornamental Aquaculture** refers to the cultivation of attractive and colorful fish with various characteristics in a confined aquatic system.
- Also called living jewels, there are around 800 species of ornamental fishes found worldwide.

- India has great potential for ornamental aquaculture due to its rich biodiversity, favorable climate and easy availability of labour.



#### What is the new scheme?

- In a first-of-its-kind experiment, 82 islanders including 77 women from Lakshadweep have undergone intensive training and formed groups for ornamental fish aquaculture.
- The scheme included technical support from the **ICAR-National Bureau of Fish Genetic Resource, Lucknow**.
- The NBFGR has maintained a **germplasm resource centre for marine ornamental organisms on Agatti island** for species conservation and employment generation among locals.
- The NBFGR also extended support through capacity building and handholding women-led community aquaculture units to raise captive-bred marine ornamentals such as shrimp to marketable size.
- Four cluster-mode community aquaculture units with the participation of 46 women were created and were successful in raising shrimp to marketable size and generating substantial income over four cycles.
- In addition to the two ornamental species of shrimp, captive-raised clownfish seeds were also distributed for further rearing in order to expand activity and enhance the income of women.
- Culture devices such as rearing tubs, mini blowers, aeration tubes, stones, hand nets, feed, and beneficial bacteria were provided alongside supplies of **Anylocaris brevicarpalis** and a **new species of shrimp (Thor hainanensis)** reported in Indian waters.

#### Benefits

- Community-based fishing using local resources was expected to generate income for women, thus empowering them to become **self-reliant**.
- The Lakshadweep islands have limited resources, mostly coconut and tuna with inhabitants dependent on fishing. However, fishing comes to a halt during the monsoon.
- Ornamental aquaculture would help **sustain the economy** of the islands during these periods.
- The project was developed on an **eco-friendly model** through the use of coconut fronds and leaves as well as solar panels.
- Ornamental aquaculture was recognized as a viable source of **foreign exchange**, that was still untapped in India. Community-based development would help boost the country's foreign exchange reserves.

#### What is the National Bureau of Fish Genetic Resources?

- The NBFGR was a research centre dedicated to fishery research under the Indian Council for Agricultural Research
- It is located in **Lucknow, Uttar Pradesh**.
- Functions:**
  - Evaluation and preservation of Fish genetic resources for sustainable use, and intellectual property protection.
  - Study, analysis, and cataloging of fish genetic resources.
  - Upkeep and preservation of fish genetic resources for the benefit of targeted species' conservation and utilization.
  - Evaluation of native and foreign genetic material, including risk evaluation and fish health.

#### ICAR

- The **Indian Council for Agricultural Research** is an autonomous organization of the Government of India which was set up in 1929.
- Formerly known as the Imperial Council for Agricultural Research, it is headquartered in New Delhi.
- ICAR is India's apex body for coordinating, guiding and managing research and education in agriculture including horticulture, fisheries and animal sciences.
- Its mandate includes research and technology development for sustainable agriculture, agri-based rural development, consultancy on agricultural policy and establishment of research guidelines.
- The Union Minister of Agriculture is the ex-Officio President of ICAR.

### More Than 90% Of The World's Salt Marshes May Soon Succumb To Sea Level Rise: Study

Priority: **Medium**



Primary Source: Down To Earth

**Prepp Prelims Booster:** Salt Marshes

**Prepp Mains Booster:** Conservation, environmental pollution and degradation,

#### Why in the news?

- According to a study published in the journal, *Science of The Total Environment* more than 90 percent of biologically productive ecosystems Salt Marshes may soon succumb to sea level rise by the turn of the century.
  - Salt marshes are coastal wetlands that are flooded and drained by salt water brought in by the tides.
  - They are marshy because the soil may be composed of deep mud and peat.



#### What does the study say?

- According to a study by the Marine Biological Laboratory (MBL) over 90 percent of these salt marshes could disappear due to sea level rise by the turn of the century.
- Scientists have been tracking vegetative cover in Great Sippewissett Marsh in Falmouth, Massachusetts, for the last 50 years in order to analyze the implications of higher nitrogen levels on marsh grass species.
- According to them, increased nitrogen levels favored higher levels of vegetation and accretion of Marsh Surface. But these ecosystems won't be able to outpace submergence from global sea level rise.
- The only choice for salt marshes is to migrate landward. However, migration to landward can be impacted by anthropogenic activities and other factors.
- Marshes all around the world face "**coastal squeeze**," in which the sea level rise, anthropogenic activity, and topographical factors (like a hill or a cliff) constrain the potential for landward marsh migration. For example, a seawall that shields a house from flooding will prevent a wetland from naturally moving to a higher location.

### What are salt marshes?

- Salt marshes are **coastal wetlands** that are flooded and drained by salt water brought in by the tides.
- They are marshy because the soil may be composed of deep mud and peat.
- As the salt marshes are frequently submerged by the tides and contain a lot of decomposing plant material
- Salt marshes occur worldwide, particularly in middle to high latitudes.

### Ecological significance of Salt Marshes

- **Protects the coast:** Salt marshes are the “ecological guardians of the coast” that maintain healthy fisheries, coastlines and communities.
- **Habitat for Aquatic life:** They provide shelter, food and nursery grounds for coastal fisheries species including shrimp, crab and many finfish.
- **Buffer against erosion:** They also protect shorelines from erosion by creating a buffer against wave action and by trapping soils.
- **Protection against floods:** In flood prone areas, salt marshes **reduce the flow of flood waters and absorb rainwater.**
- **Maintain Water quality:** They also help to maintain water quality in coastal bays, sounds and estuaries by filtering runoff and excess nutrients.
- **Carbon sinks:** Salt marshes and other coastal wetlands also serve as “carbon sinks,” holding carbon that would otherwise be released into **the atmosphere and contribute to climate change.**

### Conclusion

- In a scenario where sea levels rise, plants' only options will be to colonise new areas or move uphill. However, that migration might not be feasible in some places.
- Sea level rise is the most significant threat to salt marshes, as these ecosystems play an important role in stabilizing the environment. Therefore, preventive measures need to be taken to ensure that salt marshes can continue to play their vital role.

### World Bank's Women, Business and the Law Index

Priority: **Medium**



Primary Source: Down to Earth

**Prepp Prelims Booster:** World Bank's Women, Business and the Law Index

**Prepp Mains Booster:** Issues relating to development and management of Social Sector/Services relating to Health, Education, Human Resources, Important International institutions, agencies and fora; Role of women and women's organization, population and associated issues, poverty and developmental issues, urbanization, their problems and their remedies.

#### Context:

- Recently, the **World Bank's Women, Business and the Law Index** revealed that the global reforms towards equal treatment of women under the law had slowed in the last two decades.
- In 2022, the global average score on the index was 77.1, just one point higher than in the previous year.

### Women, Business and the Law Index

- The Index is a **World Bank** report that measures the laws and regulations affecting women's economic opportunities across 190 economies.
- It is conducted on an annual basis with the 2023 edition being the 8th Index to be published.
- The Index assessed the **legal and regulatory framework in eight areas related to women's economic participation**—mobility, workplace, pay, marriage, parenthood, entrepreneurship, assets, and pensions.

**WOMEN, BUSINESS AND THE LAW 2023**



### What are the findings of the Women, Business and the Law Index?

- Laws made to secure equal treatment for men and women across the world were making progress in bridging the gender gap.
- However, the Women, Business and the Law Index report 2023 has revealed that the **global pace of equal treatment of women has slowed to the lowest in twenty years.**
- The Index reported that only **14 out of 190 countries have laws giving men and women equal rights with the global average score being 77.1.**
- This meant that **women enjoy only 77.1% of the legal rights enjoyed by men** at present and a woman who joined the workforce now would be able to retire before men and women enjoyed equal rights.
- According to the report, only 34 gender-related legal reforms were undertaken across 18 countries in 2022, which was the lowest since 2001.
- The World Bank claimed that it **would take around 1,549 reforms and 50 years to ensure substantial legal gender equality** in the regions mentioned in the report.
- The Report highlighted that the global average index score meant that around **2.4 billion women of working age did not have the same rights as men.**
- All 14 countries with perfect scores were highly developed countries that could provide their citizens with the highest quality of economic opportunities.
- According to the report, gender parity reforms had peaked in the early 2000s but have since slowed down particularly on women's rights to inherit and own property.

#### On Sub-Saharan nations

- Sub-Saharan countries were noted to have made significant progress in the last year.
- Over **half the reforms that were implemented in 2022 occurred in seven Sub-Saharan economies** with Benin, the Republic of Congo, Côte d'Ivoire, Gabon, Malawi, Senegal and Uganda responsible for 18 reforms.

#### Conclusion

- Between 2000 and 2009, over 600 gender-related reforms were implemented globally with 2002 and 2008 witnessing the highest annual number of 73.
- Gender parity will result in a significant economic gain. The **GDP per capita could increase by 20% on average across countries if the gender employment gap was bridged.**
- Experts have estimated that **global economic gains of \$5-6 trillion** could be gained by women scaling and setting up businesses at the same rate as men.
- Countries should mobilize their complete human resource potential to tackle the growing crisis of slowing economic growth.

#### World Bank

- The **World Bank** is an international financial institution that extends credit to low and middle-income states in order to complete capital investment projects.
- It is headquartered in Washington DC USA.
- The World Bank was established at the **Bretton Woods conference in 1944** and comprises 189 member nations.
- There are five constituent bodies in the World Bank Group:
  - **The International Bank For Reconstruction And Development (IBRD)**
  - **International Development Association (IDA)**
  - **International Finance Corporation (IFC)**
  - **Multilateral Investment Guarantee Agency (MIGA)**
  - **International Centre For Settlement Of International Disputes (ICSID)**
- The IBRD and the IDA are collectively known as the World Bank.

#### Membership:

- To be a member of the World Bank, a country must first join the IMF.
- A country is required to have membership of the IDA to join the other World Bank institutions.

#### Functions:

- The IBRD is the world's largest development bank extending credit to middle and low-income states through loans, guarantees, advice, and risk management tools.
- The IDA provides grants and low-interest loans to the poorest countries.
- The IFC is the commercial wing of the World Bank Group and is responsible for supporting the development of the private sector in underdeveloped countries.
- MIGA provides guarantees in the form of risk assurance and credit improvement services to increase cross-border investments in underdeveloped nations.
- The ICSID works as the arbitration section of the World Bank and helps settle disputes between governments and investors.

### Tiger Helps Uncover Timber 'depots' In Arunachal Pradesh's Namdapha National Park

Priority: **Medium**



Primary Source: The Hindu

**Prepp Prelims Booster:** Namdampha National Park

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

#### Context:

- Recently, a tiger spotted after eight years in the **Namdapha National Park and Tiger Reserve** in Arunachal Pradesh helped forest officials identify illegal timber logging in the core area of the reserve.
- The illegal logging forced the tiger out of the core area towards the Forest Inspection Bungalow, where it was later observed.



#### What has been found in Namdapha?

- Officials in Changlang district in eastern Arunachal Pradesh discovered a 20 Km motorable kutchra road that had been built by timber smugglers in and around the core area of the **Namdapha National Park and Tiger Reserve**.
- The officials also found a number of timber depots inside the core area of the Reserve after investigating why a tiger was observed outside the core area of the Reserve after eight years.
- Large-scale smuggling was being carried out in the region with officials arresting locals and seizing excavators, trucks, pickups and other logging equipment.
- A preliminary survey of the region indicated that around 2000 CFT (cubic foot) of timber was present at the various depots in the region.

#### What caused the tiger to leave the core area?

- The tiger was observed near the **Deban Forest Inspection Bungalow**, which was located outside the core area of the Namdapha National Park and Tiger Reserve.
- According to forest officials, the intense illegal logging activities that were taking place inside the forest had forced the tiger out of the dense core area.
- The tiger habitat had been destroyed by **timber smuggling** in the catchment area of the **Mpen Nallah**.
- The officials also noted that the Mpen Nallah, which was the source of water for the animals of Namdapha and the residents of Miao had dried up due to **deforestation**.
- The **scarcity of water** in the region could lead to an increase in human-animal conflicts.
- Officials also claimed that the timber smuggling could be connected to the **encroachment** that was taking place in the core areas of Namdapha along the Miao-Vijaynagar Road.

