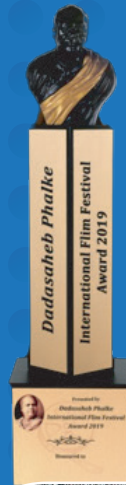




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TABLE OF CONTENTS

1. POLITY AND GOVERNANCE 1-13

1. SC refuses to legalize same-sex marriage 1
2. Judiciary is losing talent as Government sits on names: Supreme Court 3
3. Aadhaar issues 4
4. Law Commission on POCSO Act 6
5. Pendency with Information Commissions 8
6. Questions in Parliament 10
7. Reproductive autonomy V/S Rights of the unborn child 12

2. SOCIAL ISSUES 14-29

1. Global Hunger Index (GHI) 2023 14
2. Caste Census and Bihar Caste Survey 15
3. Manual Scavenging 19
4. Mera Yuva Bharat 21
5. NHRC issues advisory for transpersons 22
6. Parliamentary Standing Committee on Education 24
7. Suicide Prevention and Umeed Guidelines 27
8. International Dyslexia Awareness Month 28

3. INTERNATIONAL RELATIONS 30-43

1. Maldives' election and India's strategic interests 30
2. Sri Lanka, Bangladesh consider joining the RCEP 31
3. UN Security Council approves mission in Haiti 34
4. Indian Ocean Rim Association (IORA) 36
5. Israel-Palestine conflict and the recent Hamas clash 38
6. Dispute Settlement and the WTO Appellate Body 41

4. ENVIRONMENT, DISASTER MANAGEMENT, GEOGRAPHY 44-70

4.1. ENVIRONMENT 44-62

1. 41% of amphibians are threatened with extinction 44

2. Aerosols heating up Himalayas, key factor in climate change: ISRO study 45
3. Amazon River Dolphins 47
4. Blueprint for Indian Maritime Blue Economy 48
5. Climate Change causes \$850 bn annual loss in infrastructure globally: CDRI Report 50
6. Environment Impact Assessment (EIA) and Himalayas 52
7. E-waste 53
8. Graded Response Action Plan 55
9. National Action Plan for Green Shipping 57
10. National Water Awards, 2023 58
11. Solar Energy and Electric Vehicle Boost 60

4.2. DISASTER MANAGEMENT 62-69

1. Joshimath subsidence raises alarm bells 62
2. Cloud Burst in Sikkim 65
3. Afghanistan Earthquake 67

4.3. GEOGRAPHY 69-70

1. Zealandia 69

5. ECONOMY 71-86

1. India's first Regional Rapid Transit System (RRTS) 71
2. Government Eases Angel Tax 72
3. IMF raises India's growth forecast to 6.3% 74
4. Index inclusion bring foreign inflows 75
5. India 4th in Startups 77
6. India retains 40th rank in the Global Innovation Index 2023 79
7. IndiaSkills 2023-24 launched 80
8. Periodic Labour Force Survey 82
9. RBI extends prompt corrective action framework to government NBFCs 84
10. Trends in Bond Yields 85

6. SCIENCE & TECHNOLOGY	87-100	9. PERSONALITY, AWARDS AND SPORTS	119-126
1. Government to support AI chip development via PPP model	87	9.1. PERSONALITY	119-121
2. Bioprinting human-like skin	89	1. MS Swaminathan	119
3. CAR T-cell Therapy	90	2. Manohar Singh Gill	121
4. China's Tiangong space station	92	9.2. AWARDS	122-125
5. IMPHAL (Yard 12706)	94	1. 2023 Nobel Prizes	122
6. Long-term risks of Artificial Intelligence	95	2. Dadasaheb Phalke Award	124
7. Niemann-Pick disease	97	9.3. SPORTS	125-126
8. Pink Bollworm (PBW)	98	1. 19th Asian Games	125
7. INTERNAL SECURITY	101-111	10. FACT POINTS	127-134
1. AFSPA extended in Arunachal, Nagaland	101		
2. Interpol issues Red Notice	103		
3. Positive Indigenisation List	105		
4. Project Udbhav	107		
5. 'Trishakti Prahar' Exercise	108		
6. Uses and applications of drones	109		
8. HISTORY ART AND CULTURE	112-118		
1. Yakshagana	112		
2. Agamic Temples of Tamil Nadu	113		
3. Allah Baksh and Mewari Style Painting	114		
4. Gara Embroidery	116		
5. Kalamkari	117		

1. POLITY AND GOVERNANCE

1. SC refuses to legalize same-sex marriage

Current Context

A five-judge Constitution Bench of the apex court ruled in a 3:2 verdict **against giving constitutional validity to same-sex marriages**.

Five takeaways from SC's Judgement

- **Right to marry not a fundamental Right:** All five judges on the Bench, agreed to it.
- **Special Marriage Act, 1954:** All judges unanimously agreed that it is not possible to tweak the Special Marriage Act, 1954 by using gender neutral language to allow same-sex marriage.
- It is up to the Parliament and State legislature to enact laws on marriage.
- **Declined extending civil union to same-sex couples:** Justice Bhat, Justice Kohli and Justice Narasimha formed the majority, while the CJI and Justice Kaul wrote minority opinions in favour of extending civil union to same-sex couples.
- **On the “bouquet of rights”:** All five judges took note of the Centre's stand that a high-level Cabinet committee will look into rights that can be conferred upon non-heterosexual couples.
 - ✓ This would range from opening joint bank accounts, same-sex spouses being a beneficiary for provident fund, pension or inheritance to such spouses, etc.
- **Adoption of Child Right:** The minority view by CJI Chandrachud and Justice Kaul struck down specific guidelines by the Central Adoption Resource Authority (CARA) disallowing same-sex or unmarried couples from jointly adopting a child.

Legality of Same-sex Marriage

- The Right to marriage is a statutory and not a fundamental right guaranteed by the Constitution.
- Though marriage is regulated through various statutory enactments, its recognition as a fundamental right has only developed through judicial decisions of India's Supreme Court.

Civil Union

- A civil union under the Special Marriage Act is a legally recognized union between two individuals, regardless of their caste, religion, or nationality.
- It also refers to the legal status that allows same-sex couples specific rights and responsibilities normally conferred upon married couples.

Arguments of Petitioners

Non-recognition of same-sex marriage violates fundamental rights under :

- **Articles 14** (Right to equality before law)
- **Article 15** (Right against discrimination on grounds of religion, race, caste, sex, place of birth)
- **Article 19** (Freedom of speech and expression)
- **Article 21** (Protection of life and personal liberty) of the Constitution.

- ✓ Such declaration of law is binding on all courts throughout India under Article 141 of the Constitution.
- **SC's Other Judgements:**
 - ✓ **An adult person has the right to marry a person of their choice under Article 21** [Lata Singh vs State of UP (2006), Shafin

Jahan vs Asokan KM (2018), and Laxmibai Chandaragi B vs The State of Karnataka (2021)] as was noted by the Supreme Court, in context of Article 16 of the Universal Declaration of Human Rights.

- ✓ LGBTQ person's rights are founded on **sound constitutional doctrines** - Right to Life, Privacy, Dignity, Liberty and Freedom [KS Puttaswamy vs Union of India (2017)].
- ✓ The choice partner, the ability to find fulfilment in sexual intimacies and the right not to be subjected to discriminatory

Same-sex marriage is legal in more than 30 places around the world

Jurisdictions that allow same-sex couples to marry



Note: Classifications as of May 2023.
Source: Pew Research Center analysis of news articles and official government sources.

PEW RESEARCH CENTER

behaviour are intrinsic to the constitutional protection of sexual orientation [Navtej Singh Johar vs UOI (2018)].

Special Marriage Act (SMA), 1954

- All marriages in India can be registered under the respective personal law— Hindu Marriage Act, 1955, Muslim Marriage Act, 1954, or under the Special Marriage Act, 1954.
- ✓ It is the duty of the judiciary to ensure that the rights of both the husband and wife are protected.
- The Special Marriage Act, 1954 has provisions for civil marriage for people of India and all Indian nationals in foreign countries, irrespective of religion or faith followed by either party.
- ✓ Section 4 provides for the conditions relating to solemnization of special marriages between any two persons.
- A marriage under the Act allows people from two different religious backgrounds to come together in the bond of marriage.

Way Forward

- **Legal Reform:** Full decriminalization of Section 377 is still needed along with comprehensive legislation that explicitly recognizes same-sex marriage and provides legal rights.
- **Public Awareness and Education:** Like for eg. The inclusion of LGBTQ+ issues in school curricula, are vital to challenge stereotypes, reduce discrimination, and create a more inclusive society.

Debate regarding Same-Sex Marriage

Arguments in Favour

- All individuals, regardless of their sexual orientation, have the right to marry and form a family
- Marriage provides social and economic benefits to couples and their families which will also benefit the same-sex people.
- The CJI acknowledged cohabitation as a fundamental right, and it is the government's obligation to legally recognize the social impact of such relationships.
- Biological gender is not absolute, and gender as a social construct, is far more complex. There is no absolute concept of a man or a woman.

Arguments against

- Many religious and cultural groups believe that marriage should only be between a man and a woman and are against changing such traditional definitions.
- Some people argue that the primary purpose of marriage is procreation, and that same-sex couples cannot have biological children.
- Sanctioning same-sex marriage may create legal problems with inheritance, tax, and property rights.
- When queer couples adopt children, it can lead to societal stigma, discrimination etc., especially in Indian society where acceptance of the LGBTQIA+ community is low.

- **Mental Health and Support:** Accessible services and support groups can be beneficial for the LGBTQ+ community facing discrimination and stigma.
- **Community Building:** Pride parades and

LGBTQ+ visibility events, engaging religious and cultural leaders in dialogues, encouraging positive, non-stereotypical media portrayal etc. are progressive steps forward.

2. Judiciary is losing talent as Government sits on names: Supreme Court

Current Context

Recently, the Supreme Court highlighted how the judiciary is losing fresh talent like never before as prospective candidates shortlisted for judgeships in High Courts give up due to delayed decision-making from the government.

About

- Many a bright legal mind have fallen victim to segregation of names by the Union Government, who prefer one name over the other for unknown reasons, despite the Collegium forbidding the practice.
- It was also highlighted that around 70 High Court Collegium recommendations have been pending for over 10 months.
 - ✓ There was no word from the government on 26 transfers recommended by the Supreme Court Collegium.
 - ✓ Nine fresh recommendations made by the Collegium for appointments to High Courts have neither been acted on nor returned to the Collegium by the government.
 - ✓ The fate of seven other names reiterated by the Collegium for appointment to various High Court lie pending with the government in a fog of uncertainty.
 - ✓ The Collegium recommendation for the appointment of a Chief Justice to the very sensitive Manipur High Court is still pending.
- The Memorandum of Procedure requires the government to appoint names reiterated by the

Collegium without further delay.

Tussle over Appointments to the Judiciary

- The Union Government and the Parliament have been critical over the Judiciary's mode of appointment, as effected through the **3rd Judges Case (1998)** establishing the Collegium system, which has been labelled as non-transparent and with the intent of elevating Judiciary to the stature of a "Super-Executive" where Judges select Judges
- The Supreme Court had struck down the **National Judicial Appointments Commission (NJAC)** legislated by the **99th Constitution Amendment Act (2014)**, for being ultra vires to the Constitutional Principle of Independence of the Judiciary as the Union Government attempted to modify the appointment procedure.
- This move has been vehemently criticised by the likes of Vice-President Jagdeep Dhankar even today, calling it a violation of **Popular Sovereignty**, an expression of which are laws enacted by the elected representatives of the people, in Parliament.

Courts	Number of pending cases
• Supreme Court	71,411
• High Courts	6 million
• Lower Courts	41 million

- Thus, the Union enjoys a sour relationship with the Supreme Court Collegium and delays by the Centre in clearing the names recommended by the Collegium for appointment as judges in the higher judiciary has been a recurring phenomenon.

Impact

- **Pendency of cases:** Steady rise in pendency is not dealt with while such processes are not seamless and time-efficient.
- **Trust deficit:** Such tussles create an environment of distrust between the Executive, Legislative and Judicial branches of the Indian democracy, inhibit cooperation and lead to stagnancy in governance and reform.
- **Power struggle:** It is like a game of tug of war where each wants something important, over the power of judicial appointment to the higher judiciary.
- **Separation of powers:** It is a Basic Feature of the Constitution maintaining harmonious inter-institutional balance, but blatantly disregarded in such instances.

Appointment of Judges to the Higher Judiciary

- **Articles 124(2) and 217** of the Indian Constitution deal with the appointment of judges to the Supreme Court and High Courts.
- The Judges are formally appointed by the President as per the result of consultations and

recommendations of the Collegium.

- The **Collegium** consists of the Chief Justice of India and the four senior-most judges of the Supreme Court and decides on appointments, elevations, and transfers of Judges (**3rd Judges Case, 1998**).
- High Court judges are recommended by a Collegium comprising the CJI and two senior-most judges. The proposal, however, is initiated by the Chief Justice of the High Court concerned in consultation with two senior-most colleagues.
- The term “collegium” is not mentioned in the Indian Constitution but has been established through judicial pronouncements.
- Judges of the Supreme Court and High Courts enjoy security of tenure, and their salaries, allowances, pensions, and administrative expenses are charged upon the **Consolidated Fund of India**.
- **Article 128** of Indian Constitution postulates that any retired judge of the Supreme Court of India can be called back to sit and act as a Supreme Court judge by the Chief Justice of India with the prior permission of the President of India.
- Article 224A provides for the appointment of retired judges where the Chief Justice of a High Court for any State may at any time, with the previous consent of the President, request any person who has held the office of judge of that court or of any other High Court, to sit and act as a Judge of the High Court for that State.

3. Aadhaar issues

Current Context

Global rating agency Moody's Investors Service recently has raised concerns about security and privacy vulnerabilities in biometric technologies like the Aadhaar programme in India.

Highlights of the report

- The New York-headquartered rating agency in a report on “Decentralized Finance and Digital Assets” issued on September 23, acknowledged Aadhaar as “the world’s largest digital ID program” that assigns unique numbers to over 1.2 billion Indian residents using biometric and demographic data.

Service denials concern

- The Unique Identification Authority of India (UIDAI) administers Aadhaar, aiming to integrate marginalized groups and expand welfare benefits access.
- However, the system faces hurdles, including the burden of establishing authorization and concerns about biometric reliability.
- UIDAI-Aadhaar system often results in service denials, and the reliability of biometric technologies, especially for manual laborers in hot, humid climates, is questionable.
 - ✓ Vividly applicable in respect of India’s Mahatma Gandhi National Rural Employment Guarantee Scheme [MGNREGS].

