

CURRENT AFFAIRS PROGRAM PRE-CUM-MAINS 2024 NOV 2023: BOOKLET-3

TABLE OF CONTENTS

1.	G	SS-2	1
	1)	Polity and COnstitution: Parliamentary Previliges	1
	2)	Social Justice: Sex Ratio	4
	3) A	Social Justice: PVTGs	
	4)	IR: India-Qatar	
	B C	,	
2.		SS-3	
	1)	S&T: Deepfake	13
3.	P	Prelims Facts	15
	1)	Mapping: Tuvalu	15
	2)	Mapping: Congo River and Congo River Basin	16
	3)	Mapping: Places in News: Democratic Republic of Congo (DRC)	16
	4)	Mapping: Ethnic Conflict in Congo	17
	5)	Mapping: Lake Tanganyika	18
	6)	Mapping: Places in News: Kamchatka Peninsula	18
	7)	Mapping: Klyuchevskaya Sopka Volcano	19
	8) D	Economy: Additional Tier-1 Bonds	
	9)	Economy: Incremental CRR	21
	10)	Defence: Nirbhaya Missile	22

1) POLITY AND CONSTITUTION: PARLIAMENTARY PREVILIGES

- Why in news recently?
 - » Parliamentary Privileges in case of defamation justified or not? [Nov 2023, Source: LiveLaw]

Introduction

- Parliamentary privilege refers to <u>rights and immunities</u> <u>enjoyed by <u>Parliament as an institution</u>, <u>MPs in their individual capacity and various committees</u>. These privileges <u>ensure effective</u> <u>working of the Parliament and ensure authority, dignity and honour</u> of the Parliament and its members.</u>
- » The Indian Constitution specifies the powers and privileges of <u>Parliament in Article 105</u> and those of <u>State legislatures in Article 194</u>. This includes
 - i. **Freedom of Speech** in Parliament <u>subject to other provisions of the Constitution</u> and standing order of the house (Article 105(1), 194(1)).
 - ii. **Immunity for all speeches and votes** in the parliament or any committee from <u>judicial</u> <u>scrutiny</u> (Article 105(2), 194(2))
 - <u>Immunity for persons publishing any report</u>, paper, votes or proceeding by Parliament or under the authority of parliament.
 - iii. <u>Powers and privileges and immunities of each house of the Parliament, and of the members and the committee of each house, shall be such as may from time to time be defined by Parliament by law.</u> (105(3), 194(3)
 - Until then it would have the same privilege as the British Parliament had in 1950.
 - This was amended by the **44th Constitutional Amendment Act.** It provided that other privileges of each house of Parliament, its committees and its members are to be those which they had on the date of commencement (i.e. 20th June 1979), until defined by Parliament.
 - Till now, parliament or state legislature have not passed any law to codify their privileges.
 - iv. The above immunities are also applicable to <u>persons who by virtue of this constitution</u> has the <u>right to speak in, or otherwise to take part in the proceedings of</u>, a House of Parliament or any committee thereof as they apply in relation to members of Parliament. (104(4), 194(4))
- » Note
 - Article 194 is an <u>exact reproduction of Article 105</u> and it deals with the state legislatures and their members and committees.
- Two Types of Parliamentary Privileges
 - 1. Collective Privilege:
 - The privileges, immunities **enjoyed by each house of the parliament collectively**
 - Right to publish its reports, debates and proceedings
 - Excluding strangers from its proceedings
 - Holding secret sittings

- To <u>Punish members as well as outsiders for breach of its privileges</u> or its contempt by reprimand, admonition or imprisonment (also suspension or expulsion, in case of members)
- The <u>Courts are prohibited to enquire</u> into proceedings of a House or its committees

2. Individual Privilege:

- In <u>Civil cases</u>, no arrest during the session of the house of 40 days before the beginning of the session and 40 days after end of the session
- <u>Freedom of Speech in Parliament</u>. No proceeding can be initiated against them in any court for anything said or any vote given in Parliament or its committees.
 - This freedom is subject to the <u>provisions of the Constitution</u> and to the <u>rules and standing orders regulating the procedure of the Parliament</u>.
- They are <u>exempted from jury service</u>.

Need of Parliamentary Privileges

- » Enable each house of the legislature to discharge function properly and free of any pressure.
- » The members of <u>highest deliberative body</u> in the country and in each state should have <u>freedom</u> of speech to ensure <u>all views (no matter how small, fringe or different)</u> are being discussed.
- » <u>Immunity from Judicial proceedings</u> ensure <u>non-interference by Judiciary in the parliamentary</u> proceedings and <u>separation of powers</u>.
 - It further <u>enhances the quality of deliberation</u> in the house without <u>worrying about</u> Judicial interference.
- » These privileges ensure that <u>undue influence</u>, <u>pressure or coercion</u> is not brought on the legislature in the course of its functioning.

What constitutes a breach of privilege?

- » A breach of privilege is a violation of any of the privilege of MPs/Parliament.
 - Among other things, any action 'casting reflections' on MPs, parliament or its committees; could be considered breach of privilege.
- » No clearly laid out rules on what constitutes breach of privilege and what punishment it entails.
 - This has led to a very high weightage being given to view of the members of the house.

Sources of the Parliamentary Privilege

- » Not codified yet
- » They are based on following sources:
 - 1. Constitutional provisions
 - 2. Various laws made by Parliament
 - 3. Rules of Both the Houses
 - 4. Parliamentary Conventions
 - 5. Judicial Interpretations

Cases of breach of privileges?

- » Several such cases.
 - In 1967, two people were held to be in <u>contempt of Rajya Sabha</u>, for <u>having thrown</u> <u>leaflets from the visitors' gallery</u>.

- In 1983, one person was held in breach for <u>shouting slogans and throwing chappals from</u> the visitor's gallery.
 - Sentenced to simple imprisonment
- » Similarly there are many cases on breach of privilege of state assemblies.
 - In June 2017, Karnataka Assembly speaker ordered the imprisonment of two journalists for a year based on recommendations in two separate reports of its privilege committee.

Criticism of Parliamentary Privileges:

- » Against Freedom of Speech
 - Because of no codification it sometimes can be misused
 - For countering genuine criticism by individuals or media
- » **Unlimited Powers:** <u>No codification</u> of provisions through a law has also led <u>to parliamentarians</u> <u>getting unfettered powers</u> to deal with cases.
- » **Conflict of Interest:** It <u>allows politicians to act as judge</u> in their <u>own cause</u>, raising concerns of <u>conflict of interest</u> and <u>violating basic fair trial guarantee</u>.
- » **Used for non-essential reasons:** Further, breach of privilege is <u>invoked for the ostensible reason</u> of protecting the image of the house on the whole or its individual members.
 - It should only be used when the functioning of the house is being obstructed.
- » Right to life and personal liberty violated
 - <u>Legislatures power</u> to punish someone with imprisonment is <u>questionable</u>.