#### What measures will be taken?

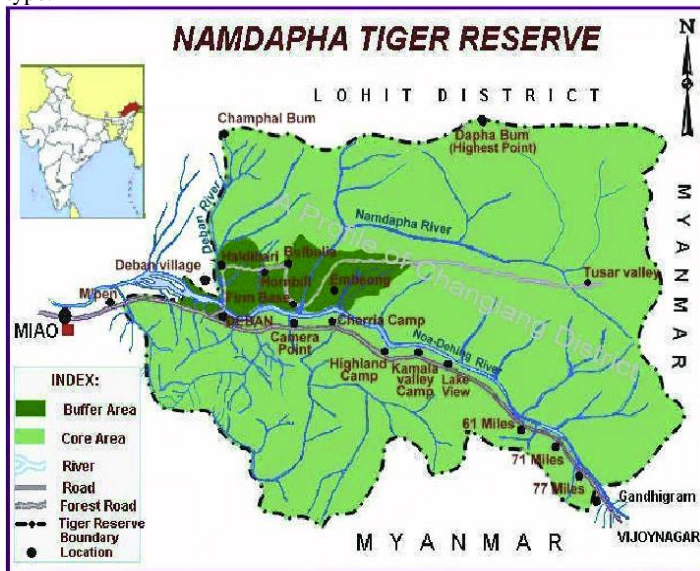
- The administration of the Reserve also mentioned that the number of sawmills in close proximity to the Reserve should be rationalized to disincentivize illegal logging.
- Sawmills would also be monitored so that sawmills did not take illegal timber.
- Protected areas within the Park would be regulated and any offenders prosecuted as per the law.
- Awareness-building campaigns would be initiated by the administration among the local communities.
- Steps would be taken to ensure that local communities also benefited from the increase in tourism at Namdapha would lead them to participate actively in conservation efforts in the Reserve.

#### Namdapha National Park and Tiger Reserve

- Namdapha National Park and Tiger Reserve was the largest protected area in the Eastern Himalayas in Arunachal Pradesh.



- Located between the **Dapha Bum range of the Mismi Hills** and the **Patkai range**, it is the **fourth largest National Park in India by area (1985 Sq Km)**.
- The Park has been named after the **Namdapha river** which originates in the Park and flows into the **Noa-Dehing river**, a tributary of the Brahmaputra.
- **Climate:** The majority of the Park experienced a sub-tropical climate with the mountainous region of the Park experiencing a montane climate with the low-lying areas experiencing a tropical climate.
- **Status:** It was established as a National Park and Tiger Reserve in 1983 and was included in the Tentative List of World Heritage Sites.
- **Fauna:** The biodiversity hotspot was the **only park in the world which housed four large cats, namely the Tiger, Leopard, Snow Leopard and Clouded Leopard**. Other species found in the Reserve include the critically endangered flying squirrel and the Hoolock gibbon.
- **Vegetation:** The vegetation was mostly of the tropical evergreen forest type.



### Background Radiation High In Kerala, But No Risk, Says Study

Priority: High



Primary Source: The Hindu

**Prepp Prelims Booster:** Background Radiation

**Prepp Mains Booster:** Distribution of key natural resources across the world (including South Asia and the Indian subcontinent); GS 2 - Issues relating to the development and management of Social Sector/Services relating to Health

#### Context:

- Recently, a pan-India study by scientists from Bhabha Atomic Research Centre (BARC) found that in parts of Kerala, background radiation levels, or that emitted from natural sources such as rocks, sand or mountains, are nearly three times more than what's been assumed.
- This doesn't however translate to an elevated health risk:
  - Background radiation is present on Earth at all times. The majority of background radiation occurs naturally from minerals and a small fraction comes from man-made elements.
  - Naturally occurring radioactive minerals in the ground, soil, and water produce background radiation.
  - The human body even contains some of these naturally-occurring radioactive minerals. Cosmic radiation from space also contributes to the background radiation around us.



#### What are the Findings of the study?

- The recent study measured radiation levels from nearly 100,000 locations across the country as opposed to the 1986 survey that only mapped 214 locations.
- The recent study found that the average natural background levels of gamma radiation in India was 94 nGy/hr (nano Gray per hour) (or roughly 0.8 milli sievert/year).
- The last study conducted in 1986, computed such radiation to be 89 nGy/hr.
- 1 Gray is equivalent to 1 Sievert, though one unit refers to radiation emitted and the other to biological exposure.
- The 1986 study measured the Maximum radiation exposure at Chavara, Kerala at 3,002 nGy/year.
- The levels in the Kollam area, where Chavara is located, were 9,562 nGy/hr, or around three times larger, according to the current study. This equates to an annual exposure of roughly 70 milliGray, or slightly more than what a worker in a nuclear plant would experience.
- This doesn't mean that those at Kollam are being exposed to higher, dangerous levels of radiation. There have been extensive studies in the past that have checked for higher rates of cancer or mortality and nothing out of the ordinary has been found.
- This just demonstrates that the body is used to receiving larger radiation levels.

#### What is the reason behind background radiation?

- The elevated radiation levels in Kollam are linked to monazite sands that have significant amounts of thorium;
- Southern India has greater radiation levels from uranium deposits due to the presence of granite and basaltic volcanic rock.
- According to the study there is a fair correlation between soil classes and absorbed dose rate.
- Low values (around 67 nGy/h) of absorbed dose rate in air were recorded for **mixed red and black soils of Maharashtra and Gujarat** while high values of (around 170 nGy/h) were recorded in the **west-coastal plains of Kerala containing coastal and derived deltaic alluvial soils**.

#### Is this radiation harmful?

- Radiation is emitted from the disintegrating nucleus of an unstable element
- **Gamma rays** are a kind of radiation that can pass unobstructed through matter.
- They are extremely energetic, however they are harmless unless present in large concentrated doses.
- It's similar to heat from a fire feeling pleasant until a sustained, concentrated burst can scald or worse, ignite.
- Gamma radiation levels are monitored around the nuclear power plants and also the exposure of plant workers to quantity of radiation are measured.
- India's atomic energy establishment has adopted the maximum radiation exposure levels specified by the **International Atomic Energy Agency (IAEA)**.

- Public exposure shouldn't exceed 1 milli-Sievert every year, those who work in plants or are by virtue of their occupation shouldn't be exposed to more than 30 milli-Sievert every year.

#### Way forward

- The present installed nuclear power capacity in the country is 6780 MW comprising of 22 operational nuclear power reactors.
- Nuclear power is a clean and environment friendly base load source of electricity generation, which is available 24X7.
- It also has a huge potential and can provide the country long term energy security in a sustainable manner.
- Expansion of nuclear power capacity will help in the country's energy transition for meeting the goal of net zero economy.
- India's plans to increase reliance on nuclear energy meant that it was time to update estimates on the natural background radiation.

#### Monazite

- Monazite is one of the beach sand minerals that contains rare earths like, lanthanum, cerium, praseodymium, neodymium etc.
- It also contains thorium which is a "prescribed substance", the list of which was revised in 2006 under the Atomic Energy Act, 1962.
- India's only monazite processing plant (MOPP) at Orissa Sands Complex (OSCOM), a unit of Indian Rare Earths Limited (IREL), a wholly owned PSU under the Department of Atomic Energy (DAE).

### Foreign Lawyers, Firms Can Operate In India: Bci

Priority: **Medium**



Primary Source: The Hindu

**Prepp Prelims Booster:** Foreign Lawyers

**Prepp Mains Booster:** Structure, organization, and functioning of the Judiciary; Statutory, regulatory and various quasi-judicial bodies.

#### Context:

- Recently, the BCI notified in the official gazette the Rules for Registration and Regulation of Foreign Lawyers and Foreign Law Firms in India, 2022.
- The Rules will allow the registration of foreign lawyers and firms with BCI. However, they cannot appear in court, they can advise clients on foreign law and work on corporate transactions.

#### What is the BCI decision?

- The BCI has framed the 'Bar Council of India Rules for Registration of Foreign Lawyers and Foreign Law Firms in India, 2021' to enable foreign lawyers and law firms "to practice foreign law, diverse international law and international arbitration matters in India on the principle of reciprocity in a well-defined, regulated and controlled manner".

#### What do the new rules permit?

- According to the Advocates Act, **advocates enrolled with the Bar Council** alone are **entitled to practice law** in India.
- All others, such as a litigant, can appear only with the permission of the court, authority or person before whom the proceedings are pending.
- They will be permitted to work on corporate projects such as joint ventures, mergers and acquisitions, issues relating to intellectual property, contract drafting, and other similar tasks on a reciprocal basis.
- Registration with BCI:** In essence, the notification permits foreign lawyers and law firms to register with BCI in order to practice law in India if they are qualified to do so in their home countries. They **cannot, however, practice Indian law.**

#### Restrictions

- Cannot Practice law in India:** However, a foreign lawyer or foreign law firm that practices law on a "fly in and fly out basis" for the purpose of providing legal advice to a client in India regarding foreign law or international legal issues would not be subject to this restriction.
- But, in this scenario, neither the lawyer nor the firm cannot have an office in India, nor may they practice for more than 60 days in a calendar year.

- Cannot appear before court:** Foreign lawyers or foreign Law Firms shall **not be permitted to appear before any courts, tribunals or other statutory or regulatory authorities.**
- They shall not be involved or permitted to do any work pertaining to the conveyancing of property, Title investigation or other similar works.
- Indian lawyers** working with **foreign law firms** will also be **subject to the same** restriction of engaging only in "non-litigious practice."



#### Impact

- According to the BCI, the move **would benefit Indian lawyers**, whose standards of proficiency in law are comparable with international standards.
- It will make India a **hub for international commercial arbitration** and **address concerns about FDI flow into the country.**
- The rules will bring legal clarity to foreign law firms that currently operate in a very limited way in India.

#### How have foreign law firms operated so far?

- The issue of foreign law firms entering the Indian market was challenged in the Bombay High Court in 2009.
- In '**Lawyers Collective v Union of India**', the Bombay High Court ruled that only Indians holding Indian law degrees can practice law in India.
- The HC interpreted Section 29 of the Advocates Act, which stipulates that only advocates enrolled with BCI can practice law.
- The HC also ruled that "practice" includes both litigious and non-litigious practice, prohibiting foreign companies from providing legal advice to Indian customers or participating in court appearances.
- In '**AK Balaji v Government of India**', the Madras High Court also held that foreign firms cannot practice either on the litigation or non-litigation side unless they meet the specifications and rules laid down by the Advocates Act and the BCI rules.
- The case included more than 32 foreign legal firms from the UK, the US, France, and Australia as respondents.
- The Madras High Court did make an exception, nevertheless.
- It declared that brief trips and "**fly in and fly out**" **client** consultations would not be prohibited in order to provide legal counsel to their Indian clients regarding foreign law or their home country's legal system as well as various international legal issues.
- The High Court ruled that foreign lawyers cannot be prevented from traveling to India to conduct arbitration proceedings in respect of disputes arising out of contracts relating to international commercial arbitration, given the goal and object of the International Commercial Arbitration introduced in the Arbitration and Conciliation Act, 1996.

#### Post 2012

- Business Process Outsourcing (BPOs) developed a significant presence in India by 2012 and were handling back-end work for US-based businesses.
- These businesses, known as Legal Process Outsourcing (LPOs), provided support services for lawyers.

- They functioned under ambiguous legal frameworks, thus the Supreme Court had to step in to establish the law.

### What was the SC's decision?

- The Madras and Bombay High Court rulings were both appealed to the Supreme Court by the BCI and Lawyer's Collective, respectively.
- With significant adjustments, such as ruling that the phrase "fly in and fly out" only applies to "casual visits not amounting to practise," the Supreme Court affirmed both the High Court judgments prohibiting foreign law firms and lawyers in 2018.
- This meant that the "fly in and fly out" route could not mean regular visits. On the issue of LPOs, the SC did not decide on their fate.
- They claimed that because they handled secretarial assistance, transcription services, and proofreading, they were effectively BPOs.

### Conclusion

The present move of allowing foreign lawyers and foreign law firms to practice in India could potentially change the landscape of legal practice in the country.

## EC Tells Allahabad HC It Does Not Have Power To Ban Caste Rallies By Parties In Non-Election Period

Priority: **Medium**



Primary Source: The Hindu

**Prepp Prelims Booster:** Election Commission

**Prepp Mains Booster:** Powers, functions and responsibilities of various Constitutional Bodies. Statutory, regulatory and various quasi-judicial bodies; Representation of the People Act

### Context

- Recently, the [Election Commission of India \(EC\)](#) submitted before a Bench of the Allahabad High Court, responding to a [writ petition](#) that sought a ban on all such political rallies.
- It said that does not have the jurisdiction to restrict caste-based political rallies held by political parties during non-election period, and nor does it have the power to ban such parties from contesting subsequent elections



### Background

- The Election Commission filed its response before the court in response to the petition filed by advocate Moti Lal Yadav, who had also sought that any political party holding such rallies should be de-registered.
- The petition was filed in 2013, following which the Allahabad HC issued a notice to the EC and other respondents in July.
- At the same time, it imposed interim orders banning all caste-based rallies in Uttar Pradesh until the ECI "took adequate measures" and appeared before the court.
- However, after not receiving a response from the parties until November 2022, the High Court issued a fresh notice to all parties seeking their counters.
- The petition had listed several political parties, including the Bharatiya Janata Party (BJP), the Indian National Congress (INC), the Samajwadi Party (SP), and the Bahujan Samaj Party (BSP), as well as the Union and

State governments and the Chief Election Officer of Uttar Pradesh, as respondents.