Security Concerns

- It also stated that certain categories of digital ID, especially those under central or federated control, are susceptible to misuse or exploitation – a concern that becomes particularly salient when sensitive biometric data like fingerprints or facial recognition information are involved.
- It also highlighted concerns regarding the decentralised digital identity saying the widespread use of this technology also faces significant hurdles.
- Decentralised Digital (DID) brings potential solutions to current ID issues but also presents challenges, including technical complexity, cyber risks, interoperability issues among different frameworks, the potential for data exploitation, and possible social repercussions.

The Unique Identification Authority of India (UIDAI)

- It is a statutory authority established under the provisions of the Aadhaar (Targeted Delivery of Financial and Other Subsidies, Benefits and Services) Act, 2016 (“Aadhaar Act 2016”) on 12 July 2016 by the Government of India, under the Ministry of Electronics and Information Technology (MeitY).
- UIDAI was created to issue Unique Identification numbers (UID), named as “Aadhaar”, to all residents of India. The UID had to be (a) robust enough to eliminate duplicate and fake identities, and (b) verifiable and authenticable in an easy, cost-effective way.
- As on 29th September 2023, the Authority has generated 138.08 crore Aadhaar numbers to the residents of India.

Policies and regulation concerns

- Further, report stated that a lack of suitable policies and regulations can discourage the use of reusable credentials and create obstacles for this technology.
- The lack of well-defined and universally accepted standards for various components within the Decentralised digital (DID) architecture – such as data formats, communication protocols, cryptographic methods, and verification procedures – hinders the ability of different DID systems to work together efficiently and seamlessly, known as interoperability.

Government Response

- The report in question does not cite either primary or secondary data or research in support of the opinions presented in it. The investor service did not make any attempt to ascertain facts regarding the issues raised by it from the Authority.
- The G-20 Global Partnership for Financial Inclusion (GPII), in a report prepared by the World Bank, has stated that the “implementation of DPIs such as Aadhaar (a foundational digital ID system), along with the Jan Dhan bank accounts, and mobile phones, is considered to

have played a critical role in enhancing ownership of transaction accounts”.

- Biometric submission is also possible through contactless means like face authentication and iris authentication, and adding that the option of mobile OTP (One-Time Passcode) is also available in many use cases.

residents using a combination of biometric and demographic information.

- This system grants individuals access to both public and private services, with verification methods that include fingerprint or iris scans, as well as alternatives like One-Time Passcodes.
- The Aadhaar programme was **launched in 2009 by the UIDAI** with the goal of providing a unique and verifiable identity for every resident of India.
- The Unique Identification Authority of India (UIDAI) serves as the Central agency responsible for administering Aadhaar.

Aadhaar

- Aadhaar, the world's largest digital ID programme, assigns 12-digit unique identification numbers to over 1.2 billion Indian

4. Law Commission on POCSO Act

Current Context

Stating that “it is not advisable to tinker with” the existing age of consent (18 years), under the Protection of Children from Sexual Offences (POCSO) Act to exempt adolescent sexual acts from the purview of the criminal law, the Law Commission of India has instead favoured introducing “guided judicial discretion in the matter of sentencing” in cases involving those in the 16-18 age group.

About

- **The Commission, in its Report No. 283 on ‘Age of Consent under the Protection of Children from Sexual Offences Act, 2012’** called for certain amendments to the Act “to remedy the situation in cases wherein there is tacit approval in fact though not consent in law on part of the child aged between 16 to 18 years”.
- The blanket criminalization of sexual activity amongst and with a child, though intended to safeguard children, is leading to incarceration of young boys and girls who engage in such activities as a consequence of sexual curiosity and need for exploration that may to some extent be normative for an adolescent.
 - ✓ There is a social cost associated with the present situation, including the negative

Law Commission of India

- It is neither a constitutional body nor a statutory body, but an executive body established by an order of the Government of India.
- The Commission is established for a fixed tenure and works as an advisory body to the Ministry of Law and Justice.
- The first such Commission was established in 1834 under the Charter Act of 1833 under the Chairmanship of Lord Macaulay which recommended codification of the Penal Code and the Criminal Procedure Code.
- The Law Commission, on a reference made to it by the Central Government or suo-motu, undertakes research in law and review of existing laws in India for making reforms therein and enacting new legislations.
- It also undertakes studies and research for bringing reforms in the justice delivery systems for elimination of delay in procedures, speedy disposal of cases, reduction in the cost of litigation etc.

impact upon the health, both physical and mental, of the children as well as a burden upon the investigating agencies and courts which takes away focus from the cases that are genuine

and require immediate consideration.

- ✓ The mental trauma and harassment faced by children who, on account of engaging in such a consensual act, come to fall within the ambit of the POCSO Act is certainly an issue of concern.

Exploring the proposals

- **With respect to reducing the age of consent to 16 years:**
 - ✓ The Commission noted that such an approach will lead to many unintended consequences of much severe nature, thereby reducing the POCSO Act to a 'paper law'.
 - ✓ Further, the police investigation suffers from a great number of inadequacies and if it is the investigating agencies that get to determine if there was consent or not, then a lot of genuine cases that need to be prosecuted under the POCSO Act may not see trial on account of investigating agencies themselves declaring them to be cases of consensual romantic sexual relationship.
 - ✓ Moreover, it cannot be ignored that reducing the age of consent will have a direct and negative bearing on the fight against child marriage and child trafficking.
- **On where a limited exception in case of consensual sexual act involving a child above the age of 16 years, should be introduced:**
 - ✓ The Commission was of the view that it was concerning and prone to misuse as the consent of a child is no consent and reading the same would be deeply problematic.
 - ✓ All children deserve the protection of the special law enacted for this very purpose and diluting the age of consent will deprive a significant portion of the child population, especially young girls aged 16 to 18 years, of the protection and expose them to unchecked exploitation.

HOW IS THE LAW MISUSED

- In 2012, legal age of sexual consent was increased from 16 to 18
- This criminalises sexual activity between anyone under 18 - even if it is consensual - under the Pocso Act
- This allows parents to book teenage partners of minor girls under Pocso after they elope
- While medical examination is a parameter considered for the Pocso Act, it doesn't conclusively prove that the partners in question engaged in sexual intercourse, say activists



CASE FILES

- From January 2017 to November 11, 2018-141 cases of elopement were slapped with Posco Act in Chennai
- In the same period, 179, cases of 'non-elopement' were booked under Posco Act
- In 2017, 83 cases were booked under penetrative sexual assault in Chennai
- Of these, 63 were listed as friends of victims on the pretext to marry them

- ✓ The increasing incidents of grooming and cyber-crimes such as sextortion are classic examples of how children in this vulnerable age group can be trapped and exploited.
- ✓ The Commission stated that the very real possibility of young girls being easily seduced in love traps and then sold off in trafficking cannot and should not be ignored. Any element of consent can be misused and may lead to children being at the mercy of adult abusers, thereby enabling prostitution and exploitation of children.
- **Carving out a limited judicial discretion at the stage of sentencing:**
 - ✓ This seems to strike a delicate balance to address the issue at hand and at the same time protecting children from sexual exploitation, and is a more reasonable approach.

- ✓ Such a discretion bestowed on the Special Court can be exercisable in cases where there appears to be factual consent on part of a child above the age of 16 years for the alleged act in question.
- ✓ However, the report also noted that wide judicial discretion may lead to arbitrariness, highlighting the need of rationalized use of this discretionary, insulated from any potential misuse.
- The Act was further reviewed and amended in 2019 to introduce more stringent punishment including the death penalty for committing sexual crimes on children, with a view to deter the perpetrators and prevent such crimes against children.
- **The Government of India has also notified the POCSO Rules, 2020:**
 - ✓ Special Court can order interim compensation for the child's needs related to relief or rehabilitation after the FIR's registration.
 - ✓ The Child Welfare Committee (CWC) may recommend immediate payment for essential needs like food, clothes, and transportation, using funds from the District Legal Services Authority (DLSA), the District Child Protection Unit (DCPU), or funds maintained under the Juvenile Justice Act, 2015.
 - ✓ The POCSO Rules empower the CWC to provide a support person to assist the child throughout the investigation and trial process.

About the POCSO Act

- It was enacted in 2012, in consequence to India's ratification of the **UN Convention on the Rights of the Child in 1992**.
- The Act defines a child as any person below the age of 18 years and provides punishment as per the gravity of offence.
- The aim of this special law is to address offences of sexual exploitation and sexual abuse of children, which were earlier, either not specifically defined or inadequately penalised.

5. Pendency with Information Commissions

Current Context

A total of 3,21,537 appeals and complaints are pending in 27 State Information Commissions across the country, and the backlog has been steadily increasing, according to a new report.

About

- The 'Report Card on the Performance of Information Commissions in India, 2022-23' said that the 2019 assessment had found that as of March 31 that year, a total of 2,18,347 appeals/complaints were pending in the 26 Information Commissions from which data was obtained, which climbed to 2,86,325 as of June 30, 2021 and then crossed three lakhs as of June 30, 2022.
- The report has been compiled based on the performance of Information Commissions across the country, and on information accessed under the Right to Information (RTI) Act by the Satark

Nagrik Sangathan (SNS), a citizens' group working to promote transparency and accountability in governance.

Key findings

- **The maximum number of pending appeals** was in Maharashtra (1,15,524), followed by Karnataka (41,047).
- **Four Information Commissions:** Jharkhand, Telangana, Mizoram and Tripura: **are defunct** as no new Information Commissioners were appointed upon incumbents demitting office.
- **Six Information Commissions are currently**

RTI Act

The RTI Act was passed in 2005. It empowers Indian citizens to seek information from a public authority, and makes the government and its functionaries more accountable and responsible.

Under the RTI law, Information Commissions are the final appellate authority and are mandated to safeguard and facilitate the people's fundamental right to information.

The RTI Act replaced the Freedom of Information Act, 2002.

- Any Indian citizen is free to seek answers from a Government Authority like applying for a delayed IT refund, driving license or passport, or details of a repair or infrastructure project completed or going on.
- Information sought can also be related to the funds allotted under the different kinds of relief funds in the country.

headless: the Central Information Commission, and the State Information Commissions of Manipur, Chhattisgarh, Maharashtra, Bihar, and Punjab.

- The report says that 2,20,382 appeals and complaints were registered between July 1, 2022 and June 30, 2023 by the 28 Information Commissions for whom relevant information was available. During the same time period, 2,14,698 cases were disposed of by 29 Information Commissions for which information could be obtained.
- Using the average monthly disposal rate and the pendency in the Commissions, the time it would take for an appeal or complaint to be disposed of was computed.
 - The assessment shows that West Bengal State Information Commission (SIC) would take an estimated 24 years and one month to dispose a matter, which suggests that a filing on July 1, 2023 would be disposed of in 2047 at the current monthly rate of disposal.
 - In Chhattisgarh and Maharashtra, the estimated time taken by SICs for disposing of an appeal or complaint is over four years. In Odisha and Arunachal Pradesh, it is over two years. The assessment shows that 10

Information Commissions will take one year or more to dispose of an appeal/complaint.

- An analysis of penalties imposed by Information Commissions shows that the **Commissions did not impose penalties in 91% of the cases where they could have been imposed.**

About Information Commissions

- Central Information Commission (CIC):**
 - The CIC was established under the provisions of the **Right to Information Act (2005)**, is hence not a constitutional but a statutory body.
 - It consists of a **Chief Information Commissioner and not more than ten Information Commissioners**. They are appointed by the **President** on the recommendation of a committee consisting of the **Prime Minister as Chairperson, the Leader of Opposition in the Lok Sabha and a Union Cabinet Minister** nominated by the Prime Minister.
 - The jurisdiction of the Commission extends over all Central Public Authorities.
 - The Chief Information Commissioner and an Information Commissioner shall hold office for such term as prescribed by the Central Government or until they attain the age of 65 years, whichever is earlier. They are not eligible for reappointment.
 - Power and Functions of CIC:**
 - To receive and inquire into a complaint from any person regarding information requested under RTI, 2005.
 - It can order an inquiry into any matter if there are reasonable grounds (suo-moto power).
 - While inquiring, the Commission has the powers of a civil court in respect of summoning, requiring documents etc.
- State Information Commissions:**
 - It is constituted by the State Governments.
 - It has **one State Chief Information**

Commissioner (SCIC) and not more than 10 State Information Commissioners (SIC) to be appointed by the Governor on the recommendation of the Appointments Committee headed by the Chief Minister.

- Federal issues in context of RTI Amendment Act, 2019
- The appointment procedures, salaries, allowances and other terms of service of the Chief Information Commissioner and the Information Commissioners were made to be completely determined by the Union Government.
- It allows the Central government to control through rules, the terms and conditions of appointment of Commissioners in the States.
- Thus, the amendment empowers the Central government to unilaterally decide the tenure, salary, allowances and other terms of service of Information Commissioners, both at the Centre and the States.

Issues with the Information Commissions

- Government officials are hardly reprimanded as penalty enforcement takes place in only 2.2% of total cases.
- Glaring vacancies, despite orders from the Judiciary to fill it up, paint a sorry picture.
- The body is shrouded in secrecy and non-transparency with nothing placed on record in terms of appointments and selections.

6. Questions in Parliament

Current Context

The Ethics Committee of Lok Sabha will hear 'oral evidence' from a BJP MP on his allegation that a TMC MP had accepted 'bribes' to ask questions in the Parliament.

Procedure for raising the questions in Lok Sabha

Existing rules

- The procedure for raising questions is governed by Rules 32 to 54 of the "**Rules of Procedure and Conduct of Business in Lok Sabha**" and Directions 10 to 18 of the "Directions by the Speaker, Lok Sabha.

- ✓ the official designation of the Minister to whom the question is addressed.
- ✓ the date on which the answer is desired.
- ✓ an order of preference, in case the MP tables more than one notice of questions for the same day.

Procedure to ask a question

- To ask a question, an MP has to first give a notice addressed to the lower house's Secretary-General, intimating their intention to ask a question.
- Usually, the period of notice for a question is not less than 15 days.
- **The notice usually contains:**
 - ✓ the text of the question.

Number of questions a member can ask

- A Member is allowed to give **not more than five notices** of questions, both for oral and written answers, in all, for any day.
- Notices received in excess of five from a Member for a day, are considered for the subsequent day(s) concerning that Minister(s) during the period of that session only.
- Usually, the period of notice of a question is not less than 15 days.

Two ways through which MPs can submit the notices of their questions

- First, through an online 'Member's Portal', where they have to enter their ID and password to get access.
- Second, through the printed forms available in the Parliamentary Notice Office.