Violation of the principle of separation of power between legislature, executive and judiciary

Parliamentary Privilege vs Fundamental Rights

- » In MSM Sharma case 1959, the Constitutional bench of the Supreme Court held that in case of conflict between fundamental right under Article 19(1)(a) and a privilege under Article 194(3) the latter would prevail.
- » In Raja Ram Pal v Hon'ble Speaker, Lok Sabha and Ors. (2007), a constitutional bench of the Supreme court held that FR under article 20 and 21 could prevail over privileges under Article 105 and 194.

Supreme Court's jurisdiction

- » Remain somewhat unclear
- » No rationale for Supreme court holding some FR superior and some subservient to parliamentary privileges.
- Aug 2022 Chairman of Rajya Sabha Venkaiah Naidu said that MPs don't enjoy any immunity from being arrested in a criminal case during session or otherwise.

Way Forward to prevent misuse

- **» Codification** of privileges is the need of the hour -> Clearly define what privileges are:
 - Framers of constitution also envisaged codification of privileges through law.
- » Breach of privilege should be applied when there is a real obstruction of functioning of a house, and not in a way that sets legislator above ordinary comment and criticism.
- » Restrict the use of privilege to the proceeding of the legislature.
 - Members who are <u>falsely accused of impropriety</u> can <u>use the defamation route</u> through courts.

- » Another issue that has to be resolved is that whether the House should have the power to sentence a person to a jail term.
 - While the British parliament continues to have such powers, it has not used it since 1880.
 - Considering the Constitutional Bench's judgement in Raja Ram Pal case in 2007 where it said that <u>privileges could be subordinate to Article 20 and 21</u>, the legislative house <u>shouldn't have the right to punish with imprisonment</u> as it affects the Right to Life and Personal Liberty under Article 21.
- » <u>Courts should also revisit their earlier judgment</u> and find the right <u>balance between</u> Fundamental Rights of citizens and privilege of the legislature.
 - Considering that the privileges is <u>subject to other provision of constitution</u>, interpreting FR to be subordinate to parliamentary privileges can be reconsidered.

2) SOCIAL JUSTICE: SEX RATIO

– Why in news?

» International Day of the Girl Child was observed on 11th October with the <u>theme</u> 'Invest in Girls' Rights: Our Leadership, Our Well Being' (Oct 2023)

Example Questions:

» Examine the effectiveness of government initiatives like Beti Bachao Beti Padhao in improving sex ratio in India. What are the key challenges in the implementation of these initiatives [15 marks, 250 words]

– Introduction:

» Gender Equality is a cornerstone of comprehensive socio-economic development. It reflects a society's commitment to fairness and inclusivity. The <u>sex ratio of a country serves as a crucial yardstick to measure gender equality</u>. It directly mirrors the <u>status and well-being of women</u>, serving as a <u>barometer of societal attitudes towards women</u>.

Bad Situation of Sex Ration in the past:

- » As per the 2011 census, India's sex ratio was 940 females for every 1,000 males.
- » Child Sex Ratio (CSR) was even <u>more alarming</u> at <u>914</u> (or 111 males for every 100 females) in 2011.
 - At least <u>9 million</u> female births went "<u>missing"</u> between 2000 and 2019 because of female selecting abortions (as per a Pew analysis of various NFHS data and census data)

Factors which led to poor sex Ratio:

- » Social Factors: Patriarchal Social Norms Son Preference (& Son-Meta Preference)
 - 1. **Patrilocality** (women having to move to husband's house after marriage)
 - 2. **Patrilineality** (property passing on to sons rather than daughters)
 - 3. **Dowry** (which leads to extra cost of having girls)
 - 4. Old age support from sons
 - 5. **Various rituals** performed by sons like last rites (lighting the funeral pyre and scattering their ashes).
- » Technological Advancements:

- Beginning of use of <u>pre-natal diagnostic tests</u> and <u>introduction of ultrasound technology</u> in 1980s made it easy to determine sex of an unborn child.
- Legalization of abortion (MTP Act, 1971) made situation worse.
- » Administrative failure Poor implementation of laws/schemes/programs
- » Lack of political will Flagship initiatives like BBBP were either missing or enough resources for the same were not allocated.

Negative Social Impact:

» Societies with high rates of sex-selective abortions typically suffer within a couple of decades from a shortage of marriageable women, and a surplus of men seeking brides. This "marriage squeeze" can trigger a variety of social problems, such as increase in sex related violence, trafficking of women etc.

Steps taken to improve Child Sex Ratio:

- » About Beti Bachao Beti Padhao (BBBP)
 - Launched in 2015, it is a comprehensive program to address the declining Child Sex Ratio (CSR) and related issues to empowerment of women over a life-cycle continuum.
- » Sukanya Samruddhi Account Scheme
 - Under these accounts of girls could be opened from the time of their birth till their attaining the age of 10. The account can be opened with an amount of Rs 1000 and in a financial year, a sum of up to Rs. 1.5 Lakh can be deposited in it. Investments made under the scheme will also be eligible for exemption under 80C of Income Tax Act, 1961.
- » Observation of <u>National Girl Child Day on 24th Jan</u> since 2008 by MoW&CD. It focuses on <u>increasing awareness</u>; <u>ensuring human rights for girls</u>; <u>increasing awareness about gender</u> inequality; and addressing girl child issues.
- » Pre-Conception and Pre-Natal Diagnostic Techniques (PCPNDT) Act, 1994 prohibits sex selective practices.

Improvement in Situation:

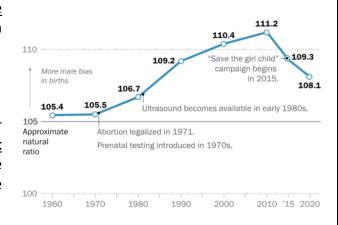
» As per the NFHS-5 (2019-21) the <u>CSR at Birth</u> is at <u>929</u> (or 108 males for every 100 females). It is a glimmer of hope and suggests that <u>Indian families are less likely to use abortions to ensure birth of sons</u> rather than daughters.

But this isn't good enough:

The Child Ratio at Birth (CRB), at 929 as per NFHS-5, is <u>below the WHO's natural ratio at</u> <u>birth (952)</u>. This indicates that despite advancements, India is yet to reach the desired gender parity.