### Election commission's argument

- In response to the fresh notice, the EC had argued that it has no jurisdiction to restrict the convening of meetings and rallies on caste lines by political parties during the non-election periods and to ban them from contesting the subsequent election.
- Therefore, the prayer for taking action against the Election Commission against parties and persons during the non-election periods is not maintainable.
- The commission argued that while it had the power to register political parties under Section 29A of the [Representation of the People Act, 1951](#).
- Once a political party is registered, there is no provision in the **Law for review of the registration or for the canceling of the registration** of any political party on any ground including the violation of its undertaking under Section 29A (5).
- Furthermore, the ECI argued that its Model Code of Conduct already lays out a strong set of guidelines that forbid electioneering along communal lines or soliciting votes based on caste, creed, or religion. These regulations, however, cannot be put into effect before an election is called because they don't take effect until then.

### What are the circumstances under which the Election commission can review the registration of a political party?

- According to the Election commission, there are only three exceptions under which it can review the registration of a political party as per the Supreme Court's 2002 judgment in **Indian National Congress Vs. Institute of Social Welfare and others**.
  - The cases where the political party in question has obtained registration through fraud or forgery.
  - Where a party "changes its nomenclature of association, rules and regulation abrogating the provisions therein conforming to the provisions of Section 29A (5) or intimating the Commission that it has ceased to have faith and allegiance to the Constitution of India or to the principles of socialism, secularism and democracy, or it would not uphold the sovereignty, unity and integrity of India".
  - Where no inquiry is called for on the part of the Commission - for instance, in cases where a registered political party had been declared **unlawful by the Union government under the provisions of the Unlawful Activities (Prevention) Act or any other similar law**.

## Validity Of Electoral Bonds Scheme | Supreme Court Fixes April 11 To Examine Whether Petitions Need To Be Referred To Constitution Bench

Priority: **Medium**



Primary Source: The Hindu

**Prepp Prelims Booster:** Electoral bonds

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

### Context:

- Recently, the Supreme Court agreed to consider whether the various petitions filed challenging the validity of the electoral bonds scheme needed to be referred to a Constitutional bench on April 11th 2023.
- According to an RTI response, ₹6.74 lakhs of electoral bonds were printed and ₹11,699.84 crores were sold between 2018 and 2022.

### What is the electoral bond scheme?

- **Electoral bonds** were introduced through the **Finance Act of 2017** as securities or instruments that could be used to donate to political parties.
- The electoral bond acts as a promissory note that could be purchased by an individual who was a citizen of India or incorporated or established in India.

- The bonds may be issued by notified banks who may be approached by donors to purchase the bonds.
- **Eligibility:** Only parties registered under **Section 29A of the Representation of People Act, 1951** and which had secured at least **1% of the total votes polled in the last General Election to the Lok Sabha or the state Assembly** would be eligible to receive the bonds.
- The SBI has been authorized to issue bonds in denominations of ₹1000, ₹10,000, ₹1 lakh, ₹10 lakhs, and ₹1 crore.
- Electoral bonds can be purchased digitally or via cheque and can be cashed by political parties only through their registered bank accounts.
- An electoral bond is valid for fifteen days from the date of issue and valid parties are credited with the specified amount on the same day.
- The bonds scheme was meant to ensure that political funding in India was clean and anonymous.

#### What are the petitions against the Scheme?

- The petitions have challenged the constitutionality of the electoral bonds scheme as it raised **cardinal and substantial questions of law that affected the process of free and fair elections.**
- The petitioners claimed that free elections were essential for democracy and that the challenges against the bonds should be heard by a bench of five or more SC judges.
- According to the petitions which have not been concluded in the last eight years, **anonymous donations to political parties just days before the election** have been made possible by the scheme.
- The Association for Democratic Reforms claimed that amendments made via the Finance Act 2016 and 2017, which were both passed as **Money Bills** have made unlimited political donations possible.
- The limits on corporate and legalized anonymous campaign donations have also been removed by the Amendments.
- **The Finance Act, of 2017 introduced electoral bonds which were exempt from disclosure under the Representation of People Act, 1951 and the Finance Act 2016 amended the Foreign Contribution Regulation Act, 2010 which allowed foreign companies with Indian subsidiaries to fund Indian political parties.**
- This had exposed Indian politics to the external influence of international lobbyists.
- The petition had sought the quashing of the **November 2022 notification of the Finance Ministry which had amended the electoral bonds scheme to allow an extra 15 days** to be specified by the Union Government in years when general elections to state and UT assemblies were to be held.
- Earlier an extra period of 30 days was allowed only in years when the General Elections to the Lok Sabha were scheduled.

#### Supreme Court on electoral bonds

- A bench of the Supreme Court headed by the CJI has recently agreed to examine on April 11th 2023 whether the validity of electoral bonds should be considered by a Constitutional Bench.
- The Court had earlier held that the scheme protected the identity of purchasers but that purchases could only be made through regular banking channels.
- In 2019, the Court ordered all parties to share details of money received via the scheme with the Election Commission and recommended that the purchase window be reduced from 10 to 5 days.
- In October 2022, the apex court had questioned the government whether the electoral bonds scheme revealed the source of political funds despite the Centre's repeated claims that the scheme was absolutely transparent.

#### How much were the bonds worth?

- According to the response by the Department of Economic Affairs to a Right To Information application filed by Commodore Lokesh Batra, electoral bonds were sold in 24 phases between March 2018 and December 2022 at a total cost of ₹10.23 crores to the exchequer.
- The taxpayer's expenses included the ₹8.33 crores in bank commissions and ₹1.9 crores in printing charges.

- **The RTI response revealed that ₹6.74 lakhs worth of electoral bonds had been printed while ₹11,699.84 crores of bonds had been purchased during the same period.**



#### Merits

- **Transparency:** It enables political parties to interact with the election commission, governing bodies, and the general public in a more open and transparent manner.
- **Accountability:** Only the party bank account declared with the ECI will receive contributions made through electoral bonds. All donations are cashed through banking channels, thus each political party is required to detail how the total amount received was used.
- **Security:** The Bonds would only be accessible through a select group of notified banks, and even then, only through cheques and electronic payments. Cash transactions will not be encouraged.
- **Anonymity:** Donations made through electoral bonds can be made anonymously by individuals, groups of individuals, NGOs, religious organisations, and other trusts. As a result, the donor's identity is protected.

#### Demerits

- **Right to Know:** Voters will not be able to determine the extent of funding received from individuals, businesses or organizations. Earlier parties were required to list details of all those that contributed more than ₹20,000. The scheme was criticised as being violative of the citizen's Right to Know and the accountability of the political class to the citizens.
- **Lack of true Anonymity:** Government officials are not restricted by anonymity because they always have access to donor information from the State Bank of India (SBI). As a result, the citizens were the only ones who were unaware of the origins of the funds.
- **Illegal funds:** As donations to parties were made anonymously, it was impossible to tell whether any donations broke Section 29B of the RPA, 1951, which forbids corporate and foreign donations to political parties.
- **Corruption and black money:** Election bonds could become an easy way for companies to transfer money they have stashed away in tax havens to political parties in exchange for some benefits. This could contribute to corruption and black money.
- **Corporate loopholes:** Electoral bonds have also removed the 7.5% donation cap which has allowed loss-making businesses to also donate an unrestricted amount.

#### SIPRI Report: India Largest Arms Importer For The Five Year Period (2018 -2022)

Priority: **Medium**

Primary Source: The Hindu

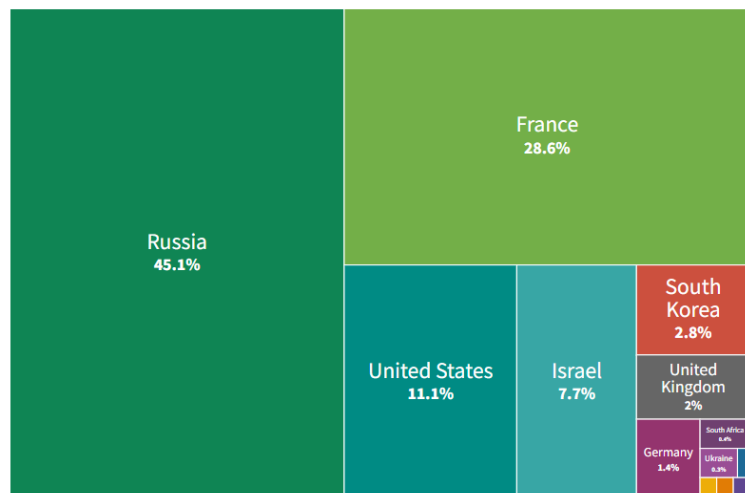
Prepp Prelims Booster: SIPRI Report

Prepp Mains Booster: Important International institutions, agencies and fora- their structure, mandate. GS 3 - Security

Context:

- According to the Swedish Think Tank, Stockholm International Peace Research Institute (SIPRI), India remained the world's largest arms importer for the five-year period between 2018-22 even though its arms imports dropped by 11% between 2013-17 and 2018-22.
- Russia was the largest supplier of arms to India in both 2013-17 and 2018-22, but its share of total Indian arms imports fell from 64% to 45% while France emerged as the second largest supplier between 2018-22.

#### India's arms imports (2018 - 2022)



#### India's arms imports (2018 - 2022)

- India's demand for imported weapons is mostly driven by its hostilities with Pakistan and China.
- India was the world's largest importer of significant weaponry in 2018-22, a title it has held since 1993-2022, with an 11% share of all worldwide imports.
- India kept this position despite its arms imports declining by 11% between 2013-17 and 2018-22.
- "From 2013-17 and 2018-22, India's arms purchases from France grew by 489%, including 62 combat aircraft and four submarines. In 2018-22, France overtook the United States as India's second-largest supplier.
- **Importer:** According to the latest SIPRI data, among the top 10 arms exporters for the period 2018-22, India was the biggest arms export market to three countries - Russia, France, and Israel and the second largest export market to South Korea.
- India was also the third largest market for South Africa which was ranked 21 on the list of arms exporters.
- **Declining imports from Russia:** The data showed **Russia was India's largest arms supplier** in the periods between 2013-17 and 2018-22, but its share of **arms imports to India fell from 64 percent to 45 percent** while France emerged as the second-largest arms supplier to India between 2018-22 at 29 percent, followed by the US at 11 percent.
- The report noted that Russia's position as India's main arms supplier is under pressure due to huge competition from other supplier nations, rise in Indian arms production and, since 2022, the above-mentioned constraints on Russia's arms exports related to its invasion of Ukraine.
- India (31%), China (23%) and Egypt (9.3%) accounted for just under two thirds of Russian arms exports.
- India was also the largest recipient of Russian arms in 2013-17, but exports to India declined by 37% between the two periods.
- In contrast, exports to China (+39%) and Egypt (+44%) increased within the same time frame, the report said while noting that Russia made no deliveries to Egypt in 2021-22 and the volume of deliveries to China in 2020-22 was at a much lower level than in 2018-19.
- It is likely that order volumes from these two states will reduce in the coming years.
- **Exporter:** India was the third largest arms supplier to Myanmar after Russia and China accounting for 14% of its imports.

#### What are the factors behind the decline in exports between 2013-17 to 2018-22?

- The decline can be attributed to several factors like:
  - India's slow and complex arms procurement process,
  - Diversification arms suppliers, and
  - replacing imports with major arms that are designed and produced locally.

#### Global Level

- While the global level of international arms transfers declined by 5.1%, imports of major arms by European nations grew by 47% between 2013-17 and 2018-22 in the backdrop of the Ukraine conflict.
- European states want to import more arms, faster after Russia's invasion of Ukraine. Strategic competition also continues elsewhere: arms imports to East Asia have increased and those to the Middle East remain at a high level.
- Overall, **U.S. exports of arms rose from 33% to 40%** while Russian exports fell from 22% to 16%.
- Between 2013-17 and 2018-22, Pakistan's imports of arms climbed by 14% and accounted for 3.7% of the global total.
- In 2018-22, 77% of Pakistan's imports of arms came from China.

#### Stockholm International Peace Research Institute (SIPRI)

- Stockholm International Peace Research Institute (SIPRI) is an **independent international institute** dedicated to research into conflict, armaments, arms control and disarmament.
- Established in 1966, SIPRI provides data, analysis and recommendations, based on open sources, to policymakers, researchers, media and the interested public.
- Based in Stockholm, SIPRI is regularly ranked among the most respected think tanks worldwide.
- SIPRI was established on the basis of a decision by the Swedish Parliament and receives a substantial part of its funding in the form of an annual grant from the Swedish Government.

#### Exercise Cobra Warrior

Priority: **Medium**

Primary Source: The Hindu

**Prepp Prelims Booster:** Exercise Cobra Warrior

**Prepp Mains Booster:** Effect of policies and politics of developed and developing countries on India's interests.

#### Context:

- Recently, Indian Air Force (IAF) have been undertaking joint training involving high intensity, large force, and tactical air war fighting operations with six other Air Forces as part of the multilateral 'Exercise Cobra Warrior' in the U.K.
- The exercise began on March 2 and concludes on March 24
  - Exercise Cobra Warrior is held twice a year and is the largest air exercise hosted by the Royal Air Force.