Speaker Role

- After submission of the notices, the next stage is when the **Speaker of Lok Sabha examines the notices of the questions** in the light of the laid-out rules.
- It is the Speaker, who decides if a question, or a part thereof, is or isn't admissible.

Conditions for the admissibility of questions

- Some set of rules that govern the admissibility of a question raised by an MP include-
 - ✓ Questions shall not ordinarily contain more than 150 words.
 - ✓ They should not contain arguments, defamatory statements, refer to the character or conduct of any person except in their official or public capacity.

Questions which are not allowed

- ✓ Queries raising larger issues of policy are not allowed, for it is not possible to enunciate policies within the limited compass of an answer to a question.
- ✓ A question is not admissible if its subject matter is pending judgment before any court of law or any other tribunal or body set up under law or is under consideration before a Parliamentary Committee.
- ✓ A query also cannot seek information on matters which may weaken the unity and integrity of the country.

Four different types of questions

- **Starred questions:** A starred question is asked by an MP and answered orally by the Minister-in-charge.
 - ✓ Each MP is allowed to ask one starred question per day.
 - ✓ Starred questions have to be submitted at least 15 days in advance (so that the Minister-in-charge has the time to prepare the answers).
 - ✓ Only 20 questions can be listed for oral answers on a day.
 - ✓ When a question is answered orally, supplementary questions can be asked thereon.
 - ✓ Starred questions are better suited to inquire about the government's views on issues and its policy inclination.
- **Unstarred questions:** An unstarred question receives a written reply from the Ministry. These also need to be submitted at least 15 days in advance.
 - ✓ Only 230 questions can be listed for written answers in a day.
 - ✓ Unlike starred questions, unstarred questions do not permit any follow-up questions.
 - ✓ Unstarred questions are more conducive for getting answers to queries related to data or information.
- **Short-notice questions:** Short-notice questions are ones pertaining to a matter of urgent public importance.
 - ✓ They can be asked with less than 10 days' notice, with reasons for the short-notice.
 - ✓ Like a starred question, they are answered orally, followed by supplementary questions.
- **Questions addressed to private Members:** The question to a private Member is addressed to the MP themselves.
 - ✓ It is asked when the subject matter pertains to any Bill, Resolution or any matter relating

to the Business of the House for which that MP is responsible.

device to practise legislative control over executive actions.

Importance of raising questions in the Parliament

- Asking questions is an inherent and unfettered parliamentary right of an MP.
- The exercise is meant to act as a parliamentary

- It can be used to get information on aspects of administration and government activity, criticise government policies and schemes, throw light on government lapses, and push ministers to take substantive steps for the common good.

7. Reproductive autonomy V/S Rights of the unborn child

Current Context:

A three-judge Bench of the Supreme Court turned down the fervent plea of a 27-year-old married woman for medical termination of her third trimester pregnancy.

About

- Chief Justice Chandrachud said that as much as the court respected the woman's right to reproductive autonomy, it could not be oblivious to the rights of her unborn child.
 - ✓ "We must also think of the rights of the unborn child. Woman's autonomy is important of course. She has a right under Article 21, but equally, we must be conscious of the fact that whatever is done will affect the right of the unborn child," the Chief Justice observed.
- The more-than-26-week pregnant woman had pleaded that she is not physically, psychologically or financially prepared to carry the pregnancy to term.
 - ✓ She is a mother of two, the younger of her children is only a year old, and she is suffering from postpartum depression.
- Unable to reach common ground, Justices Hima Kohli and B.V. Nagarathna had referred the case to the Chief Justice of India to form a three-judge Bench.
- Additional Solicitor General for the Union government, however, said the woman has no absolute right of autonomy to exercise her reproductive rights in a way that would take away the rights of her unborn child.
 - ✓ She referred to the Medical Termination of Pregnancy (Amendment) Act of 2021, which extended the deadline for abortion in "exceptional circumstances" to 24 weeks.
 - ✓ She said these circumstances allowed medical termination only if it was necessary to save the life of the mother or in case of a life-threatening delivery.
 - ✓ "Once there is a viable baby, the relief cannot be one-sided. Unless she wants to keep the child, her right to bodily autonomy or integrity cannot be beyond the Act", claimed the Additional Solicitor General.

Key Details

- Earlier, a Division Bench of two women judges of the Supreme Court were split in their opinions about the decision of a married woman to abort her 26-week pregnancy and the Centre's resolve to save the unborn child.

Reproductive rights of women in India

- The recognition of sexual and reproductive rights of women in the country still remains negligible.

- ✓ Reproductive rights in India are understood only in the context of selective issues like child marriage, female feticide etc.
- According to **UNICEF India and World Bank data**, India counts among the highest number of maternal deaths worldwide.
 - ✓ India witnesses 45,000 maternal deaths every year, coming to an average of one maternal death every 12 minutes.
- Unsafe abortions are the third leading cause of maternal deaths in India.
 - ✓ Half of the pregnancies in India are unintended and about a third result in abortion.
 - ✓ Only 22% of abortions are done through public or private health facilities.
- **The MTP Amendment Act, 2021 lays down certain expanded rights for women as compared to the 1971 legislation:**
 - ✓ Under the Act, a pregnancy may be terminated up to 20 weeks by a married woman in the case of failure of contraceptive method or device. It allows unmarried women to also terminate a pregnancy for this reason.
 - ✓ Opinion of one Registered Medical Practitioner (RMP) for termination of pregnancy up to 20 weeks of gestation and of two RMPs for termination of pregnancy of 20-24 weeks of gestation were mandated.
 - ✓ Opinion of the State-level medical board was made essential for a pregnancy to be terminated after 24 weeks in case of substantial foetal abnormalities.
 - ✓ Increased the upper gestation limit from 20 to 24 weeks for special categories of women, including survivors of rape, victims of incest and other vulnerable women (differently abled women, minors, among others).
 - ✓ **However, certain aspects of the law have raised questions like:**
 - i. If an unwanted pregnancy has proceeded

beyond 20 weeks, women have to approach a medical board and courts to seek permission for termination, which is extremely difficult and cumbersome.

- ii. The law does not accommodate non-medical concerns over the economic costs of raising a child, effects on career decisions, or any other personal considerations.

- **The Supreme Court has been extremely progressive on women's reproductive rights:**
 - ✓ **The Puttaswamy judgment (2018)** specifically recognised the Constitutional rights of women to make reproductive choices, as a part of personal liberty under **Article 21** of the Indian Constitution.

Rights of an unborn child

- **Article 21** provides the right to life only to a person who is existing physically. It is still not clear legally whether the unborn child should be considered as a person or not.
- In the explanation of **Section 6 of the Limitations Act, 1963**, an infant in the womb is considered as minor.
- **The Indian Penal Code in Section 312 to 316[8]** has implied that anyone who will prevent a child being born alive, or for causing the death of a quick unborn child, will be punished depending on the type of case.
- **The Hindu Succession Act, 1956** treats the child in the womb in the same way as a born child for the inheritance of intestate of a dead person.
- **Section 416 of The Code of Criminal Procedure** allows High Courts to postpone or commute sentences of death penalty for women found to be pregnant.
 - ✓ It implicitly recognizes an unborn infant as a normal human being subject to receive the Right to life under the Article 21 of the Indian constitution.

2. SOCIAL ISSUES

1. Global Hunger Index (GHI) 2023

Current Context

India ranks **111 out of a total of 125** countries in the Global Hunger Index (GHI) 2023, with its progress against hunger nearly halted since 2015.

About Global Hunger Index (GHI)

- The Global Hunger Index (GHI) is a tool to comprehensively measuring and track hunger at the global, regional, and national levels.
- The GHI score is based on a formula which **combines four indicators** that together capture the multi-dimensional nature of hunger, including:
 - ✓ Under-nourishment
 - ✓ Child stunting
 - ✓ Child wasting
 - ✓ Child mortality
- The 2023 GHI score for the world is **18.3**, which is considered moderate. However, it is only one point below the world's 2015 GHI score of 19.1.
- The report is prepared and released by Irish NGO **Concern Worldwide** and German NGO **Welthungerlife**.

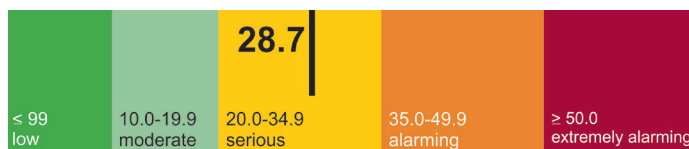
Countries' Performances

- Afghanistan, Haiti and 12 sub-Saharan countries perform worse than India on the GHI.
- South Asia and Africa, South of the Sahara are the world regions with the highest hunger levels, with a GHI score of 27 each, indicating serious hunger.
- West Asia and North Africa is the region with the third-highest hunger level with a score of 11.9 indicating "moderate" hunger level.

- Latin American and the Caribbean is the only region in the world whose GHI scores have worsened between 2015 and 2023.
- East and Southeast Asia, dominated by populous China, has the second-lowest 2023 GHI score of any region in the report. China, for example, is among the top 20 countries that each have a GHI score of less than 5.
- The region with the lowest 2023 GHI score is Europe and Central Asia, whose score of 6.0 is considered "low".

India's performance

- India **slipped four positions** as compared to last year.
- India's ranking is based on a Global Hunger Index score of 28.7 on a 100-point scale where 0 is the best score (no hunger) and 100 is the worst.
 - ✓ This categorises India's severity of hunger as **"serious"**.
- While India made significant strides between 2000 and 2015, with its score improving from 38.4 in 2000 to 35.5 in 2008 and 29.2 in 2015, over the past eight years, the country has advanced on the GHI by only 0.5 points.



- India has the **highest child wasting rate in the world**, at 18.7 per cent, reflecting acute undernutrition.
 - ✓ Wasting is measured based on children's weight relative to their height.
- The rate of **undernourishment in India stood at 16.6 percent and under-five mortality at 3.1 percent**.
- India ranked 107th out of 121 countries in 2022.
- India's neighbouring countries Pakistan (102nd), Bangladesh (81st), Nepal (69th) and Sri Lanka (60th) have fared better than it in the index.

National Family Health Survey's Data

- Child Nutrition indicators show a slight improvement at all-India level as Stunting has declined from 38% to 36%, wasting from 21% to 19% and underweight from 36% to 32% at all India level.
- In all phase-II States/UTs, the situation has improved in respect of child nutrition but the change is not significant as drastic changes in respect of these indicators are unlikely in a short span period.
- The incidence of anaemia in under-5 children (from 58.6 to 67%), women (53.1 to 57%) and men (22.7 to 25%) has worsened in all States of India (20%-40% incidence is considered moderate). Barring Kerala (at 39.4%), all States are in the "severe" category.

Why India Rejected the Report

- The Union government, though, contested India's performance for the third year in a row, citing flawed methodology.
- It said that data recorded on its **Poshan Tracker portal** showed child wasting prevalence of 7.2% among a total of 7.24 crore under-five-year-olds whose data was captured.
- The GHI uses the same data sources for all countries to calculate the respective country scores.
 - ✓ This ensures that all the rates used have been produced using comparable methodologies.
 - ✓ Introducing exceptions to this process for any country or countries would compromise the comparability of the results and the ranking,
- The second objection the MoWCD reiterated this year was the alleged use of a telephone-based opinion poll to calculate undernourishment, one of the indicators used in GHI.
- o The GHI has maintained that it doesn't use the poll, but relies on data from India's Food Balance Sheet to calculate undernourishment.

2. Caste Census and Bihar Caste Survey

Current Context

After the publication of caste survey in Bihar recently, the importance of caste census has shot to prominence.

Socio-economic data highlighted

- Monthly per capita consumption expenditures (MPCE):**
 - ✓ The convergence of class and caste-based deprivation is evident in various socio-economic statistics.
 - ✓ In rural areas, the average monthly per capita consumption expenditures (MPCE) for ST, SC, and OBC households were 65%, 73%, and 84%, respectively, compared to the 'Others' (general category) as per NSS 2011-12.
- ✓ In urban areas, the MPCE for ST, SC, and OBC households in 2011-12 were 68%, 63%, and 70% of the general category's MPCE.

- **Multidimensional Poverty:**

- ✓ **The Oxford Poverty and Human Development Initiative (OPHI)** estimated that in 2015-16, almost 28% of all Indians were multidimensionally poor, with STs at 50.6%, SCs at 33.3%, OBCs at 27.2%, and Others at 15.6%.
- ✓ This means that STs, SCs, and OBCs, which represented about 77.6% of the Indian population in 2005-06, accounted for nearly 84% of the country's poor in 2015-16.

- **Multidimensional Poverty in Muslims:**

- ✓ Among different religious communities, the multidimensional poverty headcount ratio was higher for Muslims at 31% compared to

Hindus (28%), Christians (16%), and other religious groups (15.7%).

- ✓ **According to the Sachar Committee report in 2006**, 31% of Muslims were estimated to be 'Below Poverty Line,' while the combined poverty headcount ratio for SCs and STs was 35%, Hindu OBCs were at 21%, and other Hindus (general category) were at 8.7%.

- **Education and Employment:**

- ✓ In employment, over 30% of the general category has regular jobs, while STs, SCs, and OBCs have higher informal sector representation.
- ✓ The Central government employs over 18.78

Education & Employment Indicators by Social Group

The table shows the Percentage distribution of persons by general education level, workers in usual status by broad status in employment, and employees in posts and services of the Central government

	ST	SC	OBC	GEN Source	Data
Percentage distribution of persons of age 7 years and above by general education level					
Literacy rate	69.6	72.4	76.9	85.9	Household Social Consumption on Education in India, NSS 75th Round (July 2017 June 2018), NSO, MOSPI, GoI
Secondary Education	9.9	11.5	13.5	15.8	
Higher Secondary Education	6	7.7	9.4	12.8	
Graduate	3.3	4.1	5.9	12.3	
Post Graduate and above	0.7	0.9	1.2	3.4	
Percentage distribution of workers in usual status (ps+ss) by broad status in employment					
Regular wage/Salaried	12.3	19.8	20.1	30.6	Periodic Labour Force Survey 2021-22, NSSO, MOSPI, GoI
Casual Labour	28.9	38.2	20	11.2	
Self-employed	58.8	42.1	59.9	58.2	
Percentage distribution of employees in posts and services of the Central Government					
Group A	5.9	13.0	16.6	64.6	Annual Report 2021-22, Ministry of Personnel, Public Grievances and Pensions, GoI
Group B	7.1	16.8	16.7	59.5	
Group C	7.8	17.7	22.8	51.7	
Total	7.7	17.5	22.1	52.7	

lakh people, with 52.7% in the general category. In the most skilled cohort (Group A), over 64% belong to the general category.