India's sex ratio at birth has been moving toward balance in recent years

Sex ratio at birth, or the number of male births per 100 female births



Way Forward:

- » Improving Implementation of Schemes BBBP:
 - As per the Parliamentary Committee led by Heena Vijaykumar Gavit:
 - Around 80% money spent on BBBP have been spent on media campaigns and advocacy alone.
 - Huge spending on national level media campaigns for th scheme was a clear violation of the INR 50 lakh provision earmarked for each district under the scheme for six different components consisting of innovation and awareness building, intersectoral consultation and capacity building, monitoring evaluation, and interventions of health and education.
 - Over all <u>utilization of funds was below par</u>. Only 25% of the allocated budget was utilized.
 - A 2017 CAG report also highlighted <u>various issues with BBBP</u> including <u>infrequent</u> <u>meetings</u>, <u>underutilization of funds and non-compliance with the guidelines</u>.
 - Beti Padhao component is also facing challenges due to <u>dual burden of care</u> responsibilities; <u>unavailability of clean functioning toilets</u>; <u>lack of commuting options</u> etc.
- » Comprehensive Strategies for gender equality should encompass a multifaceted approach:
 - Focus on districts and prioritize cities with low sex ratios.
 - Promoting Awareness through discussion, conference, and debates
 - **Engage Local Communities** in the development and growth of girl children it will foster a sense of collective responsibility and action.
 - Empower local governing bodies and community groups to act as catalyst for social change at the grassroot level ensuring sustainable progress, as they can <u>tailor strategies</u> to their community's unique needs, making the efforts more effective and relevant.
- » Focus on comprehensive women empowerment:
 - **Legal Reforms** Ensuring gender sensitive legislations, promoting economic empowerment, and ensuring <u>property and inheritance rights for women</u>.
 - Educational Reforms Implementing gender sensitive education policies. This includes curricula that challenges stereotypes, fosters safe and inclusive school environments, and providing scholarships and incentives to encourage girls' participation in education.
 - Creating Public Awareness and cultural change: Regulating media and advertising, engaging communities to challenge harmful practices and involving men and boys as allies in the fight for gender equality can drive societal change.

– Conclusion1:

The above initiatives are <u>integral to broader national efforts</u> to promote gender equality and empower women and girls, setting a course for a more inclusive and equitable society where all genders have equal opportunities and rights.

– Concluson1:

» Pursuing gender equality in India is an <u>ongoing journey marked by progress and persistent</u> challenges that need to be continuously addressed.

3) SOCIAL JUSTICE: PVTGS

– Why in news?

» PM Modi launches Rs 24,000-crores scheme for vulnerable tribal groups (Nov 2023)

Example Questions

- 1. Who are Particularly Vulnerable Tribal Groups (PVTGs)? Throw some light on the socioeconomic condition of these groups.
- 2. Discuss the main limitations of the government schemes focusing on PVTGs. Suggest a few remedies to deal with these limitations.

Introduction

- » Particularly vulnerable tribal group (PVTG) (earlier: Primitive tribal group) is a government of India classification created with the purpose of enabling improvement in the conditions of certain communities with particularly low development indices
- The Dhebar Commission (1960-1961) stated that within Scheduled Tribes there existed an inequality in the rate of development. In 1973, during the fourth Five Year Plan a sub-category was created within Scheduled Tribes to identify groups that considered being at a lower level of development.
- » Till now, <u>75 tribal groups</u> have been categorized by <u>Ministry of Home Affairs</u> as PVTGs. They reside in 18 states and UT of A&N Islands.

These groups are characterized by

- » A pre-agriculture level of technology
- » Stagnant and declining population
- » Extremely low literacy
- » Subsistence level of economy

Government Initiatives:

i. PM-PVTG Development Mission

- First announced in the 2023-24 budget, the scheme was <u>launched</u> by PM Modi in Nov 2023 from <u>Jharkhand's Khunti district</u> on the occasion of tribal icon Birsa Munda's birth anniversary and the third Janjatiya Gaurav Divas.
- It has a <u>budgetary allocation of Rs 24,000 crores</u> and is <u>dedicated to the holistic</u> <u>development of all 75 PVTGs living in 22,000+ villages of 18 states and UTs.</u>
- The **objective** of the scheme is to <u>improve the socio-economic conditions</u> of PVTGs by providing basic facilities like <u>road and telecom connectivity</u>, <u>electricity</u>, <u>housing</u>, <u>clean water</u>, <u>sanitation</u>, <u>improved education</u>, <u>healthcare</u>, nutrition, and sustainable livelihood to PVTG families and habitations.
- This is an <u>umbrella initiative</u> under which <u>9 ministries will implement 11 interventions</u>, including PMGSY, PMAY(G), Jal Jeevan Yojna etc.
 - **Note:** MoTA is the <u>nodal ministry</u> for overall policy planning and coordination.

ii. Scheme for Development of PVTGs

- It is a central sector scheme launched in 2008 by MoTA exclusively for PVTGs.
- **Flexibility to state:** Under the scheme, <u>Conservation cum development (CCD)/Annual Plans</u> are to be prepared <u>by each state/UT</u> for their PVTGs based on their need

- assessment, which are then <u>appraised and approved by the Project Appraisal committee</u> of the Tribal Ministry.
- Activities for development are taken in the fields of <u>education</u>, <u>health</u>, <u>livelihood and</u> <u>skill development</u>, <u>agriculture development</u>, <u>housing & habitat</u>, <u>conservation and</u> culture etc.
- Current Situation of PVTGs in India: Report by Anthropological Survey of India (AnSI) about PVTGs (April, 2017)
 - » Report: The Particularly Vulnerable Tribal Groups of India Privileges and Predicaments
 - » Key Findings
 - a. Baseline surveys exists for only 40 groups out of 75 PVTGs -> displays government's apathy towards PVTGs
 - Baseline surveys are done to <u>precisely identify PVTG families</u>, <u>their habitat and</u> <u>socio-economic status</u>, so that development initiatives are implemented for these communities, based on the facts and figures.
 - b. Regional and state specific variations in welfare schemes for PVTGs
 - <u>For instance, Odisha</u> has established <u>exclusive micro-projects</u> for PVTGs, there are none such in for the five PVTGs in Gujarat.
 - Unequal treatment in same state: In some cases, a PVTG receives benefits only
 in a few blocks in a district, while the same group is deprived in adjacent blocks.
 The reason is that micro-projects extend benefits only within their jurisdiction.
 - c. State wise distribution
 - Among the 75 listed PVTGs the highest number are found in Odisha (13).
 - Other states
 - Bihar including Jharkhand (9), MP including Chhattisgarh (7), Tamil Nadu (6), Kerala (5), Gujarat (5), WB (3), MHA (3), Kar (2), UK (2), Rajasthan (1), Tripura (1), Manipur (1).
 - All four Tribal groups in Andaman and 1 in Nicobar Islands are recognized as PVTGs.
 - d. Huge Variation in the number of PVTGs
 - A few individuals as in case of <u>Great Andamanese (57)</u>, <u>Onge(107) and Sentinelese (around 50)</u> to more than <u>4 lakh population of Sahariyas in MP and Rajasthan</u>.
 - e. Literacy rate going up
 - Literacy rate has gone up significantly over the past.
 - From a single digit, the literacy rate has gone upto 30-40% in some PVTGs.
 - Female literacy rate is still considerably lower compared to male counterparts.
 - f. Considerable increase in age of marriage among PVTGs
 - The incidence of girl child being married while still being a minor, among these tribes have been decreasing.
- Recommendations of the report
 - a. Urgently conduct baseline surveys
 - State governments should urgently conduct baseline surveys of the PVTGs to arrive at accurate demographic and socio-economic figures of the PVTGs.
 - b. Revise and refine PVTG list to avoid overlapping and repetition.