#### About the exercise

- Exercise Cobra Warrior is **run twice a year** and is the largest air exercise run by the Royal Air Force.
- The exercise is designed to train participants in high intensity, large force, tactical air warfighting operations.
- The exercise will take place until the 24th March and will see 70 aircraft taking part.
- **Participating Nations:** India, U.K., Finland, Sweden, South Africa, Saudi Arabia, U.S., and Singapore.
- **Finland, India and Saudi Arabia joined** the exercise for the **first time**.
- In addition to the Five Indian Air Force (IAF) Mirage-2000 aircraft, the IAF is supported by two C-17 Globemaster III transport aircraft and an IL-78 mid-air refuelling aircraft.
- The Mirages drawn from all three existing squadrons also include those that took part in the Balakot air strike in February 2019.



### Significance

- Cobra Warrior provides an invaluable opportunity for international allies and partners to train together in developing operational tactics in the air
- Over three weeks exercise participants will bring together their **capabilities and deliver the full spectrum of air operations**, including defensive and offensive counter-air as well as strike operations
- The exercise aims to **synchronise multi-domain effects** and so includes not just the air domain, but also space and cyber and for this iteration land as well.

## Assam's Moidams Meet UNESCO Technical Requirements For Heritage Centre

Priority: **Medium**



Primary Source: The Hindu

**Prepp Prelims Booster:** MOIDAMS

**Prepp Mains Booster:** Indian Heritage and Culture, GS2 - Important International institutions, agencies and fora

### Context:

- Recently, the Chief Minister of Assam announced that the **Moidams in Charaideo**, Assam had met all the technical requirements of the UNESCO Secretariat to be recognised as a **World Heritage Centre**.
- The Moidams were the mound-burial systems of the **Ahom dynasty**, which ruled Assam for over 600 years.

### What are the Charaideo Moidams?

- The **Charaideo Moidams** represent the mound-based burial practices of the **Tai Ahom community of Assam**.
- They are pyramid-like structures which are also known as maidams.
- The moidams which belong to the late medieval period (13th -19th century) are believed to contain the remains of the Ahom royalty who were buried along with their valuables.
- From the 18th Century onwards, the Ahoms also adopted cremation and later entombed the ashes at the Charaideo moidams.
- Out of the 386 Moidams explored so far, 90 have been found to be in the best-preserved state and were complete and accurate representations of the Ahom culture.

### How were the moidams nominated?

- According to the Chief Minister, the Prime Minister chose the Charaideo Moidams from a list of 52 sites across the country.
- The Assam government had earlier submitted a dossier on the site to the Archeological Survey of India for onward submission to UNESCO.
- The nomination coincided with the 400th birth anniversary of **Lachit Borphukan**, an Ahom general who thwarted the Mughal emperor Aurangzeb's attempts to capture Assam.

### What is the status of the nomination?

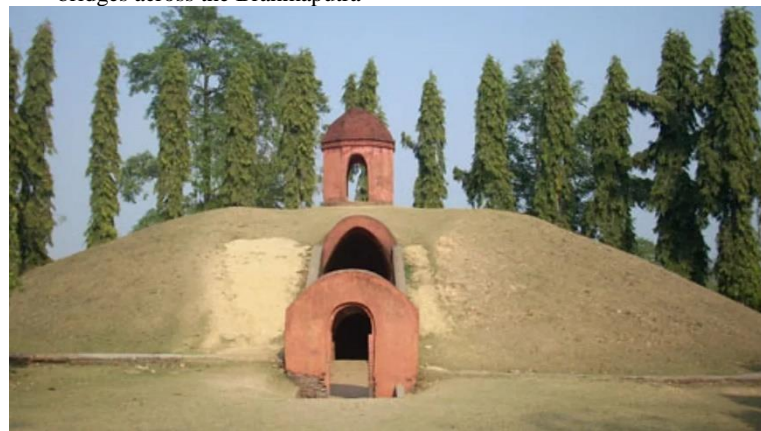
- The director of the World Heritage Centre, Lazare Eloundou Assamo had written to India's permanent delegate to UNESCO to state that the Moidams had met all the technical requirements outlined in the

Operational Guidelines concerning the completeness check of nominations to the World Heritage List.

- However, the technical completeness of the nomination did not mean that it was a site of Outstanding Universal Value or that it would be included in the World Heritage List.

### Who were the Ahoms?

- The Ahom Kingdom was believed to have been established in 1288 and existed for over 600 years in the **Brahmaputra Valley of Assam**.
- The dynasty founded by **Chaolung Sukapha**, consisting of kings called **Swargadeo**, continued until the annexation of Ahom lands to British India under the **Treaty of Yandaboo in 1826**.
- Its capital was initially at Charaideo but was later shifted to Jorhat.
- The Ahom society was based on forced labour with able-bodied males called paiks forced to work for the state and form the kingdom's military forces.
- The Ahoms traditionally worshipped tribal gods but gradually converted to Hinduism and adopted Assamese as their language of choice but did not lose all their traditional beliefs.
- The Ahoms were adept guerrilla fighters who first developed boat bridges across the Brahmaputra



### Who was Lachit Borphukan?

- Lachit Borphukan was a famous Ahom General who led the Ahom army in the **Battle of Saraighat** on the banks of the Brahmaputra in 1671.
- Considered one of the greatest naval battles on a river, the Battle of Saraighat saw the Ahoms defeat the Mughal army and extend their boundaries westwards to the Manas river.
- His naval strategies were the inspiration behind the revival of India's inland transport system and its infrastructural development.
- Since 1999, the best cadet in the National Defence Academy is awarded the **Lachit Borphukan gold medal** to commemorate his valour.

### UNESCO

- The **United Nations Educational, Cultural and Scientific Organization** is a specialized body of the UN that works for world peace through global cooperation in education, science and culture.
- Its Headquarters are in Paris and consist of 193 members.
- UNESCO was responsible for conventions such as the Convention for the Protection of the world cultural and natural Heritage.
- The World Heritage List is maintained by UNESCO to recognize sites of distinct cultural and physical significance considered to be sites of outstanding value.

## S.M. Krishna, Late Rakesh Jhunjhunwala Among Those Honoured With Padma Awards

Priority: **Medium**



Primary Source: The Hindu

**Prepp Prelims Booster:** Events of National Importance

### Context:

- Recently, 54 of the 106 Padma Awardees, including former Karnataka Chief Minister S.M. Krishna, received their awards from President Draupadi Murmu at the Rashtrapathi Bhavan.
- The Padma Awards are the country's highest civilian honours after the Bharat Ratna.



### What are the Padma Awards?

- The **Padma Awards** are among the highest honours awarded by India to recognise deserving people for their outstanding contributions to sports, art, social work, civil service, literature and education, public affairs, science and technology, trade and industry, and other sectors.
- The **Padma Vibhushan** was instituted in 1954 with three categories namely **Pahela Varg, Dusra Varg and Tisra Varg. These were later renamed the Padma Vibhushan, Padma Bhushan and Padma Shri.**
- Excluding posthumous, OCI, and NRI awardees, not more than 120 awardees were recognized every year.
- The award was not a title and could not be used as a prefix or suffix to their names.
- The Padma Awards are granted in three categories,
  - **Padma Vibhushan:** It is India's second-highest civilian honour with winners receiving a medal and a certificate for their exceptional and distinguished service.
  - **Padma Bhushan:** India's third highest civilian honour which was granted to people who had brought international prestige to India.
  - **Padma Shri:** India's fourth highest civilian honour was granted for outstanding contributions in the fields of arts, literature, sports, politics, industry, medicine, social service, etc.
- India's highest civilian honour was the Bharat Ratna.

### How are the Padma awards awarded?

- The awards are granted on the basis of recommendations of the **Padma Awards Committee** constituted by the Prime Minister every year. Nominations are made by the public.
- The Padma Awards Committee was headed by the Cabinet Secretary and included the Home Secretary, Secretary to the President and four to six eminent persons as members.
- The committee's recommendations are forwarded to the Prime Minister and President for final approval.

### Who are eligible to be awarded?

- All people are eligible to be awarded without any discrimination on the basis of race, occupation, position or sex.
- However, Government servants including those employed in PSUs, excluding doctors and scientists, are ineligible for these Awards.
- Although the award was normally not posthumously conferred, the Government could consider giving an award posthumously in highly deserving cases.
- A person who has already received a Padma award may be conferred a higher award only after five years but exceptions could be made if necessary by the Awards Committee.



### Who was awarded in 2023?

- The Padma awardees who received their awards recently included:
  - Former Chief Minister of Karnataka and External Affairs Minister, S.M. Krishna was awarded the Padma Vibhushan for his administrative excellence and statesmanship.
  - Renowned architect Balakrishna Doshi was awarded the Padma Vibhushan posthumously for his minimalistic, simple and eco-friendly approach to design.
  - Stock market investor Rakesh Jhunjhunwala (posthumous) and industrialist Kumar Managalam Birla were awarded the Padma Shri and Padma Bhushan respectively.
  - The Padma Bhushan was also awarded to Professor Kapil Kapoor, spiritual leader Kamlesh D. Patel and singer Suman Kalyanpur.
  - Jodhaiya Bai Baiga, a Baiga painting artist, Usha Barle, Pandwani and Panthi performer, and Raman Cheruvayal, a tribal farmer from Kerala, known for his work in sustainable agriculture and biodiversity preservation were conferred the Padma Shri.
  - Bhanubhai Chunilal Chitara who had worked for the preservation of Gujarat's Mata Ni Pachedi and Sankurathri Chandrasekhar of the Sankurathri Foundation which has educated a large number of rural students and provided eyecare to over 37 lakh people were also awarded the Padma Shri.

To know more about the [Padma Awards](#), click here.

#### Pandwani

- **Pandavani** is a lyrical folk art where scenes from the Mahabharata are narrated without the use of props.
- It usually has a lead singer and two accompanying musicians with instruments.
- Pandwani is popular in the Pardhi community of Chattisgarh as well as parts of Madhya Pradesh, Andhra Pradesh and Odisha.
- Traditionally, it was performed only by men, but women have also been performing the art form since the 1980s.
- There are **two styles of Pandavani: Vedamati and Kapalik.** In Vedamati, the artist sits on the floor and performs in a simple manner while in Kapalik, the performance is lively and includes a lot of improvisation.

#### Panthi

- The **Satnam sect of Chattisgarh performs the Panthi dance form.**
- It is performed in honour of Guru Ghasidas and includes the messages of Raidas, Kabir and Dadu.
- The **Mandar and Jhanj are the main instruments** while the dancer performs with the tempo of the mridangam.

#### Mata Ni Pachedi

- It is a **handmade religious textile folk art form of Gujarat** which was typically used as an offering in the temples which housed the Mother Goddess.
- It featured the Mother Goddess at the centre and her stories and legends filled up the remaining cloth.
- The textiles used for this are **hand-painted, hand-spun cloth of rectangular shape, with natural colour.**

- The **nomadic community of Waghris** were the primary practitioners of the art.

## U.S.-Argentine Researcher Wins Abel Prize For Maths

Priority: **Medium**



Primary Source: The Hindu

**Prepp Prelims Booster:** Abel Prize

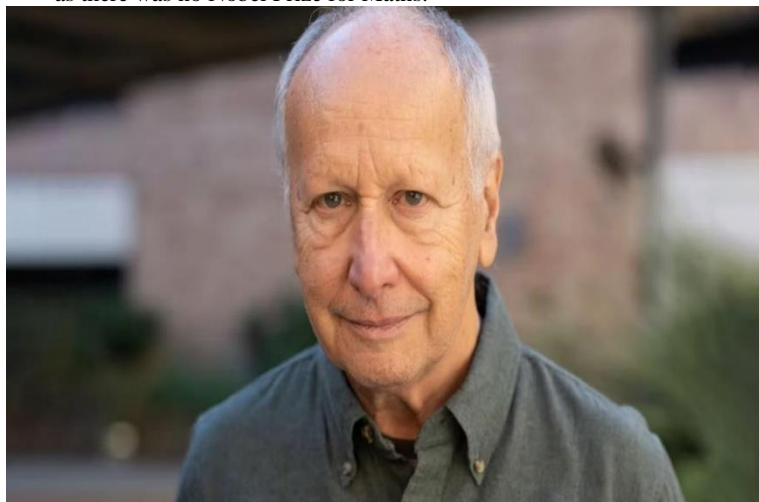
**Prepp Mains Booster:** Science and Technology- developments and their applications and effects in everyday life

### Context:

- Recently, Luis Caffarelli, a U.S.-Argentine researcher was awarded the Abel Prize for Maths in 2023.
- He was recognized for his contributions to the field of partial differential equations which could be used in the study of how water flows, population growth, etc.

### What is the Abel Prize?

- The **Abel Prize** was awarded to outstanding mathematicians in honour of the Norwegian mathematician **Niels Henrik Abel**.
- It was established by the Norwegian government in 2002 and is managed by the **Norwegian Academy of Science and Letters**.
- The award, which also carries a cash award of 7.5 million Norwegian Kroner supported a number of measures directed at stimulating the interest in mathematics among children and the youth.
- The award was meant to recognize the contributions of mathematicians as there was no Nobel Prize for Maths.