- ✓ These disparities persist even three decades after the **Mandal Commission's** implementation, fueling the demand for a nationwide caste census.

What is the Caste Census/Survey?

- It is a government population survey that records people's caste or social group to study disparities, government policy impact, and address caste-based discrimination.

Background

- The first comprehensive caste census was conducted in 1871 under the leadership of Lord Risley.
- After India gained independence in 1947, the government continued the practice of collecting caste data during censuses, primarily for affirmative action and planning purposes.
- **The last caste census was conducted in 1931**, and data was made publicly available by the British Government.
 - ✓ This caste census became the basis for the implementation of Mandal Commission Reports and subsequent reservation policies by the government for Other Backward Classes.

Socio-economic Caste Census 2011

The 2011 caste census was the first caste-based census since the 1931 census of India. But caste-based data were not revealed for the public.

Government used census 2011 for:

1. Pradhan Mantri Awaas Yojana - Grameen (PMAY-G)
2. Sumit Bose Committee in its report favoured using the same for rural development schemes.
3. The National Social Assistance Programme (to pay pension to rural poor).
4. The National Rural Livelihood Mission.
5. Pradhan Mantri Jan Dhan Yojana (PMJDY).

- **Recent Developments:** In the 2011 census, there were discussions about conducting a separate caste census, which ultimately did not occur.

- ✓ Instead, the government collected socio-economic data through the **Socio-Economic and Caste Census (SECC) in 2011**.

- Several states in India, including Rajasthan, Odisha, Maharashtra, Assam, and Karnataka, are planning or conducting caste surveys.

Recently, the Bihar government released the results of its survey of castes in the state

- **Key findings of the Bihar caste survey:**
 - ✓ **The share of Extremely Backward Classes (EBCs) and Other Backward Classes (OBCs)** cumulatively at more than 63%. The “unreserved” category of so-called “forward” castes is about 15.5%.
 - ✓ **Unreserved category or the upper castes:** They comprise 15.52% of the total population.
 - ✓ **Other Backward Classes (OBCs):** They number 3,54,63,936 (27.12%).
 - ✓ **Extremely Backward Classes (EBCs):** The biggest social group comprising 4,70,80,514 individuals, or 36.01% of the state's population.
 - ✓ **Scheduled Castes or the Dalits,** account for 2,56,89,820 (19.65%).
 - ✓ **Scheduled Tribes (STs)** number only 21,99,361 (1.68%), the bulk of the tribal population having become part of Jharkhand after the bifurcation of the state in 2000.

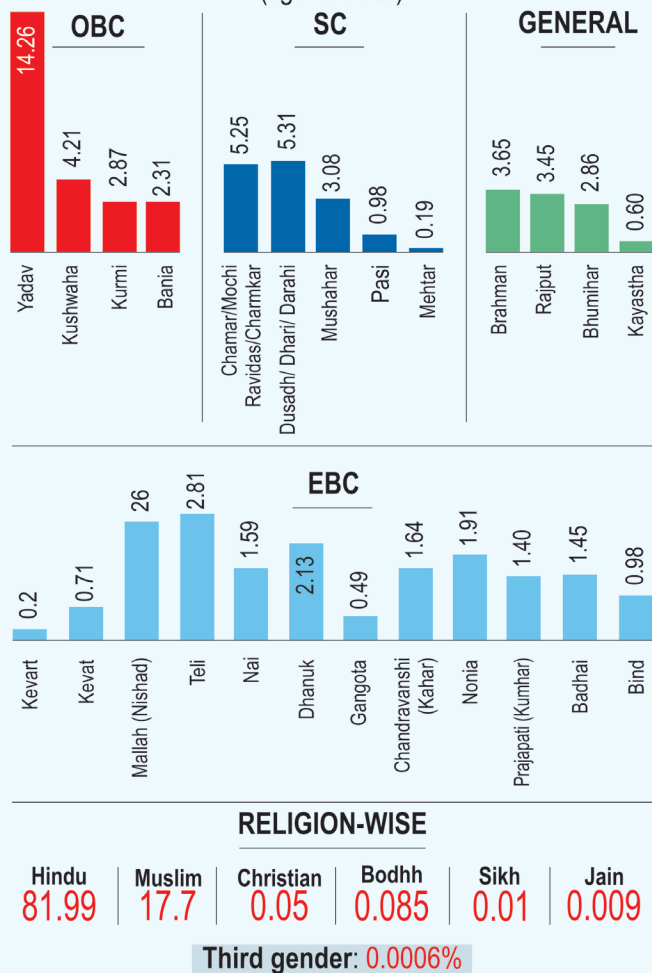
Constitutional provisions related to Census

- **Seventh Schedule:** Entry 69 of the Union List contains the Centre's exclusive power to conduct a census.

TELLING NUMBERS

How major groups stack up in Bihar

(figures in %)



provides crucial data on the caste composition of population, aiding policymakers in designing targeted policies for social and economic development.

- **Increasing OBC Quota:** It could lead to demands for expanding the OBC quota beyond the existing 27% and potentially creating sub-quotas for EBCs.
- ✓ **The Justice Rohini Commission,** which has been studying OBC sub-categorization, submitted its report, but the recommendations are yet to be disclosed.
- **Redrawing Reservation Ceiling:** It may prompt a reconsideration of the 50% reservation ceiling imposed by the Supreme Court, as the data could justify adjustments based on the population of different caste groups.
- **Socio-Economic Development:** It helps in understanding the socio-economic status of different caste communities, guiding efforts to reduce disparities and promote inclusivity.
- **Constitutional Obligations:** It aligns with the Directive Principles of State Policy in the Constitution, facilitating the pursuit of socio-economic objectives outlined in the Constitution.
- **Realizing Sarvodaya:** The Caste Census can aid in developing targeted strategies to combat widespread inequality, promote equity, and advance social justice in the long-term.

Way forward

- The Bihar caste survey highlights the need for a nationwide caste census in India to inform policies, expand OBC quotas, and reconsider reservation limits.
- A comprehensive caste census is crucial for promoting inclusivity and addressing historical disparities.

The significance of the Caste Survey

- **Informing Policy Decisions:** The survey

3. Manual Scavenging

Current Context

The Supreme Court recently held that the Union and States are duty-bound to the pledge to completely eradicate manual scavenging through the stringent implementation of the **Prohibition of Employment as Manual Scavengers and their Rehabilitation Act, 2013**.

About

- The Court directed the Centre and state governments to pay Rs 30 lakh as a compensation to next of kin of those who die while cleaning sewers.
- The Court also ordered enhancement of compensation to be paid in case of permanent disabled while manual scavenging to 20 lakhs and not less than 10 lakhs for other forms of disablement.
- The apex court issued set of 14 directions to ensure effective implementation of the Prohibition of Employment as Manual Scavengers and their Rehabilitation Act, 2013.

- ✓ Prohibition of traffic in human beings and forced labour (**Article 23**)

Deaths from Manual Scavenging

- According to the **Union Social Justice and Empowerment Ministry**, 339 people lost their lives while cleaning sewers and septic tanks in India between 2018 and 2023.
- As per the data presented before the **Parliament by the government**, nine such deaths were recorded in 2023, 66 in 2022, 58 in 2021, 22 in 2020, 117 in 2019, and 67 deaths in 2018.

Dr. Balram Singh vs. Union of India

- The Supreme Court issued directions in the case Dr. Balram Singh vs. Union of India for effectively implementing the Prohibition of Employment as Manual Scavengers and their Rehabilitation Act, 2013.
- It is a public interest litigation (PIL) case filed in the Supreme Court of India in 2020. The PIL seeks to highlight the plight of manual scavengers in India and to demand that the government take effective measures to eradicate manual scavenging and rehabilitate manual scavengers.

Manual Scavenging

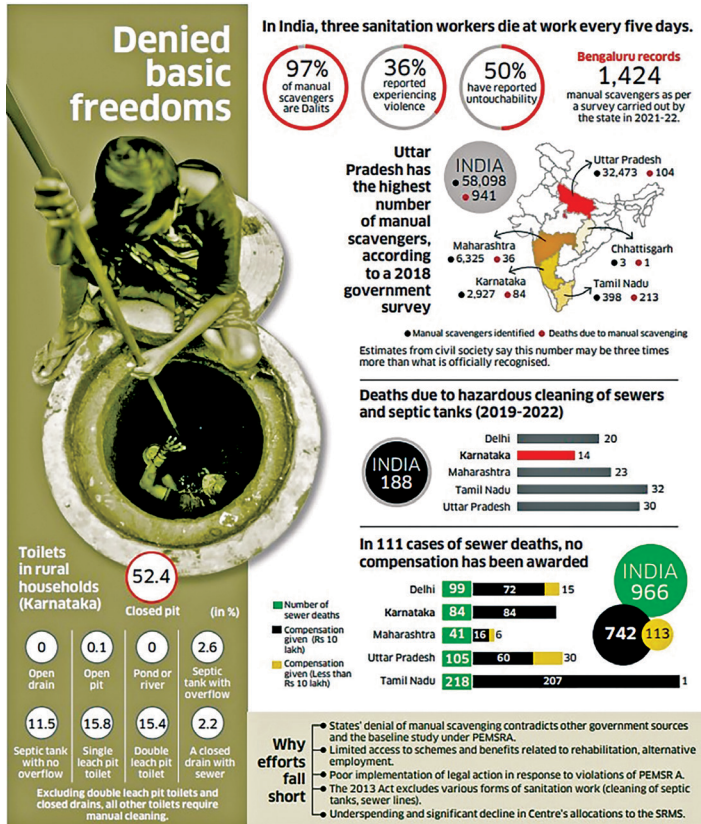
- Manual scavenging is defined as “the removal of human excrement from public streets and dry latrines, cleaning septic tanks, gutters and sewers”.
- Over three-quarters of India's 58,098 manual scavengers in 2021 were women.

Constitutional Provisions for the Safeguard of Manual Scavenging

- **Manual scavengers have several constitution safeguards and Rights such as:**
 - ✓ Equality before the law and equal protection of the laws (**Article 14**)
 - ✓ Abolition of untouchability and prohibition of its practice in any form (**Article 17**)
 - ✓ Protection of life and personal liberty (**Article 21**)

Prohibition of Employment as Manual Scavengers and their Rehabilitation Act, 2013

- It was passed in 2013 to provide for the prohibition of employment as manual scavengers and the rehabilitation of manual scavengers and their families.
- The broad objectives of the Act are to eliminate unsanitary latrines, prohibit the employment of



manual scavengers and the hazardous manual cleaning of sewer and septic tanks, and maintain a survey of manual scavengers and their rehabilitation.

Provisions

- No person or agency can engage or employ any person for manual scavenging. (Note: However, cleaning excreta with protective gear is not considered manual scavenging)
- Any person or agency who engages any person in manual scavenging in violation of the provisions of the MS Act, 2013 is punishable with imprisonment up to 2 years, a fine up to Rs. one lakh, or both.
- It outlines the provisions for the rehabilitation of sanitation workers and their families.
- After a survey of manual scavengers, the local administration must give them a photo identity card with details of their family members and monetary compensation.

✓ Their children must get a government scholarship, and they must get a residential plot and money to construct on it.

- It is also illegal for a sewer or septic tank to be cleaned by a person without the employer providing protective gear and cleaning devices and observing safety precautions.
- Under the Act, every local authority must make sure that there are no insanitary latrines in its jurisdiction and no manual scavengers are employed.
- ✓ A local authority is a municipality or a panchayat, which is responsible for sanitation in its jurisdiction.
- Local authorities must construct community sanitary latrines (which don't require the manual removal of human excreta) and make arrangements for their hygienic upkeep at all times.
- ✓ They must also ensure the use of technological appliances for cleaning sewers, septic tanks and other such spaces in their jurisdictions.

Guidelines for the states ensure the Act is implemented

- Every state must have a monitoring committee consisting of the chief minister, the minister representing Scheduled Castes and Scheduled Tribes, and the director-general of police, among other officials.
- Every state government or union territory administration must send periodic reports to the Central government about its progress on implementing this Act.
- The government has to ensure that local authorities and district magistrates implement the law. For this, a vigilance committee has to be set up at the sub-division, district, state, and central levels.

Government Initiatives

- National Action for Mechanized Sanitation

Ecosystem (NAMASTE): The scheme has been launched by the Government of India in 2022 with the aim to eradicate manual scavenging, promote mechanization of sanitation operations, and ensure the safety and dignity of sanitation workers.

- **National Safai Karamcharis Finance and Development Corporation (NSKFDC)** provides financial assistance at concessional rates for their upliftment.
- **Swachh Bharat Mission:** Under the Swachh Bharat Mission, since October 2, 2014, more than 10.99 crore sanitary toilets have been constructed in rural areas and over 62.65 lakh in urban areas, and insanitary toilets have been converted into sanitary toilets.
 - ✓ This work made a huge contribution towards ending the practice of manual scavenging.

- **Swachhata Abhiyaan:** The Ministry of Social Justice and Empowerment has launched a mobile app “Swachhata Abhiyaan” to capture the data of insanitary latrines still existing and manual scavengers associated with their cleaning.

- **Safaimitra Suraksha Challenge:** Under the campaign, sewers and septic tanks in 243 cities will be mechanized and a helpline created to register complaints if manual scavenging is reported.

Conclusion

- The eradication of manual scavenging is a complex challenge, but it is one that India must overcome.
- The Supreme Court's order is a step in the right direction, and it is hoped that the government will take all necessary steps to ensure its full implementation.

4. Mera Yuva Bharat

Current Context

Recently, the Union Cabinet approved establishment of an autonomous body ‘Mera Yuva Bharat’ (MY Bharat) to serve as an overarching enabling mechanism powered by technology for youth and youth led development.

About

- Mera Yuva Bharat (MY Bharat), an autonomous body, will benefit the youth in the age group of 15-29 years, in line with the definition of ‘Youth’ in the **National Youth Policy (2014)**.
 - ✓ In case of programme components specifically meant for the adolescents, the beneficiaries will be in the age group of 10-19 years.
- It will be launched on 31st October, 2023 on **National Unity Day**.

Impact

- **Ensuring accessibility by creating a phygital ecosystem:** The Mera Yuva Bharat platform will create such an ecosystem and empower young individuals to become catalysts for community transformation.
- **They would act as “Yuva Setu,” linking the government with its citizens.**

Recently, a web portal of the Department of Youth Affairs hosted a nation-wide program called “Meri Maati Mera Desh” in which 50 million young people

participated and helped to plant 23 million saplings to create Amrit Vatikas pan-India.