- For instance, the list contains the synonyms of the same group such as the <u>Mankidia and the Birhor in Odisha</u>, both of which refers to the same group.
- Some of the PVTGs are counted in more than 1 states, and the report suggests that the total number of PVTGs should be 63.

Conclusion / Way forward for PVTGs

- » Better identification of Problems:
 - Implement the recommendations of AnSI and PM-PVTG Mission effectively.
- » **Common Development Agency** to focus on <u>PVTGs in case of inter-state distribution of the</u> group.
- » Customized development Plans for PVTGs, considering their distinct cultural practices, traditional knowledge etc.
- » **Critical time bound monitoring and evaluation** of various projects and schemes is important for the economic upliftment of PVTGs.
- **Bottom-up approach** rather than existing top down approach for their development -> empowering local bodies to ensure better focus on PVTGs.

– Conclusion:

» Effective implementation schemes like PM-PVTG mission to the unique need of PVTG can contribute significantly to the overall development and welfare of PVTGs.

A) PRELIMS: PVTGS IN VARIOUS STATES

State / UT Name	PVTGs Name
Andhra Pradesh and Telangana	1. Bodo Gadaba 2. Bondo Poroja 3. Chenchu 4. Dongria Khond 5. Gutob Gadaba 6. Khond Poroja 7. Kolam 8. Kondareddis 9. Konda Savaras 10. Kutia Khond 11. Parengi Poroja I2. Thoti
Bihar and Jharkhand	13. Asurs 14. Birhor 15. Birjia 16. Hill Kharia 17. Konvas 18. Mal Paharia 19. Parhaiyas 20. Sauda Paharia 21. Savar
Jharkhand	Same as above
Gujarat	22. Kathodi 23. Kohvalia 24. Padhar 25. Siddi 26. Kolgha
Karnataka	27. Jenu Kuruba 28. Koraga
Kerala	29. Cholanaikayan (a section of Kattunaickans) 30. Kadar 31. Kattunayakan 32. Kurumbas 33. Koraga
Madhya Pradesh and Chhattisgarh	34. Abujh Macias 35. Baigas 36. Bharias 37. Hill Korbas 38. Kamars 39. Saharias 40. Birhor
Chhattisgarh	Same as above
Maharashtra	41. Katkaria (Kathodia) 42. Kolam 43. Maria Gond
Manipur	44. Marram Nagas
Odisha	45. Birhor 46. Bondo 47. Didayi 48. Dongria-Khond 49. Juangs 50. Kharias 51. Kutia Kondh 52. Lanjia Sauras 53. Lodhas 54. Mankidias 55. Paudi Bhuyans 56. Soura 57. Chuktia Bhunjia
Rajasthan	58. Seharias
Tamil Nadu	59. Kattu Nayakans 60. Kotas 61. Kurumbas 62. Irulas 63. Paniyans 64. Todas
Tripura	65. Reangs
Uttar Pradesh and Uttarakhand	66. Buxas 67. Rajis
West Bengal	68. Birhor 69. Lodhas 70. Totos
Andaman & Nicobar Islands	71. Great Andamanese 72. Jarawas 73. Onges 74. Sentinelese 75. Shorn Pens

4) IR: INDIA-QATAR

B) PRELIMS FACTS ABOUT QATAR

Location:

- » Qatar officially, the state of Qatar is a sovereign country located in Southwest Asia, occupying a small Qatar peninsula on the north eastern coast of the Arabian Peninsula.
- » Land border is only shared with Saudi Arabia in the south, while the rest of its territory surrounded by the <u>Persian Gulf</u>.
- » A strait in Persian Gulf separates Qatar from the nearby island of <u>Bahrain</u>.

History:

» Following Ottoman empire, Qatar became <u>British</u> <u>protectorate in the early 20th century</u> until gaining <u>Independence in 1971</u>.

Capital: Doha

High Income Economy

- » Developed country, backed by world's third largest natural gas reserves (after Russia and Iran) and oil reserves.
- » One of the highest per capita incomes in the world.
- » Most advanced Arab state for human development.

Middle Power: In the 21st century, the country has emerged as a <u>middle power</u> in the Arab world through its <u>resource-wealth</u>, as well as its globally expanding media group, <u>Al</u> Jazeera network.

Total Population

- » 2.6 million
 - Around 3 lakh Qatari
 - 23 lakh expatriates
 - Around 8 Lakh.



C) INDIA-QATAR RELATIONS

- Practice Question:
 - » Discuss the key pillars of India-Qatar bilateral relations [10 marks, 150 words]
- India Qatar relations have generally remained very steady:

- » Large Indian Diaspora: About 8 lakh Indian nationals work and live in this small country.
- » Close Economic Ties:
 - India's Energy Dependency: Qatar is the <u>largest supplier of LNG to India</u> (10.74 million tonnes in FY23), accounting for <u>54% of India's LNG imports</u>. India also imports <u>ethylene</u>, propylene, ammonia, urea, LPG etc from Qatar.
 - » LNG imports are expected to <u>increase in future</u> as India has set a target of <u>increasing the share of natural gas in the primary energy mix to 15% by 2030 from a little more than 6% at present.</u>
 - » While Indian LNG importers predominantly the public sector oil and gas companies - continue to make efforts to diversify sourcing, it could be years before the high reliance on Qatar can be reduced to a meaningful extent.