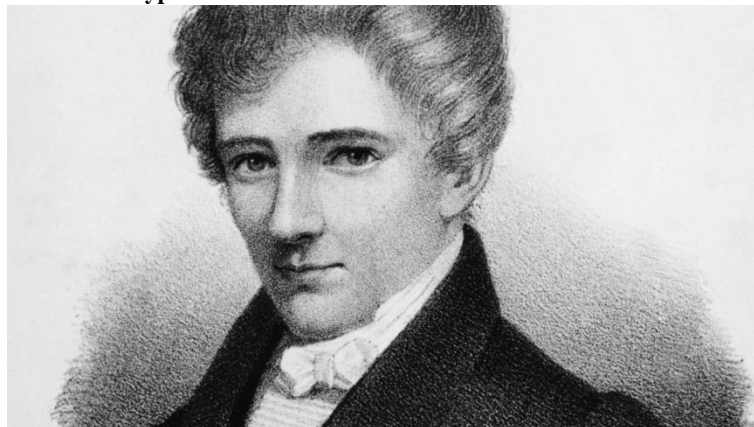
### Who won the award in 2023?

- The Abel Prize for 2023 was awarded to **Luis Caffarelli** for his outstanding contributions to **regularity theory for nonlinear partial differential equations**.
- Partial differential equations can be used to explain various phenomena such as the flow of water, melting of ice and even population growth.
- These equations which could model how several variables changed with respect to each other had applications in fields such as engineering, economics, physics, biology, etc.
- The chair of the award committee commended the award winner by stating that his geometric insights and the use of analytical tools and methods had had an immense impact on the field.
- **In 2022, Dennis Sullivan** won the award for his work on topology. **In 2007, Indian Mathematician Srinivasa Varadhan** was awarded for his fundamental contributions to probability theory.

### Who was Niels Henrik Abel?

- Neils Henrik Abel was a Norwegian mathematician who lived between 1802 and 1829.

- He has been credited with developing the **Abels Theorem** which formed the foundation of Abelian integrals and Abelian functions in mathematics.
- His work has been used in modern fields such as **ECC cryptography and encryption of online data**.



### Other mathematics Awards

- **Fields Medal:** It is awarded every four years to one or more mathematicians under the age of 40 by the International Mathematical Union.
- **Shanti Swarup Bhatnagar Prize for Science and Technology:** It is awarded by the Council for Scientific and Industrial Research CSIR for notable research work by scientists in physics, mathematics, chemistry, engineering, biology, medicine, and environmental science.
- **Swarnajayanti Fellowship:** It is an annual research fellowship awarded by the Department of Science and Technology to outstanding research produced by young scientists, in biology, chemistry, environmental science, engineering, mathematics, medicine and physics.
- **Leelavati Award:** The award was constituted by the International Congress of Mathematicians and is awarded every four years for outstanding public outreach work for mathematics.
- **DST-ICTP-IMU Ramanujan Prize for Young Mathematicians from Developing Countries:** It is awarded by the International Centre for Theoretical Physics, Italy to a researcher younger than 40 years who has performed noteworthy research in a developing country. The award is supported by the Department of Science and Technology, GoI and the Norwegian Academy of Science and Letters through the Abel Fund.

## Abusing Someone With Caste Name During Argument Won't Lead To Sc/St Act Case: Orissa High Court

Priority: **Medium**



Primary Source: The Hindu

**Prepp Prelims Booster:** SC/ST Act

**Prepp Mains Booster:** Mechanisms, laws, institutions, and Bodies are constituted for the protection and betterment of these vulnerable sections.

### Context:

- Recently, the Orissa High court held that abusing someone with the name of their caste or uttering the caste name suddenly during an exchange, by itself will not be sufficient to establish an offence under the Prevention of Atrocities (SC/ST) Act, unless there is intent to humiliate the victim specifically for their Scheduled Caste (SC) or Scheduled Tribe (ST) identity.

### Background

- The case pertained to 2017, the accused and the complainant had gotten involved in an altercation when the latter was abused in "filthy language, assaulted and terrorized by the accused."
- Others, including the victim (who belonged to a scheduled caste), tried to intervene and rescue the complainant. At this point, the accused



reportedly criminally intimidated the victim and cast aspersions on their caste.



### What did the court say?

- The court noted that it was “unjustified” to assume that the accused persons had used the slur with the intention to humiliate the victim in question because of his SC identity.
- Under such circumstances, the high court ruled that If someone is abused with the name of his caste or the caste is uttered suddenly in course of events and during the incident, by itself would not be sufficient to hold that any offense under the SC and ST (PoA) Act, unless the intention is to insult or humiliate the victim for the reason that he belongs to Scheduled Caste or Scheduled Tribe.
- The court cited a **precedent set by the Supreme Court of India in the case of Hitesh Verma Vs State of Uttarakhand** and another, which held that **establishing the intent to humiliate someone** because of their caste is a **prerequisite for bringing charges** under the relevant sections of the SC/ST Act.

### What is the SC/ST Act?

- The Scheduled Castes and Scheduled Tribes (Prevention of Atrocities) Act, 1989 has been enacted (Act 33 of 1989) to prevent atrocities against Scheduled Castes and Scheduled Tribes.
- The objective of both the Acts is to remove humiliation and harassment meted to SC and ST to ensure their fundamental, socio-economic and political rights.
- The Act also acknowledges the depressing truth that, despite multiple efforts, upper castes continue to perpetrate heinous atrocities against Scheduled Castes and Scheduled Tribes.
- The Act was enacted in accordance with the express constitutional safeguards enumerated in **Articles 15 (Prohibition of Discrimination), 17 (Abolition of Untouchability), and 21 (Protection of Life and Personal Liberty) of the Constitution**, with the dual goals of protecting members of these vulnerable communities and providing relief and rehabilitation to victims of caste-based discrimination.
- Preliminary investigation is not necessary under the modified SC/ST Act (2018), and no prior approval is required for the appointing authorities for senior police officers to file the FIRs in cases of atrocities against SC and ST.

## Manhole To Machine-Hole Scheme: Ministry Of Housing And Urban Affairs

Priority: **Medium**



Primary Source: The Hindu

**Prepp Prelims Booster:** Manhole To Machine-Hole Scheme

**Prepp Mains Booster:** Environmental pollution and degradation; GS 2 - Government policies and interventions for development in various sectors and issues arising out of their design and implementation.

### Context:

- Recently, the Ministry of Housing and Urban Affairs sent directives to implement the **Manhole to Machine-hole scheme** for the complete removal of manual scavenging. Followed by the announcement in the

budget (2023-24) by the Finance Minister that all cities and towns will be enabled for 100% transition of sewers and septic tanks from manhole to machine-hole mode.

- According to which all upcoming housing societies and commercial complexes in the country will soon mandatorily have to ensure net zero waste and have their liquid discharge treated, as part of the government’s push for reforming and modernising the sewage disposal system.
- **Achieving net zero waste means** reducing, reusing, and recovering waste streams (sludge) to convert them to valuable resources so that **zero solid waste is sent to landfills**.

### Manhole to Machine-hole scheme

- The Ministry of Housing and Urban Affairs will be sending a directive at the end of March, to all State governments to make **‘achieving net zero waste’** part of the building by-laws and ensure implementation.
- The directives are part of the government’s effort to implement the **Manhole to Machine-hole scheme** for the **complete removal of manual scavenging**.
- In the recent budget (2023-24) the Finance Minister announced that all cities and towns will be enabled for **100% transition of sewers and septic tanks from manhole to machine-hole mode**.
- The Ministry is considering **integrating septic tank design into the building by-laws** and adherence to standard specifications, geo-tagging all septic tanks and manholes for proper tracking, and lowering GST on mechanized cleaning vehicles.
- Some other guidelines include asking urban local bodies like municipalities to explore the potential of commercial use of **processed sludge as fertiliser, and empanelling all agencies providing sanitation services** in both the organized and unorganized sectors.
- Additionally, the government will evaluate **Indian criteria for automated cleaning** equipment and take into account varying de-sludging tariff rates for residential and commercial properties.
- It is also being considered about creating a **Made in India start-up to promote** low-cost technical solutions like mechanical spades and sensor sticks for gas detection.
- To ensure proper implementation, the Centre will ask the States to impose a **legal penalty** if buildings do not adhere to the bylaws and standard operating procedures, the official said.
- The directives are being formulated as a convergence of programs like Swachh Bharat, [NAMASTE \(National Action Plan for Mechanised Sanitation Ecosystem\)](#), and [AMRUT \(Atal Mission for Rejuvenation and Urban Transformation\)](#).



### What is the reason behind the move?

- **Prevent deaths due to Manual Scavenging:** The government aims to end manual scavenging, which has resulted in the death of 400 people since 2017 as per the Ministry of Social Justice and Empowerment.
- **Achieve SDG:** According to Experts, the mechanized sewage system coupled with the mandatory zero net waste clause for housing and commercial complexes is crucial for achieving Sustainable Development Goals (SDGs), particularly SDG 6.3, which aims to halve the proportion of untreated wastewater and increase safe recycling by 2030.

- **Promote treatment of sewage:** India currently generates 72,368 million liters per day of urban wastewater, of which only 28% is treated, indicating that a significant amount of untreated wastewater may be entering rivers, lakes, or groundwater.

### Conclusion

- The Confederation of Real Estate Developers' Associations of India (CREDAI), the apex body of private real estate developers in India, said these changes can also be promoted by incentivizing urban local bodies to strengthen their sewerage and treatment infrastructure.
- According to a report titled 'Circular Economy in Municipal Solid and Liquid Waste', by the Ministry of Housing and Urban Affairs the country's economy could also be boosted if the sale of treated sewage is institutionalized. It has the potential to add close to ₹3,285 crore annually (conservative estimation).

## T.N., Karnataka Among 7 States To Get Textile Parks: PM MITRA Scheme

Priority: **Medium**



Primary Source: The Hindu

**Prepp Prelims Booster:** PM MITRA

**Prepp Mains Booster:** changes in industrial policy and their effects on industrial growth; Government policies and interventions for development in various sectors and issues arising out of their design and implementation

### Context:

- Recently, the Centre has selected sites in Tamil Nadu, Telangana, Karnataka, Maharashtra, Gujarat, Madhya Pradesh and Uttar Pradesh to set up new textile parks, a year and a half after the PM Mega Integrated Textile Regions and Apparel (PM MITRA) scheme was announced.
- **PM Mega Integrated Textile Regions and Apparel Parks (MITRAs)** Scheme was launched by the Ministry of Textiles to strengthen the Indian textile industry by way of enabling scale of operations, reducing logistics costs by housing the entire value chain at one location, attracting investment, generating employment, and augmenting export potential.
- The scheme was announced in October 2021, and the parks will be set up by 2026-27. The total outlay for the project is ₹4,445 crore, though the initial allocation in the 2023-24 Budget is only ₹200 crore.

### Key Features

- The PM MITRA scheme is Inspired by the **5F vision** of the Hon'ble Prime Minister - Farm to Fibre to Factory to Fashion to Foreign.
- **Special Purpose Vehicle:** An SPV [Special Purpose Vehicle] owned by the Centre and State Government will be set up for each park which will oversee the implementation of the project.
- SPV will be a legal entity (with 51% equity shareholding of State Government and 49% of Central Government) set up by the State Government for the purpose of implementing the PM MITRA Park Project.
- **Financial Support:** The Ministry of Textiles will provide financial support in the form of Development Capital Support up to ₹500 crore per park, and a Competitive Incentive Support (CIS) of up to ₹300 crore per park will be provided to incentivize speedy implementation.
- The State governments will provide at least 1,000 acres of land for free and also facilitate the provision of utilities such as power and water.
- The government has allotted Rs. 200 crores has been allocated by the government as an initial investment.
- **Convergence with other Government of India schemes** shall also be facilitated in order to ensure additional incentives to the Master Developer and investor units.

### Significance

- According to the Prime Minister, the parks would "provide state-of-the-art infrastructure for the textiles sector, attract investment of crores and create lakhs of jobs".

- **World-class Infra:** Under the scheme, the proposed world-class industrial infrastructure would attract cutting-edge technology and boost foreign direct investment and local investment in the sector.
- The **Textiles Ministry** will oversee the execution of projects in the PM MITRA parks.
- **Sustainable Development Goal:** These are aimed at helping India to achieve the **United Nations Sustainable Development Goal 9:** "Build resilient infrastructure, promote sustainable industrialization and foster innovation".
- **Manufacturing hub:** The scheme would be a great example of the government's policy of 'Make in India' and 'Make for the World'.
- It aspires to fulfil the vision of building an **Aatmanirbhar Bharat** and to position India strongly on the **Global textiles map**.
- **Integrated approach:** PM MITRA Parks will offer an opportunity to create an **integrated textiles value chain right** from spinning, weaving, processing/dyeing and printing to garment manufacturing at a Single location.
- Integrated Textile Value chain at one location will reduce the logistics cost of the Industry.
- It is intended to generate ~1 lakh direct and 2 lakhs indirect employment per park.
- **Reduce wastage:** The textile industry has been unorganised in the country and this led to increased wastage and logistical costs impacting the competitiveness of the country's textile sector. This cluster-based approach will solve several problems in the sector.
- The use of **renewable will be encouraged** in these parks
- **Plug-and-play facilities:** The parks would offer excellent infrastructure, plug-and-play facilities as well as training and research facilities for the industry.
- **Centre state collaboration:** PM MITRA Parks represent a unique model where the Centre and State Governments will work together to increase investment, promote innovation, create job opportunities and ultimately make India a global hub for textile manufacturing and exports.