Cabinet Decisions: 11 October 2023

MY YUVA BHARAT

Impact:

- Leadership Development in the Youth
- Better alignment between youth aspirations and community needs
- Enhanced efficiency through Convergence of existing programmes
- Act as a one stop shop for young people and Ministries
- Create a centralized youth data base
- Ensuring accessibility by creating a physical ecosystem

Few examples of Government schemes for the Youth

- Rashtriya Yuva Sashaktikaran Karyakram (RYSK)
- Pradhan Mantri Kaushal Vikas Yojana
- YUVA: Prime Minister's Scheme For Mentoring Young Authors
- National Youth Policy-2014
- National Skill Development Corporation
- Scheme for Promotion of Menstrual Hygiene among Adolescent Girls
- Cultural Heritage Youth Leadership Scheme

- **Vision 2047** requires a framework that can bring rural youth, urban youth and rural youth under a single platform.

✓ The existing schemes of the Department were designed and launched at different points in time over the last 50 years with the then prevailing understanding of needs of rural youth in our society.

- The dynamic shifts in the urban-rural landscape have necessitated a re-evaluation of these approaches.

✓ It is imperative to create a framework that unites rural, urban, and rural youth on a common platform.

✓ There is a need to establish a new contemporary technology led platform for the Government to engage with the present-day youth.

- In today's fast-paced world, characterized by rapid communication, the prevalence of social media, the emergence of new digital tools and cutting-edge technologies, a technology driven platform can connect youth to programs that can help them improve their capabilities and also connect them with community activities.

✓ Mera Yuva Bharat would help to create and sustain such a phygital ecosystem that connects millions of young people in a network seamlessly.

- Mera Yuva Bharat supported by a technology platform would help to increase the youth outreach efforts of the Department of Youth Affairs.

Youth Empowerment as the Way Forward

- India's youth are to play a critical role in defining the future of the nation, especially at the pivotal juncture of India's 75 years of independence, as we embark on a paradigm shifting development journey over the next 25 years of building an **Amrit Bharat by 2047**.

5. NHRC issues advisory for transpersons

Current Context

The National Human Rights Commission (NHRC) recently issued an advisory to the Centre, State governments and Union Territory Administrations, calling upon them to ensure the welfare of transgender persons.

About

- In the advisory, the Commission has observed that one of the primary concerns of transpersons in the country is that despite legal reforms, they continue to grapple with discrimination, leading to employment disparities, limited access to healthcare, and exclusion from social circles.
- The Commission has asked for the implementation of its recommendations in letter and spirit, and has sought Action Reports within two months.
- The Advisory has focused on six key areas for action by the Centre, States and UT Administrations to ensure transgender persons get access to education, healthcare, employment, inclusivity, welfare, and grievance redressal.

Recommendations

- Single trans child of a deceased government employee or pensioner, may be treated as an unmarried daughter for the family pension and other benefits;
- Transgender persons should be allowed to inherit ancestral agricultural land;
- Multi-purpose identity cards may be provided to the Transgenders to help the access government schemes and other benefits;
- The Insurance Companies may be advised to consider and accept the **Transgender Certificate** issued by the appropriate authority for document verification purposes;
- The concerned Ministry should ensure the timely release of the funds allocated to **Garima Greh**;
- Setting up Transgender Welfare Board under the Section 10(1) of the **Transgender Persons (Protection of Rights) Rules, 2020**;
- Reaching out to the family member of Transgenders through Anganwadi workers to sensitize them about trans-children public to be sensitized through educational campaigns;
- Establishing a **Transgender Protection Cell** under the Director General of Police or his/ her

nominee in the State to monitor cases of offences against Transgender Persons;

Study on human rights of **transgenders** in India

99% of transgenders have suffered social rejections on more than one occasions.

52% transgenders were harassed by their classmates and 15% by even teachers

57% transgenders have a desire to get a sex-realignment surgery, but they cannot afford it

96% of transgender people are forced to take low paying work or undignified work as their livelihood such as "badhai, begging and sex work



Source: NHRC. Data as on 2017

- Adequate steps may be taken to deal with the complaint of sexual harassment of Transgender persons;
- A policy should be formulated to address the issues of violence, discrimination and harassment at educational institutions by protecting gender non-conforming students from bullying, harassment or other forms of violence;
- An **Anti-Discrimination Cell** must be set up at the district level for Transgender persons, and ensure the setting up of a monitoring committee at educational institutions to address the issues of prejudices, discrimination, sexual abuse and other violence against them;
- Transgender students should not be discriminated against in higher studies, and suitable provision for providing financial assistance to them for pursuing

degree/diploma/PG courses may be ensured;

- Provision of scholarship and free education for Transgender students also be formulated;
- Medical Boards at the district level should be set up to assist Transgender person in consultation, besides provisions in every district civil hospital for consultation, treatment, counselling for sex reassignment surgery;
- A provision for a suitable amount to be made for those who want to opt for a sex change or free sex reassignment surgery in government hospitals;
- Inclusion of 'Third Gender' as an identity category of the Transgender community seeking jobs in various civil services and to enable them to apply and appear in entrance examinations;
- Besides, wide publicity is to be given to the **National Career Service Portal** amongst the Transgender community;
- Sensitization programmes for other employees on sexual orientation and gender identity may be organized regularly;
- A Grievance Redressal Cell having at least one Transgender Person be set up in the organizations wherever they are employed to deal with their issues;
- Forms which require candidates to indicate their sex must provide 'Third Gender' as a category in the options;
- All public places should have separate washrooms for Transgender Persons;
- Provisions to facilitate an exclusive platform for transgender persons to showcase their talent in cultural events and also to consider Old Age home facilities for the transgender community

must be considered;

- The Ministry of Corporate Affairs may consider incorporating welfare activities of **Transgender Persons explicitly in Schedule VII of the Companies Act, 2013**, which provides the list of activities that can be included for making expenditures for **Corporate Social Responsibilities (CSR)** activities.

India's efforts for Transgenders

- **Transgender Persons (Protection of Rights) Act 2019** as an overarching legislation.
- **National Council for Transgender Persons** constituted as per the 2019 Act to monitor, evaluate and advice the Government on relevant policy responses.
- **Transgender Persons (Protection of Rights) Rules, 2020** in pursuance of the 2019 Act to recognise the identity of transgenders and prohibit discrimination.
- **National Portal for Transgender Persons** to help transgenders in digitally applying for a certificate and identity card.
- **Garima Greh Shelter-homes by MoS J&E** to rehabilitate victims from the community.
- **Ministry of Home Affairs had sent an advisory** to Heads of Prisons in the States/UTs to ensure privacy, dignity of the third gender inmates.
- **Election Commission issued directions (2009)** to amend the format of the registration forms to include an option of "others"
- **The Supreme Court in National Legal Services Authority Vs. Union of India (2014)** recognized them as the "Third Gender".

6. Parliamentary Standing Committee on Education

Current Context

The Parliament Standing Committee on Education tabled a report during the Special Session of Parliament on the "**Implementation of the National Education Policy (NEP), 2020 in Higher Education.**"

About

- The report noted that of the 1,043 universities functioning in the country, 70% are under the State Act and that 94% of students are in State or private institutions with just 6% of students in Central higher educational institutions, stressing the importance of States in providing higher education.
- The Committee appreciated the manner in which the NEP was implemented in Jammu and Kashmir, making the UT among the first in the country to implement NEP from the academic session 2022 in all its higher educational institutions.

Issues highlighted

- **The panel tried to discuss issues such as:**
 - i. The rigid separation of disciplines,
 - ii. Limited access to higher education in socio-economically disadvantaged areas,
 - iii. Lack of higher education institutes (HEIs) that teach in local languages,
 - iv. Limited number of faculty,
 - v. Lack of institutional autonomy,
 - vi. Lesser emphasis on research,
 - vii. Ineffective regulatory system,
 - viii. Low standards of undergraduate education.
- Indian institutions were likely to face several issues in implementing the **Multiple Entry and Multiple Exit (MEME) system**.
 - ✓ While the MEME looked like a flexible system, if institutions allow it, it would be very difficult for them to predict how many students would exit and how many would join midway.
 - ✓ Since institutions would not know the in- and out-traffic, it will certainly disturb the pupil-teacher ratio.

Recommendations

- The panel said that by 2030, every district in the country should have at least one multidisciplinary HEI.
- The **Gross Enrolment Ratio** in higher education,

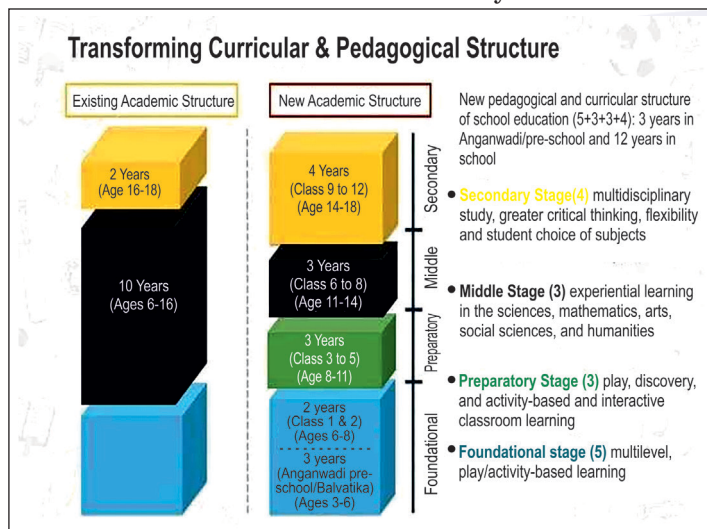
including vocational education, should be increased from 26.3% in 2018 to 50% by 2035.

- **The panel asked the Union Government and the State Governments to take actions such as:**
 - i. Earmarking suitable funds for the education of Socially and Economically Disadvantaged Groups (SEDGs),
 - ii. Setting clear targets for higher Gross Enrolment Ratio for SEDGs,
 - iii. Enhancing gender balance in admissions to HEIs,
 - iv. Providing more financial assistance and scholarships to SEDGs in both public and private HEIs,
 - v. Making admission processes and curriculum more inclusive,
 - vi. Increasing employability potential of higher education programmes,
 - vii. Developing more degree courses taught in regional languages and bilingually.
- It also recommended specific infrastructural steps to help physically challenged students and a strict enforcement of all no-discrimination and anti-harassment rules.
- The Committee suggested improving the effectiveness and impact of the **Higher Education Financing Agency (HEFA)** in funding HEIs.
 - ✓ It asked the HEFA to diversify its funding sources beyond government allocations and explore partnerships with private sector organisations, philanthropic foundations, and international financial institutions.
 - ✓ It recommended reviewing and adjusting the interest rates on loans provided by HEFA “to make them more competitive and affordable” for HEIs.

National Education Policy: Key Highlights

- The new National Education Policy (NEP), 2020 aims to make “India a global knowledge superpower”. The two earlier education policies were brought in 1968 and 1986.
- **It tries to ensure:**

- ✓ Universal Access at All Levels of schooling from pre-primary school to Grade 12.
- ✓ Quality early childhood care and education for all children between 3-6 years.



- It discards any hard separations between arts and sciences, between curricular and extra-curricular activities, between vocational and academic streams.
- It envisages setting up of a new **National Assessment Centre, PARAKH** (Performance Assessment, Review, and Analysis of Knowledge for Holistic Development).

Initiatives complementary to NEP 2020

1. **PM-SHRI scheme** aims to provide high-quality education in an equitable, inclusive, and joyful school environment.
2. **NIPUN Bharat Mission** tries to create an enabling environment to ensure the universal acquisition of foundational literacy and numeracy.
3. **PM e-VIDYA** is aimed to promote online education and digital learning by providing various e-learning platforms like DIKSHA.
4. **National Curriculum Framework for Foundational Stage and Jadui Pitara** for play-based learning teaching material tailored for children (3 to 8 years).

Learning plan

A look at the key features of the new education policy:



R.V.S. PRASAD

- Public spending on education by States, Centre to be raised to 6% of GDP
- Ministry of Human Resource Development to be renamed Ministry of Education
- Separate technology unit to develop digital education resources



SCHOOL EDUCATION

- Universalisation from age 3 to Class 10 by 2030
- Mission to ensure literacy and numeracy skills by 2025
- Mother tongue as medium of instruction till Class 5 wherever possible
- New curriculum to include 21st century skills like coding and vocational integration from Class 6
- Board exams to be easier, redesigned



HIGHER EDUCATION

- New umbrella regulator for all higher education except medical, legal courses
- Flexible, holistic, multi-disciplinary UG degrees of 3-4 years' duration
- 1 to 2 year PG programmes, no M.Phil
- College affiliation system to be phased out in 15 years

5. **NISHTHA** is a capacity-building program for teachers and school principals in India.
6. **NDEAR** is an architectural blueprint, that lays down a set of guiding principles and building blocks to enable the creation of digital technology-based applications pertaining to education.
7. **Academic Frameworks** like **Academic Banks of Credit**, **National Credit Framework (NCrF)** and **National Higher Education Qualification Framework (NHEQF)** to facilitate credit transfer and academic flexibility.

About Parliamentary Standing Committees

- A Parliamentary Committee is a panel of MPs appointed or elected by the House or nominated by the Presiding Officer (Speaker/Chairman).
- The Committee works under the direction of the Presiding Officer and it presents its report to the House.
- **They draw their authority from:**
 - ✓ **Article 105:** Privileges of MPs.
 - ✓ **Article 118:** Parliamentary authority to regulate its procedure and conduct of business.
- **Broadly, there are two types of Parliamentary Committees:**
 - i. Standing Committees
 - ii. Ad Hoc Committees.
- The Standing Committees are constituted **periodically (permanent)** and work on a continuous basis.

- ✓ They can be further classified into six categories of which, the Parliament Standing Committee

on Education falls under the category of Departmental Standing Committees.

7. Suicide Prevention and Umeed Guidelines

Current Context

Recently, the Union Ministry of Education released the draft guidelines titled **UMMEED** (Understand, Motivate, Manage, Empathise, Empower, Develop) for schools to prevent suicide among students.

Key aspects of the guidelines

- It prescribed in its '**Plan of Action**' the setting up of wellness teams, orientation of teachers and family members, and immediate response to students exhibiting warning signs.
- The guidelines aim to serve as directions to schools for enhancing sensitivity, understanding, and providing support in case of reported self-harm.
- A **school wellness team (SWT)** may be formed under the leadership of the school principal, where each member is oriented in handling crisis situations.
 - ✓ When a student displaying warning signs has been identified by any stakeholder, they need to be reported to the SWT, which is supposed to take immediate action.
- The guidelines recommend an orientation a year for teachers and family members, to help build awareness around student suicides. These orientations will be conducted by the schools for the capacity-building of various stakeholders.