Bilateral Trade:

- » India's total import from Qatar in FY23 were <u>valued at \$16.81 billions</u> of which <u>50% was that of LNG imports</u>.
- » India's exports to Qatar were valued at just \$1.97 billion in FY23.
 - The major exports include <u>cereals</u>, <u>vegetables</u>, <u>fruits</u>, <u>spices</u>, <u>processed</u> <u>food</u>, <u>copper articles and iron & steel</u>.
- **Investments** by Qatar Investment Authority is <u>substantial in India's new economy</u>.
 - » Major Qatari investments since 2019 include investments in Airtel's AirtelAfrica, Byju's, Adani Transmission Ltd, Adani Green Energy, Reliance Retail Ventures Limited, Swiggy, Allen Career Institute etc.

» Strong Political Ties:

- There have been <u>high-level visits in recent years</u>, with PM Modi visiting Qatar in 2016, and the Emir of Qatar, <u>Sheikh Tamim bin Hamad Al Thani</u>, paying a state visit to India in March 2015.
- Further, EAM S Jaishankar has visited Doha multiple times.
- Even when <u>Qatar was isolated and feeling the heat of Saudi-led blockade</u> in 2017-2021, <u>India continued its economic engagement with Doha</u>.
- » **Defence Cooperation** is an important pillar of the bilateral agenda.
 - India-Qatar <u>Defence Cooperation Agreement</u> signed in 2008, was <u>further extended for a period of five years in 2018</u>.
 - India offers <u>training slots in its defence institutions</u> to a number of partner countries, including Qatar.
 - India also <u>regularly participates in the biennial Doha International Maritime Defence</u> <u>Exhibition and Conference (DIMDEX) in Qatar</u>.
 - Indian Naval and coastguard ships regularly visit Qatar as part of bilateral cooperation and interaction.

» Cooperation during COVID-19:

- During the pandemic, India and Qatar collaborated on many fronts including <u>repatriation</u> efforts for stranded citizens and sharing experiences on managing the crisis.
- Source of tension (Key differences) which impact India-Qatar relations:

- » India and Qatar don't have converging views on the situation in West Asia.
 - o For e.g.
 - India's improved relation with Saudi-Arabia and Qatar's poor relation with Saudi Arabia led group.
 - India is sometimes seen to be abandoning its <u>commitment to the Palestinian</u> cause.
- » Qatar is a bastion of Islamic conservatism.

Former Indian Navy Personnel Getting Death Penalty (Oct 2023)

- » Basic Details of the case?
 - The Indian Nationals were employed by the <u>Al Dahra company in Doha</u>. The company was involved in <u>producing high-tech Italian origin submarines</u> that are known for stealth capabilities.
 - These Indians were <u>involved in imparting training to Qatar armed forces officers</u>.
 - They were arrested in 2022 and trials were held in March and June 2023. They
 were provided consular access on multiple occasion by India. Eventually, they
 were given death <u>penalty</u> by a local court on 26th Oct 2023.
 - According to a report by <u>Financial Times</u>, the eight Indians had been <u>charged with</u> <u>spying for Israel</u>. But this has been disputed, and it has been asserted that there is no ongoing submarine contract and no Israeli connection.
- » India's Response:
 - GoI has expressed shock and is exploring all consular and legal assistance in the matter.
- » How could India-Qatar relation get affected?
 - The verdict is the <u>first major crisis to hit the India-Qatar relations</u>. Given the situation with India's energy security concerns and ambitions, the case of the <u>retired Navy</u> Personnel presents a <u>sensitive challenge for India's diplomacy</u>.
 - Further, **timing of the judgment** is another issue. Right now, West Asia is going through turmoil and polarized situation due to Israel-Palestine war.
- Way Forward: Deft Diplomacy:
 - » Legal Option:
 - Appeal in higher Court
 - » Mercy Petition to Emir of Qatar who is known to pardon people during Ramadan and Eid.
 - » Political and Diplomatic Option:
 - "Epsionage issues are determined not only by judicial verdicts but also by the nature of relations between states": Former diplomat Vivek Katju
 - Delhi should work with various <u>levers with Qatari establishments</u> Political, Economic,
 Defence and Indian Community.
 - Use the <u>help of influential Indian Community members</u> to work the levers in the Qatar establishment.

– Conclusion:

- » This is a challenging diplomatic issue that requires careful consideration and strategic action.
- » India's <u>response should consider the implications of the Vienna Convention on Consular</u> Relations, international precedents, and the broader context of India-Qatar relations.

» Weather through diplomatic dialogues, political interventions, legal appeals, or a blend of these strategies, India has the potential to seek a resolution.

2. GS-3

1) S&T: DEEPFAKE

– Why in news?

- » PM Modi warns against deepfakes, calls on media to educate people on misinformation (Nov 2023)
- Following the <u>controversy created by Deepfake videos of actress Rashmika Mandanna and Katrina Kaif's deepfakes being circulated online</u>, the GoI has asked social media companies to remove deepfake within 36 hours of a complaint being registered (Nov 2023)

Example Questions:

- » Examine various risks associated with the malicious use of deepfake technology. Suggest measures to regulate and manage those risks [15 marks, 250 words]
- Example Video-1: https://youtu.be/3wVpVH0Wa6E?si=A2VSJMf97nATm8_y
- Basics: Deepfakes refer to manipulated media (audio, video, images etc) created using a form of Artificial intelligence called <u>Deep Learning (or Deep Neural Network)</u>. This manipulated content use <u>lip syncing, swapping of face</u> etc. mostly without consent.

– How does the Deepfake technology work?

- The technology involves modifying or creating images or videos using a <u>machine learning technique</u> <u>called Generative Adversarial Network (GAN)</u>. The AI driven software <u>detects and learns the subjects'</u> <u>movements and facial expressions from the source material</u> and then <u>duplicates this in another video</u> or image.
- » <u>Larger the source material used</u>, better will be the quality of deepfake. Therefore, highest number of deepfakes are made of public figures like <u>politicians and film stars</u>.
- Through a collaborative work of two softwares, the fake video is rendered until the second software package can no longer detect the forgery. This is known as "unsupervised learning" when machine language models teach themselves. The method makes it difficult for other software to identify deepfakes.

Advantages:

- » Synthetic Media/ Deepfakes can create <u>possibilities and opportunities for all</u> people, regardless of how people listen, speak, or communicate. It can give people voice, purpose, and ability to make an <u>impact</u> at scale and with speed.
- » It has been used by the ALS association in collaboration with a company to <u>use voice cloning</u> technology to help people with ALS digitally recreate their voices in future.