## All-in-one parks

The PM Mega Integrated Textile Regions and Apparel (PM MITRA) scheme was announced in October 2021

■ The parks will come up by 2026-27

■ The total outlay for the project is ₹4,445 crore, though the initial allocation in the 2023-24 Budget is only ₹200 crore

■ States have offered to provide at least 1,000 acres, says Minister Goyal



■ Spinning, weaving, processing/ dyeing, printing and garment manufacturing will be done at one location

■ Effort is to reduce logistics cost of textile industry and make it globally competitive

### Conclusion

- PM Mega Integrated Textile Regions and Apparel Parks (MITRAs) Scheme will strengthen the Indian textile industry by way of enabling scale of operations, reducing logistics costs by housing the entire value chain at one location, attracting investment, generating employment, and augmenting export potential.

## The Issues With The Quality Control Orders For Fibers

Priority: **Medium**



Primary Source: The Hindu

**Prepp Prelims Booster:** Bureau of Indian Standards (BIS)

**Prepp Mains Booster:** Government policies and interventions for development in various sectors and issues arising out of their design and implementation; Issues relating to development

### Why in the news?

- Recently, **Quality Control Orders (QCO)** have been issued for fibres that constitute the basic raw materials for the majority of the Indian textile and clothing industry.
- International producers of these fibers who serve India are also required to obtain a license from the **Bureau of Indian Standards (BIS)**, which is the certifying body for the QCOs.



### What are Quality Council Orders?

- Quality Control Orders (QCO) have been issued for cotton, polyester, and viscose fibers, which are the fundamental raw materials for the bulk of the Indian textile and clothing business.
- The primary goal of the QCO is to regulate the entry of low-quality and cheaper goods and to ensure that consumers receive quality products.
- Textile purchasers, whether local or foreign, have created a supply chain throughout the years, and when there are limits due to certification, the value chain is disturbed.

### Why are fibers included in QCOs?

- The textile and clothing industries in India use both indigenous and foreign fibers and filaments.
- Imports are made for a variety of reasons, including cost parity, non-availability in the local market, or to satisfy a specific demand of a foreign customer.
- The complete supply chain from cloth producers to exporters, has been concentrated on quality standards set by buyers.

### What are the challenges?

- India imports 50,000-60,000 tonnes of viscose fiber yearly and its variations such as Modal and Tencel LF from over 20 nations. In the case of polyester, almost 90,000 tonnes of polyester fiber and 1.25 lakh tonnes of Polyester Partially Oriented Yarn are imported each year.
- Expensive:** Overseas fiber makers supply not just to India, but also to other countries. Some fibers are only available in limited amounts in India. Obtaining the certificate from the BIS is expensive, and so not everyone is interested in obtaining the certificate.
- BIS authorities must visit the production unit abroad before granting the certificate, and this process has yet to be completed for all suppliers who have requested for BIS registration. There is no clarification on the fibers that were delivered prior to certification and will arrive in India in the coming days.
- Textile purchasers, whether local or foreign, have created a supply chain throughout the years, and when there are limits due to certification, the value chain is disturbed.

#### About Quality Council of India (QCI)

- The Quality Council of India (QCI) was established in 1997 as an independent organization.

- It was established jointly by the Government of India and the Indian Industry, which was represented by the three principal industry organisations, namely the
  - Associated Chambers of Commerce and Industry of India (ASSOCHAM),
  - Confederation of Indian Industry (CII), and
  - Federation of Indian Chambers of Commerce and Industry (FICCI).
- It intends to create and run a national accreditation system, as well as to support quality through the National Quality Campaign.
- The Department of Industrial Policy & Promotion, Ministry of Commerce & Industry, is the responsible agency for QCI.
- The Prime Minister appoints the Chairman of QCI based on the industry's proposal to the government.

### Government Initiatives to promote textile sector

- National Technical Textile Mission:** It aims to increase domestic technical textile usage while positioning the country as a worldwide champion in the field. It aims to raise the scale of the domestic market to between \$40 billion and \$50 billion USD by 2024.
- Amended Technology Upgradation Fund Scheme (ATUFS):** In order to update the textile industry's technology, the government authorized the "Amended Technology Upgradation Fund Scheme (ATUFS)" in 2015.
- Scheme for Integrated Textile Parks (SITP):** It seeks to assist small and medium-sized textile company proprietors in clustering investments in textile parks by providing financial assistance for the parks' top-notch infrastructure.
- SAMARTH (Scheme for Capacity Building in the Textile Sector):** To address the shortage of qualified workers, the government established the SAMARTH Scheme for Capacity Building in the Textile Sector.
- North East Region Textile Promotion Scheme (NERTPS):** It is an initiative that provides infrastructure, skill building, and marketing help to all areas of the textile business.
- Power-Tex India:** It includes creative power-loom textile research and development, new markets, branding, funding, and worker welfare initiatives.
- Silk Samagra Scheme:** It aims to reduce the country's dependence on foreign silk by improving the quality and output of locally made silk.
- ICARE Jute:** This 2015 trial project aims to assist jute farmers in overcoming challenges by providing discounted certified seeds and popularizing many recently developed retting technologies under water-restricted circumstances.
- PM Mega Integrated Textile Region and Apparel (PM MITRA) Parks:** It seeks to centralize the complete textile value chain, from spinning to weaving to processing/dyeing to garment production.

### Way Forward

- The textile industry believes that imports of specialty fibers used in mixes with other fibers should be unrestricted.
- Every foreign applicant for a BIS certificate should receive it as soon as possible following inspection.
- Several textile operations employ lower grade fibers derived from rejects and trash, which are not covered by the QCO. There is also concern that basic clothing prices may rise.
- Furthermore, polyester spun yarn manufacturers in the MSME sector require cash assistance to establish product testing facilities.
- According to the industry, the QCO should be deployed only after all ambiguities have been resolved and all irregularities have been corrected.

### Spouses Of H-1B Visa Holders Can Work In U.S., Says Judge

Priority: Medium

Primary Source: The Hindu

Prepp Prelims Booster: H-1B

Prepp Mains Booster: Effect of policies and politics of developed and developing countries on India's interests, Indian diaspora.

### Why in the news?

- Recently, US district judge Tanya Chutkan has ruled that spouses of H-1B visa holders can work in the United States.
- The US District Judge dismissed a lawsuit filed by *Save Jobs USA* which had approached the court to dismiss the Obama-era regulation that gave employment authorization cards to spouses of certain categories of H-1B visa holders.
- The H-1B is a **temporary (nonimmigrant) visa category** that allows employers to petition for highly educated foreign professionals to work in "specialty occupations" that require at least a bachelor's degree or the equivalent.

### What did the court say?

- According to Judge Chutkan's order, **Save Jobs USA's** main argument is that **Congress has never given the Department of Homeland Security** the authority to permit foreign nationals, such as those with H-4 visas, to **work during their stay in the United States**.
- The H4 Visa is issued to the family member, who is dependent on the H1B Visa holder who is presently working in the United States. The dependent family member here means a spouse or unmarried child under the age of 21.
- She noted that this argument, however, is directly **contradicted by the Immigration and Nationality Act's text**, decades of executive branch practice, and both explicit and implicit congressional approval of that practice.
- According to the judge's ruling, Congress explicitly and deliberately gave the American government the authority to approve employment as a permissible condition of an H-4 spouse's stay in the United States.
- According to Judge Chutkan's ruling, the federal government has had a history of authorizing employment for visa holders in similar classes, which shows Congress' approval of this authority.
- The Department of Homeland Security has authorized employment not only for students but also for their spouses and dependents.
- Additionally, the department has extended work authorization to spouses of **foreign government officials and employees** or officers of international organizations.
- Judge Chutkan cited these points while dismissing the lawsuit filed by *Save Jobs USA*.



### Impact

- Spouses of certain categories of H-1B visa holders, who were previously not allowed to work in the U.S., **will now be able to seek employment and earn a livelihood**. This is a significant relief for those, who were struggling financially due to the inability of the spouse to work.
- The ruling will also **benefit American companies** that rely on **skilled foreign workers** who hold H-1B visas, as it will enable them to attract and retain talent by providing the spouse with the ability to work

### Covid-19: Did Sars-Cov-2 Originate In Raccoon Dogs From Wuhan Wet Market? New Data Gives Links

Priority: **Medium**



Primary Source: The Hindu

### Prepp Prelims Booster: SARS-CoV-2 virus

**Prepp Mains Booster:** Issues relating to development and management of Social Sector/Services relating to Health, GS3 - Science and Technology- developments and their applications and effects in everyday life.

### Context:

- Recently, a new report published in the Atlantic has suggested that the **SARS-CoV-2 virus** could have originated in **raccoon dogs** which were sold illegally at the Wuhan wet market
- The new theory about the origin of the virus has been released amid **Israel reporting a new variant of the virus and rising case numbers in India**.

### What does the new report say?

- A new report published in the American Magazine, the Atlantic, has suggested that the **SARS-CoV-2 virus that caused the global COVID-19 pandemic could have originated in racoon dogs**.
- Researchers have found that racoon dogs which were sold illegally at the Wuhan wet market were potential carriers of the virus.
- An analysis of the genetic samples collected from the racoons from Wuhan indicated that the racoons could have been carrying and shedding the virus at the end of 2019 when China began to experience the emergence of respiratory illnesses.
- The new report was believed to be the clearest **proof that the virus was zoonotic** in origin.



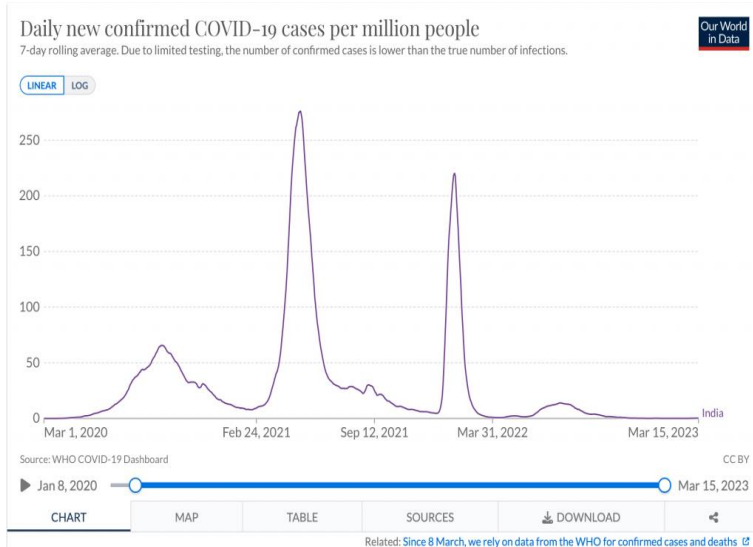
### New COVID variant

- A **new variant of the COVID-19 virus was reported in Israel which was a combination of the BA.1 and BA.2 subvariants**.
- Symptoms of the new variant included fever, headaches and muscle aches but did not require any special medical treatment.
- India was also reporting an increase in case numbers, which could potentially be due to the increased testing regimen to identify cases of the seasonal flu.
- The Union Ministry of Health and Family Welfare has directed the states of Tamil Nadu, Karnataka, Kerala, Telangana, Maharashtra and Gujarat to adopt necessary actions in light of the increasing number of Covid and flu infections.
- In the past year, India's Covid graph has been relatively stable with the fewest cases since the pandemic began except for a small hike in case numbers during July 2022.

### End of the Pandemic

- Experts have suggested that the WHO was considering officially declaring that the pandemic had ended. However, such decisions were complex as they involved numerous factors other than just the disease's epidemiology.

- An epidemic has numerous political, social and economic implications aside from medical data which influenced decision-making on the pandemic and its associated measures.
- The **Institute for Health Metrics and Evaluation**, an independent population health research centre at the University of Washington Medicine, has projected that there were no signs of a massive global surge by the end of June 2023.
- The projections by the IHME have claimed that the **drop in numbers was due to a heterogeneous combination of natural infection and vaccine-derived protection**.
- China was expected to face an increase in cases due to the failed zero-COVID policy that it had stuck to but the rise could be mitigated by implementing appropriate measures and increasing vaccinations.
- The IHME further predicted that the characteristics of future variants were difficult to predict due to the considerable differences in the variants.
- A new study in the Lancet has revealed that the new XBB omicron subvariant was as distant from wild-type SARS-CoV-2 as SARS-CoV-2 was from SARS-CoV, and that XBB should probably be named SARS-CoV-3.