India's strategy to prevent suicides: Schemes and Steps

- Mental Healthcare Act, 2017: Mental Healthcare Services for the mentally fatigued.
- KIRAN: 24/7 toll-free helpline by the Ministry of Social Justice and Empowerment to provide support to people troubled by anxiety, stress, depression, suicidal thoughts etc.
- Manodarpan Initiative: Psychosocial support to students, family members and teachers by the Ministry of Education under Atmanirbhar Bharat Abhiyan.
- National Suicide Prevention Strategy: Launched by the Ministry of Health and Family Welfare to ensure multi-sectoral collaborations to achieve reduction in suicide

mortality by 10% by 2030.

- Suicide Prevention Helpline Directory: A collection of working helplines in India.

- Stressing the need for immediate response to a student exhibiting warning sign, or found attempting self-harm, the guidelines list the actions that may be taken by an individual at the school, or the member of the wellness team on coming across such a case.

Prevalence of Student Suicides: Relevant Data

- Over 13,000 students died in 2021 in India at the rate of more than 35 every day, a rise of 4.5% from the 12,526 deaths in 2020.
 - ✓ 864 out of 10,732 suicides being due to "failure in examination" according to the latest data as per NCRB's ADSI report 2021.
- Since 1995, the country lost the highest number of students to suicides in 2021.
 - ✓ The death by suicide of students has increased by 32.15% since 2017.
- Maharashtra had the highest number of student suicides in 2021 with 1,834, followed by Madhya Pradesh and Tamil Nadu.
- The report also showed the percentage of women student suicide was at a five-year low of 43.49%, while men student suicides made up 56.51% of the total student suicides.
 - ✓ However, in 2017, 4,711 women students died by suicide, while in 2021 such deaths increased to 5,693.
- As per the Ministry of Education, 122 students from IITs, NITs, central universities and other central institutions died by suicide over 2014-21.
 - ✓ 68 of 122 belonged to the Scheduled Castes (SC), Scheduled Tribes (ST) or Other Backward Classes (OBC).

Vulnerabilities that may push students to suicides

- Exam related stresses where anxiety of results makes them mentally fragile.
- Family pressure creates a performance burden on students, inciting them to take drastic steps in case of failures.
- Institutional forms of harassment like ragging, caste-based discrimination, bullying due to sexuality etc. may push students to suicides.
- Inability to deal with rigorous courses, harsh pedagogical curricula etc. may also contribute to the same.
- Many students in educational hubs live in isolation far away from their homes and families, making it difficult to deal with an unfamiliar and competitive environment.
- Cyber bullying and online harassment are menaces that contribute to student suicides.
- Substance abuse consequentially creates mental health problems, financial difficulties and emotional stress, all of which can be overwhelming for students.
- Adolescent emotional turbulence marked by relationship problems, family conflicts, and friendship issues can also contribute to student suicides.
- Many students in educational hubs are reluctant to reach out for help when they are struggling due to fear of stigma borne out of lack of awareness.

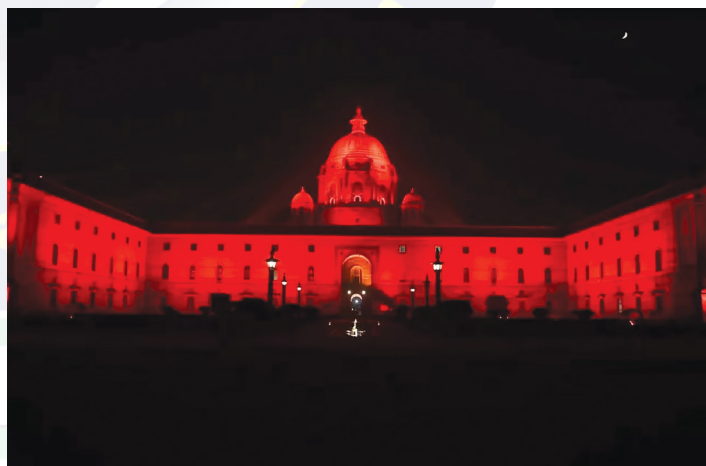
8. International Dyslexia Awareness Month

Current Context

The entire month of October was celebrated as dyslexia awareness month, with the North Block and South Block of Rashtrapati Bhavan, as well as India Gate and the Indian Parliament in Delhi being lit up in red to mark the occasion on 29th of this month.

About

- Every year International Dyslexia Awareness Month is observed in October.
- The theme for this year was 'Go Red.'
- UNESCO MGIEP and its partner ChangeInkk Foundation had sought for the government's support in the '**Go Red**' campaign post in which many important buildings and monuments throughout Delhi displayed red lighting on October 29th evening.
- The 'Go Red' campaign aims at removing the stigma associated with dyslexia, eradicating discrimination, and increasing public knowledge around the subject as well as the many strengths of dyslexic thinking.



About Dyslexia

- Dyslexia is a learning disorder that involves difficulty reading due to problems identifying

speech sounds and learning how they relate to letters and words (decoding).

5 Myths and Facts About Dyslexia

Myth:

"Dyslexia is something children will outgrow."



Fact:

Children with dyslexia continue to face challenges as they grow

Myth:

"Dyslexia is just a problem of visual perception."



Fact:

Studies show that dyslexics have difficulty at the phoneme level.

Myth:

"Dyslexia affects more boys than girls."



Fact:

It affects girls and boys equally. Boys are more likely to be referred by schools for diagnosis.

Myth:

"Dyslexia only affects people who speak English."



Fact:

Dyslexia occurs in every language, even the ones that don't use an alphabet script

Myth:

"A person with Dyslexia can't be a good reader."



Fact:

With intense systematic instruction, a person with dyslexia can become a good strong reader.

- Also called a reading disability, dyslexia is a result of individual differences in areas of the brain that process language.
- **World Dyslexia Day is observed on October 8th** each year.

- ✓ It raises awareness about these issues and what can be done to manage such a disorder.
- ✓ This day aims to promote inclusivity, access to education, and the implementation of effective strategies to support individuals with dyslexia in their learning endeavors.

What happens in Dyslexia?

- Persons with Dyslexia are often unable to read quickly and write without committing errors.
- Persons with Dyslexia might struggle with

reading, writing, vocabulary, and tasks that require hand-eye coordination.

- The main problem in dyslexia is trouble recognizing phonemes.
- So, it's a struggle to make the connection between the sound and the letter symbol for that sound, and to blend sounds into words.

Prevalence

- **The United Kingdom's National Health Service** defines dyslexia as a common learning difficulty – affecting about one in every 5 people globally that mainly causes problems with reading, writing and spelling.
- According to statistics, only 1 in 20 gets identified, and their chances of dropping out of school by the eighth grade are increased by 35 per cent.
- It is a life-long difficulty but does not affect a person's intelligence.
- With proper support to improve reading and writing skills, people with dyslexia can be successful at school and work.

3. INTERNATIONAL RELATIONS

1. Maldives' election and India's strategic interests

Current Context

Maldives' new President-elect has expressed desire to end the presence of Indian troops in the islands as India's future of engaging in the region hangs in a precarious position.

About

- The second round of elections came in favour of the challenger candidate Dr. Mohamed Muizzu, who represented the PNC-PPM coalition, and defeated President Ibu Solih of the MDP with a convincing 8% lead.
- Solih's government had been seen as pro-India, as he openly projected an "India First Policy", signed many agreements with India including a major UTP-Uthuru Thilafalhu Coastguard harbour project, that was seen as a cover for more permanent Indian military presence in the Maldives.
- The Opposition led by Dr. Muizzu has been adamant on retaining Maldives' sovereignty and autonomy and has promoted a policy of "India Out".
 - ✓ Erstwhile ties to the opposition also date back to President Yameen's similar campaign on the pretext of his preference to China.
- As a result, the election was seen as a tussle between India First vs India Out campaigns, and as an extension, an India vs China contest.

Importance of Maldives to India

- India's keen interest in the Maldives can be attributed to its strategic geographical location, as it serves as a crucial crossroads for vital maritime routes.
 - ✓ Ensuring maritime security and safeguarding the free movement of vessels through these waters is of utmost importance to India.
- India's relationship with the Maldives faced challenges during Yameen's tenure, but witnessed a significant improvement under President Solih.
 - ✓ The 2020 "India-out" campaign of Yameen stated that the 2023 elections aimed to reduce India's influence in the Maldives.
 - ✓ Under President Solih's leadership, the "India First Policy of Maldives" was upheld.
- Under President Solih, India was invited to start many infrastructure projects including the \$500mn Greater Male connectivity project funded by grants and concessionary loans from India.
 - ✓ This significant initiative is supported by a grant of USD 100 million and a substantial Line of Credit (LOC) amounting to USD 400 million from India.
 - ✓ It surpasses the scale of the Sinamale Bridge Connectivity Project, which received assistance from China.
- India's High Impact Community Development Project (HICDP) in the Maldives, is aimed at fostering socio-economic development in local communities, empowering youth, and preserving culture and heritage.
- For India, which is engaged in a tense border dispute with China, keeping Chinese influence out of its back yard in the Indian Ocean is seen as highly important and under the current Solih government they have invested more than \$2bn in infrastructure,

as well as increasing training and security cooperation, in an apparent bid to deepen influence.

- ✓ Earlier this year, India's foreign minister, Subrahmanyam Jaishankar, visited the Maldives to give them two sea ambulances and sign several development agreements, while emphasising that India was "always willing" to help the Maldives.
- ✓ They also utilised soft cultural power, opening a highly active Indian cultural centre in Mal.
- Though it is a widely scattered archipelago with a population of just over 500,000, the Maldives holds crucial strategic importance for India and China.
 - ✓ It is on the pathway of essential east-west cargo shipping lines, including China's oil supplies from the Gulf.
 - ✓ It is also seen as a gateway to larger geopolitical influence and control over the Indian Ocean, particularly for China, which is growing increasingly assertive in the region.
- **Maldives is a key element in India's IOR strategy that includes strengthening its "Diamond Necklace" to counter China's "String of Pearls" through:**
 - ✓ Placing naval and air-force personnel, upgrading military infrastructure
 - ✓ Human assistance and Disaster relief ops
 - ✓ Countering surveillance and military operations by China
 - ✓ Keeping IOR sea lanes secure and open from threats like piracy

- ✓ Working with Indo-Pacific partners including US, Japan, Australia, France, UK, and EU.
- ✓ A number of dialogues including the IORA, ION, India-SL-Maldives trilateral etc. are quite significant.

Implications

- While the electoral win of Dr. Muizzu may not have been the desired outcome for India, it is necessary to see that being too close to the Solih government may have had a role in the pushback against him and hence, India must prioritize a more balanced and sustainable approach in future.
- A changing mood in Maldives can potentially prove to be a hindrance to India's strategic engagements in the island, both military and non-military in nature.
- India will need to tread the path of diplomacy very keenly through more confidence in traditional ties, and the avoidance of a zero-sum mindset is necessary to build its strategic future in the IOR.
 - ✓ The key security imperative remains balancing Chinese aggrandizement in the IOR and successfully establish its position as the dominant player in the region.
- A full-fledged "India-Out" policy will prove detrimental to India's strategic interests. India must leverage its soft power and look to convince the new government that proximity to India serves Maldives' national interest as well.

2. Sri Lanka, Bangladesh consider joining the RCEP

Current Context

India's neighbours Sri Lanka and Bangladesh are now considering their chances of membership in the Regional Comprehensive Economic Partnership (RCEP).

About

- Sri Lanka has already applied to join the RCEP, and

President Wickremesinghe is expected to seek support for his country's candidacy during his visit to Beijing for the **Belt and Road Initiative (BRI) Forum**.



- Meanwhile, the Bangladesh government is expected to take a final decision only after elections are held there in January 2024.

Implications

- **The Sri Lankan Presidential Secretariat confirmed the government's application** for RCEP membership and recognised the potential of this vast trade block comprising major economies in the region.
 - ✓ As his government negotiates with the International Monetary Fund (IMF) and other creditors for loans to tide over Sri Lanka's financial crisis, Mr. Wickremesinghe has moved more purposefully towards RCEP membership.
 - ✓ Through bilateral meetings, he is seeking support for the move from Malaysia, Indonesia, Japan and Thailand, and is likely to raise the issue in his meetings in Beijing as well.
 - ✓ During the crisis in Sri Lanka, the role of regional markets was realized to be extremely important. Joining the RCEP opens up the prospect of being more competitive with international players
- **Meanwhile, Bangladesh** is expected to graduate from the list of Least Developed Countries by November 2026, and will lose

preferential access to global markets, with a recent OECD paper estimating that export earnings could drop by 14% and average tariffs could increase by 9%.

- ✓ Its Commerce Ministry's proposal said that joining RCEP could increase Bangladesh's exports by \$5 billion.
- ✓ As Bangladesh is already negotiating free trade agreements with six of the 15 RCEP countries, joining the grouping would simplify the process.

India's reaction

- The MEA hinted that India's neighbours joining RCEP, could be a "development of concern", citing the opening up of markets in India's vicinity to a group dominated by Chinese trade, and the possibility that those markets may become more globally competitive than India's.
- Both countries concerned are also in talks with India for updated Free Trade Agreements (FTAs), and are part of the 2006 South Asia Free Trade Agreement (SAFTA).
 - ✓ However, they recognise that joining RCEP would take them out of the orbit of subcontinental trade, and enable access to the Association of South East Asian Nations (ASEAN)-led group that comprises China, Japan, South Korea, Australia, and New Zealand as well.
- While India was a founder member of the RCEP grouping, it pulled out of talks in 2019, owing to concerns over mobility in services and fears of Chinese goods flooding the market, as well as objections raised by the domestic agriculture sector and smaller businesses.
 - ✓ While India has been invited to return to RCEP meetings on several occasions, the government has not yet indicated that it would consider a review.

What RCEP means to India?

Potential Positives	Potential Negatives
- The RCEP presents a decisive platform to boost India's objectives under the "Act East Policy." - Complements India's existing FTAs with the ASEAN and some of its member countries, as it would deal with Japan and South Korea. - The RCEP can potentially streamline intra-regional trade, their rules and regulations which can potentially reduce trade costs. - The RCEP is expected to harmonize trade-related rules, investment and competition regimes of India with those of other countries of the group. - It could promote economic integration in the South and South-East Asian region by ensuring better access to a vast regional market. - In addition to facilitating foreign direct investment, the RCEP will create opportunities for Indian companies to access new markets. "Servicification" of manufacturing puts India at an advantage due to its expertise in services.	- It isn't sensitive to India's policies of rural development and 'Make in India', as it could dent India's manufacturing competitiveness. - The plantation sector is already reeling from the impact of the India-ASEAN FTA. - New Zealand's competitive dairy products can jeopardize India's small scale domestic units. - Eliminating a slew of import tariffs on a larger number of industrial products could induce stress. - E-commerce commitments can predate the progress of SME domestic manufacturing. - Eliminating export restrictions on minerals and raw material may threaten availability of raw materials domestically. - Investor state dispute settlement provisions in RCEP without the safeguards provided in the Model BIT is against India's national interest. - It increases India's liability and severely limit its policy space to implement any policy reform that may compromise investors' profits. - Agreeing to data exclusivity, extending patent terms and unduly strong enforcement measures compromises the production of generic medicines which is key for a developing country like India.