– Concerns:

- » Like most new technologies, it can also be <u>weaponized to inflict harm</u> to individuals, institutions, businesses or a country.
- » Crime against women can increase with malicious use of Deepfakes in pornography and can inflict emotional, reputational and in some cases violent outcome for some individuals. (for e.g. viral deepfake video of actress Rashmika Mandana incident)
- » Endanger Social Harmony Communal/caste-based statements.
- » Decrease trust towards institutions like government/media by propagating false propaganda against them
- **Undermine democracy and impair diplomacy** false information about institutions, public policy, and politicians powered by a Deepfakes can be exploited to spin the story and manipulate belief.
- How to spot/identify a deepfake?
 - » Look for unnatural blinking or lack of it.
 - » Lighting that just don't sit right.
 - » Sometimes, voice could be too robotic.
 - » It the video sounds too sensational to be true, trust your gut.
 - » Voices that miss the mark on lip synchronization
- Recent Advisory released by Ministry of electronics and Information Technology:
 - » <u>IT Rules, 2021</u> require that <u>all content reported to be fake or produced using deepfake be taken down</u> by intermediary platforms within 36 hours.
 - An advisory was sent to social media platforms in Nov 2023, reminding them that they may <u>lose "safe harbour immunity"</u> under the IT Act, if they fail to remove within 36 hours deepfake content that has been reported.
- Way Forward: To defend the truth and secure freedom of expression, we need a multi-stakeholder and multi-modal approach. Collaborative actions and collective techniques across legal reforms, social media regulation, media literacy, and technology intervention can provide effective and ethical countermeasures to mitigate the threat of malicious Deepfakes.
 - » Legislative Reforms:
 - IT Act needs <u>stronger provisions to Curb Deepfake menace</u>. Currently <u>IT Act and IPC</u> only partially address the harms which arise from deep fakes.
 - There is also need of a law on AI to govern the complexities relating to AI and related applications.
 - Consumer awareness and Media Literacy by Consumers and Journalists will be the key to fighting Deepfakes. Media literacy efforts should be enhanced to <u>cultivate a discerning public</u>. A consumer should have the ability to decipher, translate, understand and use the information we encounter.
 - **Technological intervention** with easy to use and <u>accessible technology solutions to detect Deepfakes</u>, authenticate media, and amplify authoritative sources will be crucial in fighting Deepfakes.
 - » International Collaboration: To explore <u>content labelling solutions or watermarking of AI-generated content.</u>

3. PRELIMS FACTS

1) MAPPING: TUVALU

Tuvalu is a <u>country in</u> **West Central-Pacific Ocean**. It is composed of <u>9 coral islands</u> scattered in chain lying approximately northwest to southeast.

History: Together with what is now <u>Kiribati</u> (formerly the Gilbert Islands), Tuvalu formed the <u>British Gilbert and Ellice Islands</u> Colony before separately gaining its <u>independence in 1978.</u>

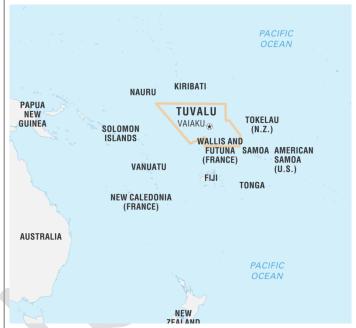
De facto capital: **Vaiaku**. This is where <u>most of the</u> government offices are located.

Geography:

- The islands are <u>low-lying</u>, most being <u>13 to 16</u> feet above sea level.
- No Rivers: Rain catchment and wells are sources of fresh water.

Recent Developments: Australia Offers Climate Refuge to Tuvalu Citizens (Nov 2023)

- A new treaty known as the Australia-Tuvalu
 Falepili Union Treaty is the most significant
 agreement between Australia and Tuvalu.
 - It promises <u>Australian assistance</u> to the nation on <u>climate action</u> and <u>security</u>.
 - Under this <u>Australia will provide</u>
 <u>migration pathways</u> for people from
 Tuvalu facing the existential threat of
 climate change. It is the <u>world's first</u>
 <u>bilateral agreement on climate</u>
 mobility.
 - Under the treaty, <u>Australia will implement special visa agreement</u> to allow <u>Tuvaluans to work</u>, study and live in Australia. This is <u>not a refugee visa</u>, but rather will allow <u>upto 280 Tuvaluans</u> (from a population of around 11,200) to migrate to Australia each year presumably on a <u>permanent basis</u>. This will provide people with <u>both legal and psychological security</u>.



2) MAPPING: CONGO RIVER AND CONGO RIVER BASIN

Congo River was formerly also known as the Zaire River.

It is the <u>second longest (4,700 km) river of Africa (9th longest of the world)</u> (the longest is Nile).

It is also the <u>world's third largest river in terms of</u> discharge volume after Amazon and Ganges.

It is also the <u>world's deepest recorded river</u>, with measured <u>depth of around 220 m</u>.

Important Tributary: The <u>Chambeshi</u> is a <u>tributary of the Lualaba River</u> (which is the name of the Congo river upstream of Boyoma Falls.

Crosses equator twice: It is the <u>only major river of the</u> world to cross equator twice.

The river and its tributaries <u>flow through the **Congo**</u> <u>**Rainforest**</u>, the second largest rainforest area in the world, after the Amazon Rain Forest.

Congo River Basin: It is the world's <u>second largest river</u> <u>basin</u> (after Amazon river), comprising an area of <u>3.4</u> million square kms



Basin countries include: <u>DRC</u>, <u>Republic of Congo</u>, parts of Gabon, <u>Part of Cameroon</u>, <u>Central African Republic</u>, <u>Rawanda</u>, <u>Burundi</u>, <u>parts of Tanzania</u>, <u>Western Zambia</u>, <u>northern Angola</u>.

3) MAPPING: PLACES IN NEWS: DEMOCRATIC REPUBLIC OF CONGO (DRC)

It is a country located in <u>Central Africa and equator</u> passes through northern part of the country giving it a tropical climate.

It has a small 40 km coastline, otherwise it is landlocked.

DRC is the <u>second largest country</u> in the Africa (after Algeria).

Capital: Kinshasa (located on Congo river), is the largest city of the DRC and also its <u>administrative</u>, <u>economic and cultural centre</u>.

DRC gained <u>independence from **Belgium** in 1960</u> and from 1971 to 1997 the country was officially called the



Neighbouring Countries: Republic of Congo (Brazzaville); Central African Republic; South Sudan; Uganda; Rwanda; Burundi; Tanzania (Separated by Lake Tanganyika), Zambia and Angola.

<u>Mobutu Sese Seko</u> to give the country what he thought was a <u>more authentic African name</u>. "**Zaire**" is a variation of a term meaning "great river" in local African languages; Following the overthrow of Mobutu in 1997, the country's name prior to 1971, the <u>DRC</u>, was reinstated.