## Conclusion

- The origins of the virus have still not been ascertained but preliminary data has mostly indicated that the virus was zoonotic in origin.
- It was still uncertain what kind of variant may emerge in the future especially given the variety of sub-variants that have evolved from the Omicron variant.

## Raccoon Dogs

- The **common raccoon dog (Nyctereutes procyonoides)** which is also known as the **Chinese raccoon dog or Asian raccoon dog** is a small heavy-set fox-like canid species native to East Asia.
- Although it was named for the raccoon-like markings on its face, they are not raccoons with its closest relative being the fox.
- They are omnivores whose diets mostly consisted of birds, fish, insects and fruits.
- **Habitat:** Raccoon dogs are found in China, Japan, Russia, Vietnam, North Korea, South Korea, Austria, France, Hungary, Poland, Romania, Slovakia, Germany, Sweden, and Finland.
- They live in a temperate climate in coniferous and broadleaf forests as well as grasslands. They have also been known to live in urban settings
- They are the **only known species of canids to practice hibernation**.
- **Conservation Status: Least Concern**

## Combining Social Welfare And Capital Markets Through SSE

Priority: **Medium**

Primary Source: The Hindu

**Prepp Prelims Booster:** Social Stock Exchange

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

### Context:

- Recently, the National Stock Exchange of India received final approval from the markets regulator Securities and Exchange Board of India (SEBI) to set up a Social Stock Exchange (SSE).
- Finance Minister Nirmala Sitharaman, presenting the Union Budget back in 2019, had proposed to initiate steps for creating a stock exchange under the market regulator's ambit. The proposal was cleared in September 2021.

### What is Social Stock Exchange (SSE)?

- A Social Stock Exchange (SSE) is a platform that helps social enterprises raise **funds from the public through its mechanism**.
- The SSE functions as a separate segment within an existing stock exchange and serves as a medium for social enterprises to seek finance for their social initiatives, **acquire visibility and provide increased transparency about fund mobilization and utilization**.
- Retail investors can only invest in securities offered by for-profit social enterprises (SEs) under the Main Board. In all other cases, only institutional investors and non-institutional investors can invest in securities issued by SEs.
- **Eligibility:** To be eligible for registration or listing on the SSE, any non-profit organization (NPO) or for-profit social enterprise (FPSE) must establish the primacy of social intent.
- Seventeen plausible criteria are listed under Regulations 292E of SEBI's ICDR (Issue of Capital and Disclosure Requirements) Regulations, 2018, including eradicating hunger, poverty, malnutrition and inequality; promoting education, employability, equality, empowerment of women and LGBTQIA+ communities; working towards environmental sustainability; protection of national heritage and art; or bridging the digital divide, among other things.
- Additionally, at least 67% of their activities must be directed towards attaining the stated objective.
- **Corporate foundations, political or religious organizations or activities, professional or trade associations,** and infrastructure and housing companies (except affordable housing) **would not be identified as SSE**.
- NPOs would be deemed **ineligible** should it be dependent on corporates for more than 50% of their funding.

### How can a non-profit organization (NPO) raise money?

- NPOs can raise money either through the issuance of **Zero Coupon Zero Principal (ZCZP)** Instruments from private placement or public issue, or donations from mutual funds.
- ZCZP bonds entail **zero coupons and no principal payment at maturity** and **must have a specific tenure** and can only be issued for a **specific project or activity** that is to be completed within a specified duration as mentioned in the fund-raising document (to be submitted to the SSE).
- It must also demonstrate the requisite expertise **through its performance in similar projects in the past**, thus, acquiring investor confidence and tackle concerns about a potential default.

### How can For-profit enterprises (FPEs) raise money?

- For-profit enterprises (FPEs) **need not register with social stock exchanges before it raises funds through SSE**.

- However, it must comply with all provisions of the ICDR Regulations when raising through the SSE.
- It can raise money through the **issue of equity shares (on the main board, SME platform, or innovators growth platform of the stock exchange)** or issuing equity shares to an Alternative Investment Fund including a Social Impact Fund or issue of debt instruments.



### Disclosures

- SEBI's regulations state that a social enterprise should submit an annual impact report in a prescribed format, audited by a social audit firm, within 90 days from the end of the financial year.
- Listed NPOs, on a quarterly basis, are required to furnish details about the money they have raised category-wise, how they have been utilized, and the unutilized balance amount.

### China Takes Lead In Mapping The Deep

Priority: **Medium**



Primary Source: The Hindu

**Prepp Prelims Booster:** Deep sea Exploration

**Prepp Mains Booster:** Science and Technology- developments and their applications and effects in everyday life; GS2 - Effect of policies and politics of developed and developing countries on India's interests

### Context:

- Recently, a Chinese manned submersible **Fendouzhe** dived into the **Kermadec Trench in the South Pacific Ocean** as part of the country's deep-sea exploration initiatives.
- The mission collected information about the marine organisms, habitats, and natural resources in the 10,000m deep trench.



### India's Deep Sea Mining Mission

- China, Russia, Germany, France, USA and India have been competing to secure exploration contracts in the vast areas of the open seas under the jurisdiction of the **International Seabed Authority**.

- China has already secured numerous contracts for vast areas of the Indian Ocean and Pacific Ocean.
- The Ministry of Earth Sciences approved the Deep Sea Mission in 2021 which intended to explore the deep ocean for resources, develop deep-sea technology for sustainable use of ocean resources, and support the Indian Government's **Blue Economy** initiatives.
- The Mission would be carried out in phases at an estimated cost of ₹4,077 crores over a five-year period.
- A major component of the Mission was **Operation Samudrayaan** which consists of sending a three-member manned submersible called '**MATSYA 6000**' to 6000 metres depth for deep sea mineral research.
- Matsya has been developed by the National Institute for Ocean Technology, Chennai and was part of the government's push for a Blue economy.

### PLACES IN NEWS

#### Kuno National Park and Mukundra Tiger Reserve

**Reason to be in news:** The Kuno National Park (KNP) in Madhya Pradesh, which currently houts 20 cheetahs brought in from Africa, does not have enough prey to sustain all of the animals. The Rajasthan government offered to house some animals in the smaller but well-equipped Mukundra Tiger Reserve; "political considerations" prevented this from happening.

- **Kuno National Park** is a national park and wildlife sanctuary in Madhya Pradesh, India. It takes its name from the Kuno River. It was established in 1981 as a wildlife sanctuary with an initial area of 344.686 km<sup>2</sup> in the districts of Sheopur and Morena. It was designated a national park in 2018.
- **Mukundra Tiger Reserve** is located near Kota, Rajasthan. The Mukundra Hills was declared a Wildlife Sanctuary in 1955 and a National Park (Mukundra Hills (Darah) National Park) in 2004.



#### Joshimath

**Reason to be in news:** The third session of the National Platform for Disaster Risk Reduction (NPDRR) conference is to be held in Delhi from March 10-11. The land subsidence that displaced many people in Uttarakhand's Joshimath, as well as the role of the National Disaster Response Force (NDRF) following the Turkey earthquake, will be among the many disaster-related topics discussed. **Joshimath** is located in the Chamoli district of the Himalayan state of Uttarakhand and is bounded by two regional thrusts: Vaikrita in the north and Munsiri in the south.



### Great Nicobar Island

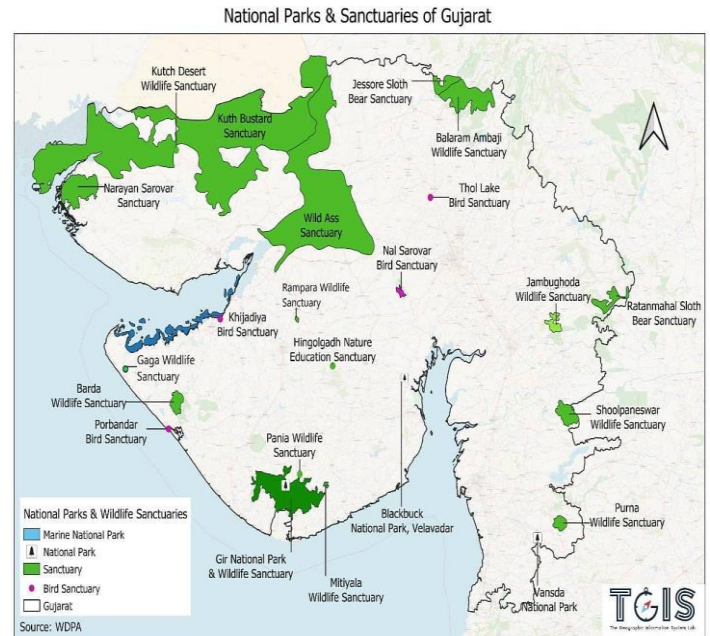
**Reason to be in news:** Recently, India has begun building a naval base on Great Nicobar island as part of its strategy for the Indian Ocean Region. The **Great Nicobar Island**, which has a 910 sq km surface area, is the southernmost of the Andaman and Nicobar Islands in the Bay of Bengal. India's southernmost point is **Indira Point** on Great Nicobar Island, which is only 150 kilometres from Indonesia.



### Barda Wildlife Sanctuary

**Reason to be in news:** Recently, a report by the Wildlife Institute of India revealed that the government of Gujarat has planned to translocate 40 adult and sub-adult lions to the Barda Wildlife Sanctuary. **Barda**, located in Gujarat was established as a wildlife sanctuary in 1979, prior to which it was a private reserve for Porbandar and Jamnagar. The Sanctuary includes two rivers, the

Bileshvry River and the Joghri River, as well as two dams, the Khambala and the Fodara.



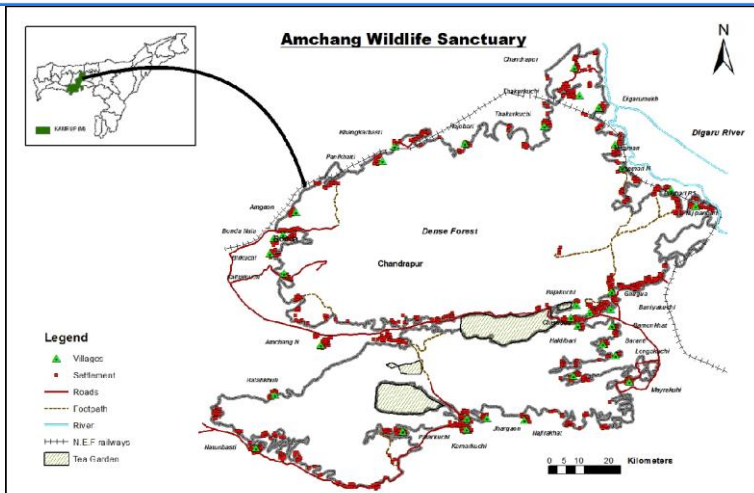
### Namdapha National Park and Tiger Reserve

**Reason to be in news:** Recently, a tiger spotted after eight years in the Namdapha National Park and Tiger Reserve in Arunachal Pradesh helped forest officials identify illegal timber logging in the core area of the reserve. **Namdapha National Park and Tiger Reserve** was the largest protected area in the Eastern Himalayas in Arunachal Pradesh. Located between the Dapha Bum range of the Mismi Hills and the Patkai range, it is the fourth largest National Park in India by area (1985 Sq Km). The Park has been named after the Namdapha river which originates in the Park and flows into the Noa-Dehing river, a tributary of the Brahmaputra.



### Sharda Peeth

**Reason to be in news:** Home Minister, Amit Shah said that the government will move forward to open Sharda Peeth on the lines of the Kartarpur corridor. **Sharda Peeth**, a revered site for the Hindu community, is located in Neelum Valley in Pakistan Occupied Kashmir (PoK) across Teetwal village in Kupwara district of Jammu and Kashmir, along the Line of Control (LoC).



### Zoji La Pass

**Reason to be in news:** Border Road oOrganization reopened Zojila pass on Srinagar-Kargil leh Highway in record 68 days. **Zojila pass** is the high mountain pass at an elevation of 11,578 feet above sea level, located in kargil district of Ladakh. It is the strategic link connecting Ladakh to Srinagar and the rest of India.

### Changthang Wildlife Sanctuary



**Reason to be in news:** Standing Committee of National Board for Wildlife has cleared the setting up of a new Indian Air Force based Changthang Wildlife Sanctuary( CWS) in Eastern Ladakh. **Changthang Wildlife Sanctuary** is located in the Ladakhi Changthang Plateau in Leh District of Ladakh

### Amchang Wildlife Sanctuary

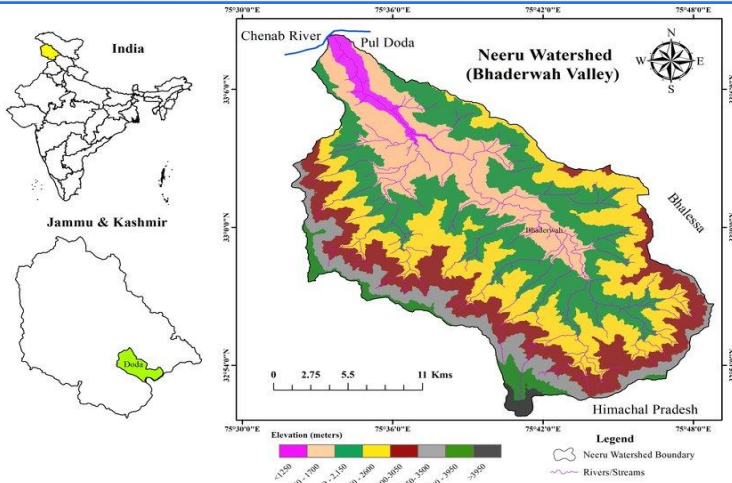
**Reason to be in news:** Assam High Court has sought a report on demarcation of borders of Amchang Wildlife Sanctuary. It is a small but naturally rich habitat on the eastern fringe of Guwahati City. It falls under the East Kamrup division with the Brahmaputra river to its north. It was declared as a Wildlife Sanctuary in 2004 by the Government of Assam.