RCEP

- It is a large scale Intra-regional Free Trade Agreement (FTA) between countries in the Asia-Pacific which includes the 10-member ASEAN countries along with China, Japan, South Korea, Australia and New Zealand.
- The objective is to realise a comprehensive, cohesive and mutually beneficial economic partnership agreement among the ASEAN States and its FTA Partners.
- RCEP will cover trade in goods, trade in services, investment, economic and technical cooperation, intellectual property, competition, dispute settlement and other issues.
- At present, RCEP members represent 30% of the

global GDP; in fact, it is the first such agreement involving the big Asian economies.

- It aims to eliminate up to 90% of tariffs imposed on goods traded within the bloc within 20 years.

Entering the RCEP

- Under the RCEP agreement that came into force in January 2022, it was mandated to accept membership applications from countries after 18 months, that is, from July 2023.
- Currently, groundwork for the accession rules is being prepared post which, the start of the negotiations of potential accession by the respective countries would begin.

3. UN Security Council approves mission in Haiti

Current Context

In what is being hailed as an historic first, the UN Security Council authorized the deployment of an international security mission to help Haiti's national police quell surging gang violence and restore security across the strife-torn Caribbean nation.

Multinational Security Support (MSS) Mission

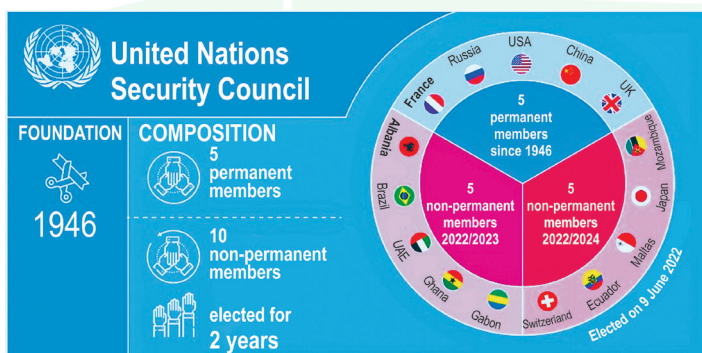
- The UN Security Council adopted resolution 2699 (2023), authorizing a multinational security mission to Haiti to help the Caribbean nation combat criminal gangs.
- The mission was requested by the Haitian Government and civil society representatives, following months of chaos and steadily worsening conditions affecting civilians.
- Adopting the resolution with a recorded vote of 13 in favour and 2 abstentions (Russia and China), the Multinational Security Support (MSS) mission is touted to help secure critical infrastructure and transit hubs such as the airport, ports, schools, hospitals and key intersections.
- It also called on countries participating in the mission to ensure the highest standards of transparency, conduct and discipline for their personnel, and called for an oversight mechanism to prevent human rights violations or abuses, including sexual exploitation.
- The non-UN mission is also slated to help ensure unhindered and safe access to humanitarian aid for millions of Haitians in need.
- The resolution, adopted under UN Charter's Chapter VII, which sets out the Security Council's responsibilities to maintain international peace and security, was penned by the United States and Ecuador.

Situation in Haiti

- There have been more than 3,000 homicides reported this year, and over 1,500 instances of kidnapping for ransom.
- Around 200,000 have been forced to flee their homes while sexual violence and abuse against women and girls at the hands of armed gangs ticks up.
- Tens of thousands of children are unable to go to school.
- **Report of the Secretary-General (September 2023) on Human rights situation in Haiti**
 - ✓ The human rights situation is marked by brutal attacks, including indiscriminate killings and kidnappings targeting the civilian population.
 - ✓ Armed violence and attacks by gangs against the population escalating. Gangs have used snipers on rooftops to indiscriminately shoot people.
 - ✓ Mass looting and burning of houses have resulted in the displacement of thousands of people.
 - ✓ Sexual violence, including collective rape, is used by gangs to terrorize especially women and girls.
 - ✓ The emergence of vigilante movements presents an additional layer of complexity to an already highly challenging security situation.
 - ✓ National institutions are ill-equipped to re-establish the rule of law. Stabilizing the security situation in Haiti will require significant support to national police.

UNSC Powers under Chapter VII of the UN Charter

- **Chapter VII** outlines possible courses of Action with Respect to Threats to the Peace, Breaches of the Peace, and Acts of Aggression.
- **Article 39:** The Security Council shall determine the existence of any threat to the peace, breach of the peace, or act of aggression and shall make recommendations, or decide what measures shall be taken in accordance with Articles 41 and 42, to maintain or restore international peace and security.
- **Article 41:** The Security Council may decide what measures not involving the use of armed force are to be employed to give effect to its decisions, and it may call upon the Members of the United Nations to apply such measures.
 - ✓ These may include complete or partial interruption of economic relations and of rail, sea, air, postal, telegraphic, radio, and other means of communication, and the severance of diplomatic relations.
- **Article 42:** Should the Security Council consider that measures provided for in Article 41 would be inadequate or have proved to be inadequate, it may take such action by air, sea, or land forces as may be necessary to maintain or restore international peace and security.
 - ✓ Such action may include demonstrations, blockade, and other operations by air, sea, or land forces of Members of the United Nations.
- **Article 44:** When the Security Council has decided to use force it shall, before calling upon a Member not represented on it to provide armed forces in fulfilment of the obligations assumed under Article 43, invite that Member, if the Member so desires, to participate in the decisions of the Security Council concerning the employment of contingents of that Member's armed forces.
- **Article 48:** The action required to carry out the decisions of the Security Council for the maintenance of international peace and security shall be taken by all the Members of the United Nations or by some of them, as the Security Council may determine.
 - ✓ Such decisions shall be carried out by the Members of the United Nations directly and through their action in the appropriate international agencies of which they are members.
- **Article 49:** The Members of the United Nations shall join in affording mutual assistance in carrying out the measures decided upon by the Security Council.
- **Article 51:** Nothing in the present Charter shall impair the inherent right of individual or collective self-defence if an armed attack occurs against a Member of the United Nations, until the Security Council has taken measures necessary to maintain international peace and security.
 - ✓ Measures taken by Members in the exercise of this right of self-defence shall be immediately reported to the Security Council and shall not in any way affect the authority and responsibility of the Security Council under the present Charter to take at any time such action as it deems necessary in order to maintain or restore international peace and security.



4. Indian Ocean Rim Association (IORA)

Current Context

'Reinforcing Indian Ocean Identity' was the banner theme at the Indian Ocean Rim Association's (IORA) Council of Ministers (COM) conference held in Colombo recently.

About

- It was attended by foreign ministers and senior officials of the 23-nation grouping of countries.
- This year's conference was marked by a lot of interest from other countries, especially those who are or are trying to be "dialogue partners" putting a spotlight on the organisation, believed to be the brainchild of former South African President Nelson Mandela.

IORA

- The Indian Ocean Rim Association includes 23 countries from Africa, West Asia, South Asia, South East Asia, Australia and Littoral States situated in and around the Indian Ocean.
- The grouping, whose apex body is the Council of Foreign Ministers that meet once a year, moves by rotation through members every two years.
- Sri Lanka took charge as Chair this year from Bangladesh, and India is Vice-Chair, meaning that the troika of IORA is within the South Asian region.
- While the IORA was formed in 1997 (then called the Indian Ocean Region-Association for Regional Cooperation) in Mauritius, its genesis came from a speech Nelson Mandela gave in Delhi in 1995.
- It is a regional tripartite forum that gathers government representatives, academia and business leaders for encouraging cooperation and greater interaction between them.
- The organisation is founded upon the values of open regionalism for boosting economic cooperation especially on the realms of trade facilitation, investment, the region's social

development and promotion.

- **Key initiatives include:**

- ✓ **The Indian Ocean Dialogue (IOD):** A flagship initiative of the organization with its origins in the 13th Council of Ministers meeting (2013).
- ✓ **IORA Sustainable Development Program (ISDP):** A project-based program intended to meet the needs of the Member States of the IORA where proposals are formulated by the Member countries in collaboration with IORA Secretariat to realise objectives revolving around sustainable development.

IORA's Membership

- **23 Countries:** Australia, Bangladesh, the Comoros, France, India, Indonesia, Iran, Kenya, Madagascar, Malaysia, the Maldives, Mauritius, Mozambique, Oman, Seychelles, Singapore, Somalia, South Africa, Sri Lanka, Tanzania, Thailand, the UAE and Yemen.
- **11 Dialogue Partners:** China, Egypt, Saudi Arabia, Germany, Italy, Japan, South Korea, Russia, Türkiye, the U.K. and the U.S.

IORA in the geopolitics of the Indian Ocean Region

- A third of the world's population (2.6 billion people) live in the region, and 80% of global oil trade, 50% of the world's containerized cargo and 33% of its bulk cargo passes through it.
- The region produces a combined total of \$1 trillion in goods and services, and intra-IORA trade is billed at around \$800 billion.
- Meanwhile, China is actively trying to rope in India's neighbours with groupings like the Belt

and Road Initiative (BRI), China-Indian Ocean Region Forum on Development Cooperation, China-South Asian Countries Poverty Alleviation and Cooperative Development Centre, which exclude India.

- ✓ IORA, however, remains a “safe space” for India and other countries of the region that wish to keep out the constant challenge of big-power rivalries.
- IORA membership is based on consensus, and Pakistan has not been admitted to the grouping since it first applied in 2001, on the basis that it has not extended MFN status to India, making the IORA a less contentious space for India as well, compared to groupings like the Shanghai Cooperation Organisation (SCO).

Focus areas of IORA

- **According to its charter, the IORA's Seven Priority Areas are**
 - ✓ Maritime safety and security;
 - ✓ Trade and investment facilitation;
 - ✓ Fisheries management;
 - ✓ Disaster risk management;
 - ✓ Science and technology;
 - ✓ Tourism and cultural exchanges;
 - ✓ Gender empowerment.
- The IORA also runs a special fund in addition, disbursing \$80,000-\$150,000 for project grants to members, and has a particular focus on climate change.
- Strategic issues and the importance of keeping a free and open sea lane, guarding against piracy, have become integral parts of the grouping's agenda.

India at the Conference

- Speaking at the conference this year, External Affairs Minister S. Jaishankar stressed the importance of maintaining the Indian Ocean as a

“free, open and inclusive space” where there was “respect for sovereignty and territorial integrity” based on the UN Convention on the Law of the Seas.

- In comments understood to be aimed at China, he warned of the dangers of “hidden agendas, unviable projects or unsustainable debt” to countries in the Indian Ocean Region.
- At the initiative of India, IORA's outlook on the Indo-Pacific was adopted by the 22nd Council of Ministers' meeting.
- India's message of 'Vasudhaiva Kutumbakam' or 'the world is one family' was recognized as a binding force for IORA Member States.
 - ✓ India, with its extensive coastline, maritime interests, and historical ties, is in a position to foster collaboration and dialogue in the region.
 - ✓ India's commitment to the IORA is deeply rooted in the principles of peaceful coexistence, shared prosperity, and regional collaboration.
- **India stressed upon building convergence on the following aspects in the forum:**
 - ✓ Articulating concerns of the Global South,
 - ✓ Nari Shakti or women-led development,
 - ✓ The democratization of technology through Digital Public Infrastructure,
 - ✓ Mission LiFE
 - ✓ Importance of the International Solar Alliance (ISA) and the Coalition for Disaster Resilient Infrastructure (CDRI)
 - ✓ Maritime safety and security,
 - ✓ Blue economy
- As the Vice-Chair of IORA, the apex regional body of this region, India aimed to further strengthen the regional identity and cooperation among Member States, Dialogue Partners, and the well-being and prosperity of the Indian Ocean community.

INDIA'S PRESENCE IN THE INDIAN OCEAN



5. Israel-Palestine conflict and the recent Hamas clash

Current Context

On 7 October 2023, Gaza-based militants led by Hamas, a U.S.-designated foreign terrorist organization, engaged in a series of surprise attacks by land, sea, and air against Israel. As a response, Israel has threatened an all-out war as the world is set to witness an unprecedented humanitarian disaster.

Current Situation

- **The attacks' scope and lethality against Israel have no precedent in the 12 years Hamas has controlled Gaza.**
 - ✓ Close to 200 Israeli citizens have been taken

hostage by Hamas, many have been mercilessly murdered at their homes, in music festivals etc.

- ✓ Critics lashed out at PM Netanyahu's failure to respond, a delayed deployment of the Israeli army and the overall intelligence

failure in predicting an attack of this scale as Hamas was able to infiltrate one of the most heavily guarded borders in the Middle-East.

- In response, Israel's cabinet formally declared war on Hamas, in efforts to push militants out of Israeli territory, target them in densely populated Gaza, and recover hostages.
- Israel issued an evacuation order for close to 1.1 million civilians to move to the southern parts of Gaza amidst speculation of a large-scale ground offensive by the Israeli Defence Forces (IDF).
 - ✓ The UN said the evacuation was not possible and warned of "devastating humanitarian consequences".
- Meanwhile, Iran-backed militant outfit Hezbollah, that enjoys political legitimacy in Lebanon, has warned of opening up a second front of attack in the Northern Israel-Lebanon border if Israel proceeds with a full-scale invasion.

Hamas and Gaza

- Hamas emerged in Gaza in the late 1980s, and established itself as an alternative to the secular Fatah movement in the 1990s by violently attacking Israeli targets after Fatah had entered into a peace process with Israel.
- Hamas's political leader, President Mahmoud Abbas, is supposedly based in Qatar. Hamas reportedly receives much of its funding, weapons, and training from Iran.
- After Israel withdrew military forces from Gaza in 2003, Hamas forcibly seized it from the Fatah-controlled Palestinian Authority (PA) in 2009.
- Since then, Gaza has faced crisis-level economic and humanitarian conditions, partly owing to broad restrictions that Israel and Egypt—citing security concerns—have imposed on the transit of people and goods.
- Before the current violence, Hamas and other militants engaged in four major conflicts with Israel in 2008-2009, 2012, 2014, and 2021.
- Egypt and Qatar have helped mediate conflict and provide basic resources, but Gaza has not experienced broader economic recovery or reconstruction.