Lake Tanganyika: It is the <u>longest freshwater lake in the</u> <u>world</u> and the <u>second deepest</u> (after Lake Baikal of Russia). It forms boundary between <u>DRC-Burundi</u> and part of boundary between DRC-Tanzania.

Most of the country is composed of the <u>Central</u> Congo Basin.

Congo Basin Rain Forest: The country consist of significant portion of the Congo Basin rain forest often known as the "second lung of the Earth".

4) MAPPING: ETHNIC CONFLICT IN CONGO

Background of Conflict in DRC?

Rwandan Genocide in 1994: Ethnic <u>Hutu extremists</u> killed nearly 1 million <u>minority ethnic **Tutsis** and non-extremist Hutus.</u>

Since then, the <u>eastern part of DRC, bordering Rwanda, has been facing insurgency perpetrated by several rebel militant groups</u>. According to the UN, more than 120 insurgent groups are active in eastern provinces of <u>Ituri, North Kivu, South Kivu, and Tanganyika</u>.

Tutsi led M23 Rebel Group: The Tutsi led M-23 rebel group <u>resurfaced in Nov 2021</u> and has <u>worsened the security situation in the eastern provinces of DRC</u>. After failure of various peace attempts, the <u>groups have kept on advancing since Jan 2023</u>. **DRC** accused Rwanda of supporting Tutsi group.

Prominent Rebel Groups:

- The prominent groups besides M23 include the Allied Democratic Force (ADF), the Cooperative for Development of the Congo (CODECO).
- ADF is an <u>Uganda based insurgent groups</u> and is operating since 1999. It has also <u>pledged its</u> allegiance to ISIS.



Provinces of DRC

Why insurgency?

- Ethnic Intolerance: Following the Rwandan genocide, <u>around 2 million Hutu refugees</u> <u>crossed Rwanda into North Kivu</u> and South Kivu provinces of DRC. The <u>organized ethnic militias</u> <u>in DRC fearing persecution</u>.
 - Tensions intensified as <u>Rwandan Tutsis</u> organized militias against the Hutus who fled to DRC.
 - Subsequently <u>several</u>, <u>ethnic</u> and <u>interethnic</u> groups who felt threatened

 CODECO claims that they <u>aim to protect the</u> <u>ethnic Lendu against the Hemas and the Congo</u> army.

Impacts of Insurgency:

- Thousands are dead.
- Huge Internal Displacement: In Oct 2023, the UN International Organization on Migration (IOM) reported that the number of people who have been internally displaced in the DRC has risen to 6.9 million.
- In the <u>eastern province of Kivu</u>, nearly a <u>million people have been displaced due to the ongoing conflict</u> with the rebel group, <u>Mouvement du 23 Mars</u> (M23)

- started organizing their militias against each other.
- Political Instability: <u>President Felix Tsikedi</u> came to power in 2019 through democratic elections. The country is to <u>hold elections on 20th Dec</u>. However, election commission has <u>raised</u> concerns about how continuing insecurity in parts of the country would <u>pose a challenge to a</u> "free democratic and transparent" vote.
- Control over territory and natural resources
- Extrajudicial killings by security forces
- Rising tensions with neighbouring countries
 (Armed groups have been supported by the governments of Rwanda, Uganda and Burundi, at various points, acting as proxies for each country's interest in the region)

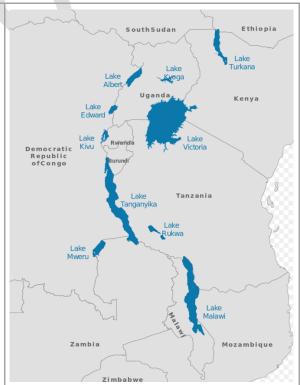
5) MAPPING: LAKE TANGANYIKA

Lake Tanganyika is one of the African Great Lake. It is the <u>world's</u> <u>longest lake</u>.

It is <u>second-oldest freshwater lake</u> in the world, the <u>second largest</u> <u>by volume</u>, and the <u>second deepest</u> in the world, in all cases <u>after</u> <u>Lake Baikal</u> in Siberia.

The lake is <u>shared between **four countries**</u> - DRC(40%), Burundi, Tanzania (46%) and Zambia.

The lake <u>drains into the **Congo River**</u> system and <u>ultimately into the Atlantic Ocean</u>.



6) MAPPING: PLACES IN NEWS: KAMCHATKA PENINSULA

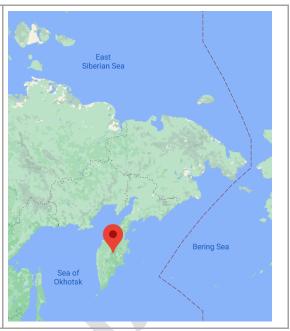
Kamchatka peninsula is a <u>peninsula in the Russian Far East</u>, with an area of about 2.7 lakh km². It is sparsely populated.

The <u>Pacific Ocean</u> and the <u>Sea of Okhotsk</u> make up the <u>peninsula's</u> <u>eastern and western coastlines</u>, respectively.

The peninsula is noted for its array of <u>active and dormant volcano</u>, <u>geysers</u> and <u>geothermal springs</u>.

Immediately offshore along the Pacific coast of the peninsula runs the 10,500 meter deep <u>Kuril-Kamchatka Trench</u>.

Biodiversity Disaster in 2020: Many dead sea creatures (Octopus, Seals, and other sea creatures) have washed up on beaches in Kamchatka, in Russia's far east, in what is being treated as a major marine pollution incident. Initial analysis detected oil products and phenol in the water.



7) MAPPING: KLYUCHEVSKAYA SOPKA VOLCANO

It is the <u>tallest volcano of Eurasia</u> and is located on <u>Kamchatka</u> <u>Peninsula</u>. It is a stratovolcano with a <u>height of 4,650 m</u>.

It has been <u>active in recent years</u> and have <u>released lava in June 2023</u>. It also erupted in Nov 2023 and sent <u>ash as high as 13 kms</u> above sea level.



8) ECONOMY: ADDITIONAL TIER-1 BONDS

– Why in news?

- » In Nov 2023, Swiss banking giant UBS sold additional tier-1 (AT-1) bonds for the first time and after taking over beleaguered banking peer Credit Suisse in March 2023.
 - Earlier, it was decided to write-off around \$17 billion in AT-1 bonds issued by Credit Suisse. This had invoked fury from investors.