### Neeru River

**Reason to be in news:** Eurasian otters spotted in the Neeru Stream of the Chenab catchment. **Neeru** is a perennial stream that originates in the Kailash lake and is a tributary of Chenab.





### Khandagiri Udaygiri Caves

**Reason to be in news:** Archaeological Survey of India has warned that these caves are eroding fast. Khandagiri Udaygiri Caves are one of the earliest groups of Jain rock cut architecture in Eastern India. It was built around 2nd century by King Kharvela of Meghavahana Dynasty.



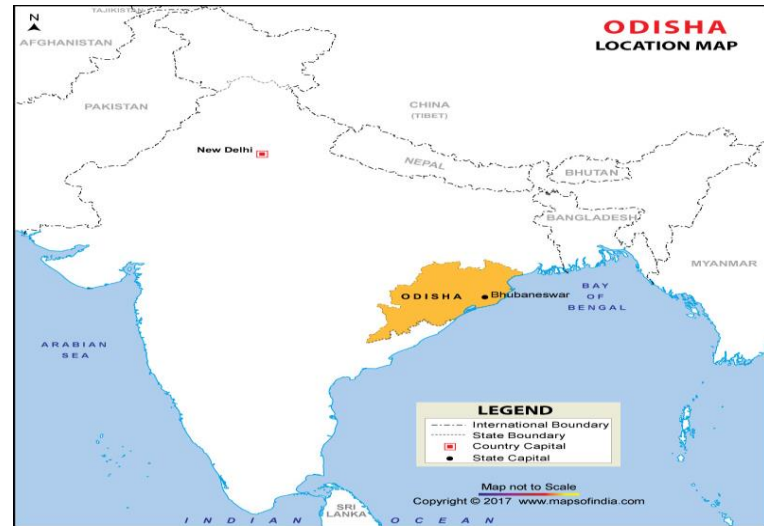
### Anji Khad Bridge

**Reason to be in news:** India's first cable-stayed railway bridge, the Anji Khad Bridge, is set to be operational by May 2023. The bridge is expected to connect the Union Territory of Kashmir with the rest of India through train for the first time, as well as the two Union Territories of Jammu and Kashmir.



### Odisha

**Reason to be in news:** The Archaeological Survey of India (ASI) found a 1,300-year-old stupa right in the middle of a mining site in Odisha's Jajpur district from where Khondalite stones were supplied for the beautification project around the 12th Century Shree Jagannath Temple in Puri.



### Tamil Nadu- Keeladi Museum

**Reason to be in news:** Recently, Chief Minister M.K. Stalin inaugurated the Keeladi Museum, a testimony to the regal life lived by ancient Tamils during the Sangam Age, in Sivaganga district. Located 12 km southeast of Madurai city, the hamlet gained an indispensable place in history as a major urban habitation site, unlike many other archaeological sites in the State, after the excavations began in 2015.

### Southern India



### Bangladesh

**Reason to be in news:** Recently, Myanmar officials were in a meeting with Rohingya return refugees in which Bangladesh authorities stated the revival of a long stalled effort to return the stateless minority to their homeland. Bangladesh is home to around a million Rohingya, most of whom fled a 2017 military crackdown in neighbouring Myanmar now subject to a UN genocide investigation. Bangladesh, located east of India on the Bay of Bengal, is a South Asian country known for its lush flora and numerous waterways. Its rivers, the Padma (Ganges), Meghna, and Jamuna, produce fertile plains. The

Sundarbans, a massive mangrove forest shared with Eastern India on the southern coast, is home to the regal Bengal tiger.



### Saudi Arabia

**Reason to be in news:** Recently, Saudi Arabia has agreed to join the Shanghai Cooperation Organisation as a “dialogue partner”, the latest indication of closer political ties with China. **Saudi Arabia**, formally the Kingdom of Saudi Arabia, is a nation in Western Asia. It occupies the majority of the Arabian Peninsula and has a land area of around 2,150,000 km<sup>2</sup>, making it the fifth-biggest country in Asia, the second-largest in the Arab world, and the largest in Western Asia and the Middle East.



### Austria

**Reason to be in news:** Austria and India discussed technology and developments in road infrastructure development and green technologies.

**Austria** is a landlocked country in southern Central Europe, located in the Eastern Alps. Austria is bounded on the northwest by Germany, on the north by the Czech Republic, on the northeast by Slovakia, on the east by Hungary, on the south by Slovenia and Italy, and on the west by Switzerland and Liechtenstein.



### Australia

**Reason to be in news:** India and Australia have signed a framework mechanism for mutual recognition of qualification to ease mobility of students and professionals. **Australia** is a sovereign country comprising the Australian continent's mainland, the island of Tasmania, and other smaller islands. Australia is the largest country in Oceania and the world's sixth largest.



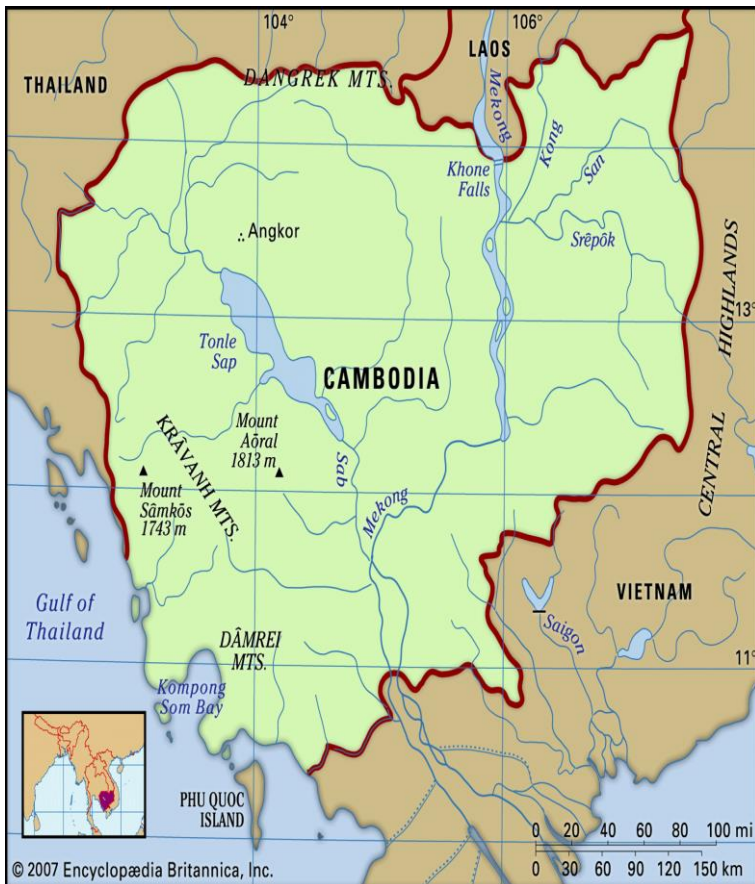
### Macquarie Island

**Reason to be in news:** Tasmania has planned to give greater protection to Macquarie island which is declared a World Heritage area. **Macquarie island** is an oceanic island in the Southern Ocean, lying southeast of Tasmania.



## Cambodia

**Reason to be in news:** The coming election is to focus on democracy and inclusive development in Cambodia. **Cambodia** is a Southeast Asian country surrounded by Thailand, Laos and Vietnam. The Gulf of Thailand gives it maritime access.



## Jordan

**Reason to be in news:** The second consultative meeting on defense cooperation held between India and Jordan. Jordan is a Middle Eastern country locked in the Arabian Peninsula. It shares a border with Syria, Iraq, Saudi Arabia, Israel and parts of Palestine.



## Sweden

**Reason to be in news:** Sweden's Parliament formally approved a bill to allow it to join NATO.

**Sweden** is a Nordic nation in Northern Europe, situated on the Scandinavian Peninsula. It borders Norway to the west and north, Finland to the east, and Denmark to the southwest by a bridge-tunnel across the Oresund. Sweden is the biggest Nordic country, the third-largest country in the European Union,

## Ecuador

A strong earthquake shook southern Ecuador and northern Peru killing at least 15 persons. The 6.8-strong quake was centered just off the Pacific Coast, about 80 km south of Guayaquil, Ecuador's second-largest city. **Ecuador** is a nation in northern South America, surrounded by Colombia on the north, Peru on the east and south, and the Pacific Ocean on the west. Ecuador also comprises the Galápagos Islands in the Pacific, roughly 1,000 kilometers (621 miles) west of the continent. Quito is the capital and largest city in Ecuador.

and the fifth-largest country in Europe. Stockholm is the country's capital and largest city.



**Reason to be in news:** Egypt is planning to import rice from India through rupee's trade route. Egypt is located in the northeastern corner of Africa. It is bordered by Libya (West), Sudan (South), Israel (Northeast), Red Sea and Gulf of Aqaba (East) and Mediterranean Sea (North).

### Romania

**Reason to be in news:** India and Romania signed an agreement of defense cooperation. **Romania** is a country in Central, Eastern, and Southeastern Europe. It shares borders with Bulgaria to the south, Ukraine to the north, Hungary to the west, Serbia to the southwest, Moldova to the east, and the Black Sea to the southeast.



### Equatorial Guinea

**Reason to be in news:** Equatorial Guinea has confirmed another eight cases of the "highly virulent" Marburg virus, a deadly hemorrhagic fever with no authorised vaccine or treatment. **Equatorial Guinea** is a nation in Central Africa with a land size of 28,000 square kilometers.



### Indonesia

**Reason to be in news:** Recently, Indonesia's Mount Merapi, one of the world's most active volcanoes, erupted, spewing out smoke and ash that blanketed villages near the crater. The Merapi Volcano Observatory estimated that the ash cloud reached 3,000 metres above the summit. **Indonesia** is a nation in Southeast Asia and Oceania located between the Indian and Pacific Oceans. It is made up of about 17,000 islands, including Sumatra, Java, Sulawesi, and portions of Borneo and New Guinea.



### Malaysia

**Reason to be in news:** At least four persons died and 41,000 people were evacuated in Malaysia after floodwaters caused by "unusual" torrential rains lasting days swept through several States. Johor, the country's second-largest state bordering Singapore with four million people, is the worst affected with over 40,000 evacuated to schools and community centers. **Malaysia** is a Southeast Asian nation. The federal constitutional monarchy is made up of thirteen states and three federal territories that are divided into two parts by the South China Sea: Peninsular Malaysia and Borneo's East Malaysia. Peninsular Malaysia has land borders with Thailand as well as sea boundaries with Singapore, Vietnam, and Indonesia.



### Malawi and Mozambique

**Reason to be in news:** Cyclone Freddy has killed at least 70 in Malawi and Mozambique on its return to southern Africa. Freddy, set to become the longest-lasting storms, barrelled through southern Africa.



### North Korea

**Reason to be in news:** North Korea has revealed small nuclear warheads, which it says can be fitted on to short-range missiles. The North has long claimed it has tactical nuclear weapons, capable of hitting targets in South Korea. **North Korea** is a country in East Asia. It constitutes the northern half of the Korean Peninsula and borders China and Russia to the north at the Yalu (Amnok) and Tumen rivers, and South Korea to the south at the Korean Demilitarized Zone. North Korea's border with South Korea is a disputed border as both countries claim the entirety of the Korean Peninsula. The country's western border is formed by the Yellow Sea, while its eastern border is defined by the Sea of Japan. North Korea, like its southern counterpart,

claims to be the legitimate government of the entire peninsula and adjacent islands. Pyongyang is the capital and largest city.



### UAE

**Reason to be in news:** Archaeologists have found the oldest pearling town in the Persian Gulf on an island off one of the northern sheikhdoms of the United Arab Emirates. Artifacts found in this town on Siniyah Island in Umm al-Quwain, likely once home to thousands of people and hundreds of homes, date as far back as the region's pre-Islamic history in the late 6th century. **The United Arab Emirates** is a country in Western Asia (the Middle East). It is located at the eastern end of the Arabian Peninsula and shares borders with Oman and Saudi Arabia, while having maritime borders in the Persian Gulf with Qatar and Iran. Abu Dhabi is the nation's capital, while Dubai, the most populated city, is an international hub.