– What are AT-1 Bonds:

» AT-1 bonds are perpetual debt instruments issued by banks to raise money and build up their core equity capital. There is no maturity date, implying that the issuer doesn't pay the principal amount back to investors but makes periodical interest payments throughout the life of the bond.

- » <u>'Call Option'</u>: In practice, AT-1 bonds typically come with a 'call option', which means that the bank issuing these instruments can redeem them or repay investors after a specified period.
- These bonds were <u>introduced according to Basel banking norms</u> made after the <u>Global Financial Crisis</u>. These are a <u>form of "contingent convertible (cocos)" bonds</u> which were created to <u>prevent the need for government-funded bail-outs</u> of precarious banks.

– Why the risks for investors?

- Some features of AT-1 Bonds make them <u>riskier than several other bonds</u>.
 - AT-1 Bonds have <u>equity like characteristics</u> (<u>quasi-Equity instruments</u>), which permit banks to absorb losses.
 - If the bank faces financial stress, with capital requirement dropping below a
 specific levels, the covenants of AT-1 bonds typically permit the lender to hold
 off on interest payments or pay a lower amount. The bonds may also be
 converted into equity, helping to preserve the capital.
 - Some provisions allow the banks to <u>write-off</u> AT-1 bonds in case of severe financial crisis.
 - Further, <u>AT-1 bond investor</u> (unlike other bond investors) are <u>not at the top of pecking order</u> when it comes to receiving pay-outs from a bank facing financial <u>stress</u>. In fact, details sometimes put <u>equity investors</u> above than the bond investors.

– How are AT-1 bonds triggered?

- » These have different trigger mechanisms:
 - For e.g. <u>if the Bank's capitalization level falls below a preset threshold</u>, the bond may be converted to shares, which eliminates bank's liabilities on the AT-1.
- To compensate for these risks, <u>banks pay investors a higher rate of interest for AT-1 bonds</u> than other debt instruments or deposits.

D) AT-1 BOND IN INDIA:

- How much are the AT-1 bond holdings of Indian Banks?
 - » Indian Banks don't depend on AT-1 bonds much.
 - In a study, brokerage firm Macquarie sad that while India's **PSU banks** have an exposure of 1-2 percent to AT-1 bonds, private sector banks only have an exposure of 0-1 percent.
- The Indian market for AT-1 bond was upended in March 2020 following the crisis in Yes Bank.
 - Following severe financial stress, RBI and Yes Bank had decided to <u>write-off additional</u> <u>tier-1 (AT-1) bonds</u> worth Rs 8,415 crores. Mutual funds were amongst the biggest sufferers.

- This was challenged in the court, and <u>Bombay High Court in Jan 2023 ordered</u> <u>quashing of the write-off</u>. But in Sep 2023, Finance Ministry has moved to the Supreme Court against the order.
- In 2021, SEBI amended valuation rule for perpetual bonds.
 - » Residual maturity of Basel-III AT-1 bonds will be 10 years until 31st March 2022.
 - » It will be 20 and 30 years for subsequent six months.
 - » From 1st April 2023, the residual maturity of AT-1 bonds will become 100 years from the date of issuance of the bond.
- SEBI then provided a <u>phased timeline for mutual funds to value AT-1 bonds as 100-year</u> instruments.
 - » The 100 year valuation kicked in from 1st April, 2023.
 - » Before this, AT-1 bonds were <u>valued according to the call options on the papers</u> generally 5 to 10 years.
 - » Impact: <u>Huge decline in mutual fund investments in AT-1 bonds</u> as a 100-year valuation lead to <u>very sharp movements in market yields of such papers</u>.
- Recovery in AT-1 bond system in India:
 - With improvement in banking sector in the form of <u>reduced NPAs</u>, the <u>risk perception</u> <u>surrounding AT-1 bonds improved</u>. In FY23, banks issued <u>more than Rs 33,000 crore worth of AT-1 bonds</u>.
- Note:
 - » AT-1 bonds are subordinate to Tier-2 bonds.
 - » Tier-2 Bonds are <u>subordinate to unsecured creditors, banks depositors, and senior bonds</u>. They are <u>not perpetual instruments</u>. They have a <u>maturity period of minimum 5 years</u>.

9) ECONOMY: INCREMENTAL CRR

In Aug 2023, RBI <u>introduced Incremental CRR</u> to <u>absorb the surplus liquidity</u> created in the system due to <u>multiple factors</u>, including the return of Rs 2,000 notes.

- » It was decided that wef from the <u>fortnight beginning Aug 12, 2023</u>, scheduled banks shall maintain an <u>I-CRR of 10% on the increase in their net demand and time liabilities (NDTL)</u> between May 19, 2023, and July 28, 2023.
- » This was **purely a temporary measure** for managing the liquidity overhang.
- » Existing CRR remained unchanged at 4.5%.
- » Impact:
 - Reduce the supply of money and thus <u>curtail inflation</u>.

In Sep 2023, RBI announced that it will discontinue the I-CRR in a phased manner.

» Why release in phased manner?

- So that system liquidity is not subjected to sudden shocks and money markets function in a orderly fashion.
- » **RBI released <u>25% of I-CRR</u>** on 9th, Sep; <u>25% on 23rd Sep</u> and <u>remaining 50% of the I-CRR on 7th</u> October 2023.

About Cash Reserve Ratio:

- Under RBI Act, 1934 Scheduled Banks are required to keep a % of their net time and demand deposits (i.e. total deposits of customers) in the form of cash deposits with RBI.
- Objectives of CRR:
 - » Since a part of total deposits in bank is available in the form of cash, it can be used to readily make money available to customers when they demand it.
 - » Further, RBI also controls the amount of money in market and thus inflation through CRR.
- Note:
 - » Banks don't get any interest for this money deposited with RBI.
 - » CRR has to be maintained in cash only.

10) DEFENCE: NIRBHAYA MISSILE

- Why in news?
 - Nirbhaya Missile to be with All Three Forces (Nov 2023: Source: ET)
- Introduction
 - These are long-range sub-sonic cruise missiles being developed by DRDO indigenously.
 - They are nuclear capable with a range of 1,000 km and payload of 300 kg.
 - It is a <u>terrain hugging missile</u>. It can fly almost at the level of tree-tops to evade detection by radars.
 - It has been built to <u>identify and strike targets in heavily populated areas with pin-point</u> accuracy and is capable of carrying a nuclear capable warhead.
 - It is powered by solid rocket boosters developed by Advanced Systems Laboratory (ASL).
- Update: Nov 2023
 - In a significant boost to the firepower of the defence forces, <u>all three defence forces will now have long-range cruise missiles of the Nirbhay class</u> in their arsenal to strike targets at ranges of over 1,000 Km range.