- Millions of Palestinian civilians have flocked the Rafah crossing near the Egyptian border in attempts to flee. They have been subjected to a refusal from Egypt to let them enter their territory while Israeli air-strikes have also been conducted near the crossing.
 - ✓ Hamas however has urged the citizens not to flee out of intimidation by Israel's psychological warfare. Israel has highlighted the use of civilians as shields by Hamas as the bombings continue in Gaza.
- Delivery of food, essential medicine and other forms of aid have been severely hampered as trucks stand lined up on the way to Rafah. Israel has stripped off all food, fuel, water, electricity supply to Gaza as a retaliation to Hamas.

Factors that derail peace in the region

1. **The region is at the center of historic claims** on the land since the Ottoman times. It is the confluence of three prominent **Abrahamic religions** and their holy sites:
 - ✓ Temple Mount for Jews
 - ✓ Al-Aqsa Mosque for Arabs
 - ✓ Bethlehem as the birthplace of Jesus Christ
2. **Western imperialism** and its irresponsible policies have hugely contributed to the long-standing dispute.
 - ✓ Britain leveraged Arab support to defeat the Ottoman Empire in WWI in return of their independence via the **Hussein-McMahon correspondence**.
 - ✓ **Balfour Declaration (1917)** promised an independent land for Jews.
 - ✓ Ultimately, the demands of the two clashed as the **UN Partition Plan (1947-48)** failed with Arab rejection.
3. **A history of warfare, violence and armed resistance** has created a security dilemma

for Israel while pushing Palestinian public opinion into hardline radical opposition.

- ✓ **Arab-Israeli War** (1948-49)
- ✓ **Six-Day War** (1967)
- ✓ **Yom Kippur War** (1973)
- 4. The region has also been marred by **terrorism backed by Palestinian sympathisers**.
- ✓ **Hamas** is a Foreign Terrorist Outfit designated by the US.
- 5. A **high intensity of violence** in the region marked by mass casualties and loss of life makes peace a distant dream.
- ✓ **Intifadas** (1st in 1987-1993, 2nd in 2000-2005).
- 6. **Peace efforts have been repeatedly sabotaged** by extremism and radicalism.
- ✓ Egyptian President was assassinated post the signing of the **Camp David Accords** in 1978.
- ✓ Right-Wing violence was experienced in Israel post the signing of the **Oslo Accords** in 1993.

Triggers for the recent clashes

1. Israeli policies have alienated the Palestinian population with regular evictions, displacement of Palestinian families.
- West Bank has been at the center of **atrocities against the Palestinian people** with the IDF regularly deployed to use abject force against the civilians.
 - **Displacement** of Palestinians have been complemented by the rise of **illegal Israeli settlements** progressively into earmarked Palestinian land (as per the UN).
 - The UN has described the process as a **violation of International Law** with noted instances of **War-Crimes** as per the Rome Statute which established the International Criminal Court.



- **Right-wing domestic politics** in Israel, especially under PM Netanyahu, has intensified the systematic subjugation of Palestinian people, openly **rejecting the Two-State Solution** to advocate for the annexation of all or part of the West Bank to Israel and the continued governance of the Palestinians without full rights or the vote.
 - ✓ Israeli and foreign human rights groups say Israel has increasingly carved out a form of apartheid in the occupied territories.
- 2. **Political rise of Hamas since 2006 with the ideology of “Death to Israel”, is a factor.**
 - The policies of the far-right Israeli government enabling settler violence in the occupied West Bank and Jerusalem led to a sense of desperation among Palestinians and growing demands for a reaction.
 - At the same time, the rising tensions in the West Bank caused by these policies necessitated the shift of Israeli forces away from the south and into the north to guard the settlements. This gave Hamas both a justification and an opportunity to attack via Operation Al-Aqsa Flood.
- Hamas appears to be driven by the goals of deterring Israeli violations of Al-Aqsa Mosque and taking hostages to bargain for the release of Palestinian political prisoners held in Israeli jails.
- Hamas was emboldened after it managed to repair its ties with Iran. Hezbollah Secretary-General Hassan Nasrallah has said that he was personally involved in improving the relations between Hamas and Damascus.
- 3. **Normalization of Arab-Israeli ties was met with staunch opposition.**
 - Hamas leadership felt compelled to act due to the diminished significance of the Palestinian issue for Arab leaders who became less keen on pressuring Israel on this matter.
 - Saudi-Israel normalization under the influence of the USA is fundamentally against hardline Arab ideology on the Palestinian cause, thus pushing the militants into undertaking such extreme measures.

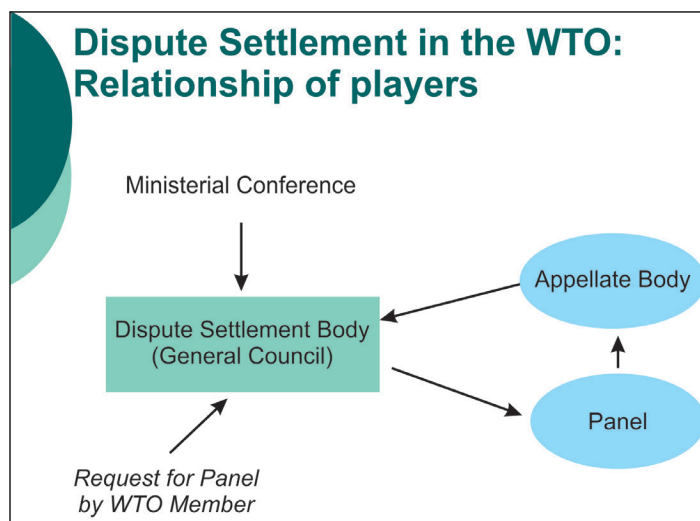
6. Dispute Settlement and the WTO Appellate Body

Current Context

The recently concluded G-20 Declaration reiterated the need to pursue reform of the World Trade Organization (WTO) and ensure a fully and well-functioning dispute settlement system, accessible to all members by 2024.

About

- Since India's quest has been to establish a rule-based global order, its support for an appellate review will ensure more states and investors' confidence in international investment law.
- The WTO's dispute settlement system, conceived as a two-tier panel cum appellate body structure, has been dysfunctional since 2019, because the United States has blocked the appointment of appellate body members.
- Hailed as the crown jewel of the WTO, the dispute settlement system, with the scope for appellate review and mechanisms to enforce rulings, has issued over 493 rulings since its establishment in 1995.
 - ✓ To put this in context, the International Court of Justice has dealt with only around 190 cases since 1947.
- The appellate body has been crucial in ensuring coherence and predictability in rulings, ensuring confidence in the WTO dispute process.
- While the commitment expressed in the G-20 Declaration is heartening, whether it will have an appellate process or just be a one-stage panel



process, given Washington's continued opposition to an appellate review process, remains to be seen.

- ✓ The U.S. seems inclined towards the de-judicialization of international trade law — an approach whereby countries take back control from international courts and tribunals.
- ✓ However, as with adjudication in national courts, the appellate review process at the international level serves as an essential check on the interpretation and application of law and ensures consistency.

Benefits of an appellate review

- A sound appellate mechanism will help address a critical structural facet of the ISDS mechanism whereby, it operates through ad hoc or one-off arbitration tribunals without any appellate review.
 - ✓ In international investment law, hundreds of ISDS tribunals operating under different arbitral institutions have, on several occasions, offered diverging interpretations of the same treaty provision.
 - ✓ Likewise, these tribunals have reached opposite conclusions despite interpreting and applying the same treaty to the same facts.
- The absence of an appellate review mechanism has meant that inconsistent and

incoherent decisions and legal reasoning dot the landscape of international investment law.

- ✓ This has caused instability and improbability for states and foreign investors, making the regime chaotic.
- An appellate review mechanism will allow for rectifying errors of law and harmonizing diverging interpretations.
 - ✓ It will have the power to uphold, modify, or reverse the decision of a first-tier tribunal and thus bring coherence and consistency, which, in turn, will infuse predictability and certainty into the ISDS system.
- An appellate mechanism will also be better than existing mechanisms such as the annulment proceedings, which only apply to arbitrations administered by the International Centre for Settlement of Investment Disputes — an institution India is not a member.
 - ✓ Further, such annulment proceedings can only address limited issues, such as the improper constitution of an arbitration tribunal or corruption but cannot correct errors in legal interpretation.
- The appellate mechanism will also be superior to getting an ISDS award set aside on limited procedural grounds in a court at the seat of arbitration.

Investor-State Dispute Settlement (ISDS)

- While the future of the WTO's appellate process is uncertain, another area of international law witnessing the formative stages for an appellate process is international investment law through investor-state dispute settlement (ISDS), which is a ubiquitous component of Bilateral Investment Treaties (BITs).
- The ISDS today is the principal means to settle international investment law disputes. Till January 1, 2023, 1,257 ISDS cases have been initiated. India has had a chequered history with ISDS, with five adverse awards, four in favour, and several pending claims.

Restoring the World Trade Organization's crown jewel

- Discussions on creating an appellate review mechanism are ongoing at the United Nations Commission on International Trade Law or UNCITRAL's working group III, deliberating on ISDS reforms.
- **There are several critical issues in creating an appellate review, such as what form it should take:**
 - ✓ an ad hoc appellate mechanism (a body constituted by the disputing parties on a case-by-case basis) or a standing appellate mechanism;
 - ✓ what the standard to review the decisions of the first-tier tribunal should be; and
 - ✓ what the time frame and the effect of the decision should be.

Indian context

- Although India has not made a formal statement

on this issue, India, presumably, supports the idea of an appellate review in the ISDS because Article 29 of the Indian model BIT talks of it.

- Given India's concerns about inconsistency and incoherence in the ISDS system, supporting the creation of an appellate review mechanism will be in India's interest.
- In any case, India will have to take a stand on this issue as part of the ongoing investment treaty negotiations with the European Union, which is championing the creation of an appellate review mechanism for investment disputes.
- Since India's quest has always been to establish a rule-based global order, it should support an appellate review which will usher in greater confidence for states and investors in international investment law.
- For those same reasons, India should also push for the restoration of the WTO appellate body towards achieving the goal of a fully and well-functioning dispute settlement system at the WTO.

4. ENVIRONMENT, DISASTER MANAGEMENT, GEOGRAPHY

4.1. ENVIRONMENT

1. 41% of amphibians are threatened with extinction

Current Context

A study by over 100 global experts has found that 41% of amphibian species worldwide are threatened with extinction, meaning they are either vulnerable, endangered or critically endangered.

About

- This is the highest for any vertebrate group, compared to 26.5% of mammals, 21.4% of reptiles and 12.9% of birds.
- Between 2004 and 2022, a few critical threats have pushed more than 300 amphibians closer to extinction.
- The study found that habitat destruction and degradation affect 93 percent of all threatened amphibian species and continues to be the most common threat.
- Habitat loss and climate change are the major drivers of amphibian declines globally, according to the latest IUCN Red list assessment.
 - ✓ Climate change was the primary threat for 39 percent of these species.

Reasons for most threatened species

- Amphibians are the world's most threatened animals.
- They are also at risk because of their delicate skin. Most amphibians absorb oxygen to breathe through their skin, and so they do not have scales, feathers or fur to protect them.
 - ✓ Their unique biology and permeable skin make them very sensitive to environmental changes.
 - ✓ Chemical pollution, bacterial and fungal infections impact them quickly, as do

Amphibians

- Amphibians are small vertebrates that need water, or a moist environment, to survive. The species in this group include frogs, toads, salamanders, and newts. All can breathe and absorb water through their very thin skin.
- Amphibians are especially vulnerable animals. They have distinct life stages that each often require separate habitats, so they can be disrupted by changes in either aquatic or land environments.

heightened swings in temperature and moisture levels due to climate change.

- The study also found that the loss of habitat from the expansion of farming and ranching is the single biggest threat to amphibians worldwide.
- But a growing percentage of amphibian species are now also pushed to the brink by novel diseases and climate change.
 - ✓ The effects of climate change – increased frequency and intensity of extreme weather events, changes in moisture and temperature, sea-level rise and fires – can result in the loss of key breeding sites, increased mortality, habitat degradation, and habitat shifts that make it harder for amphibians to find suitable places to live.

Status in India

- India is a global biodiversity hotspot and a major centre for amphibian diversity and endemism. The overall understanding and status of

amphibians in India hold important implications on the livelihood of amphibians worldwide.

- Over 70% of Indian amphibians are endemic to the country and found nowhere else in the world.
 - ✓ This also means that if these species go extinct, they will altogether vanish from the surface of the Earth.
- The total number of amphibian species in India stood at 453 species, of which 426 species were assessed.
- Out of the assessed amphibian species, 139 are found to be in the threatened— in other words facing significant threats that are pushing them closer towards extinction.
 - ✓ These threatened species are divided into

three categories — 16 species are critically endangered, 72 are endangered, and 51 are in the vulnerable category.

Location of threatened amphibian species

- The greatest concentrations of threatened amphibian species were identified in several biodiversity hotspots, including the Caribbean islands, the tropical Andes, Madagascar and Sri Lanka.
- Other locations with large numbers of threatened amphibians include Brazil's Atlantic Forest, southern China and the southeastern United States.

2. Aerosols heating up Himalayas, key factor in climate change: ISRO study

Current Context

A new analysis by the Indian Space Research Organisation's (ISRO) Physical Research Laboratory has shown that the Hindu Kush-Himalaya-Tibetan Plateau region has been witnessing an alarming increase in aerosol levels.

About the Report

- The increase in aerosols in the Hindu Kush-Himalaya-Tibetan Plateau region could be the reason behind increase in temperatures, altering rainfall patterns and accelerating glacier retreat.
- The study, the first of its kind, used ground-based observations, satellite data, and simulations, to assess aerosol characteristics and radiative forcing — the change in energy flux in the atmosphere caused by natural or anthropogenic factors of climate — in several locations in the Indo-Gangetic Plains (IGP), the Himalayan foothills and the Tibetan Plateau.
 - ✓ Data shows that the aerosol radiative forcing efficiency (ARFE) — which shows the effect of anthropogenic aerosols on the radiative

fluxes at the top of the atmosphere — was significantly higher in the Himalayan foothills. The mean ARFE is two to four times higher here than over other polluted sites in south and east Asia, owing to higher AOD (aerosol optical depth) and aerosol absorption.

- The significant, regionally coherent aerosol-induced warming that we observe in the high altitudes of the region, is a significant factor contributing to increasing air temperature, observed accelerated retreat of the glaciers, and

Global Warming Potential (GWP)

- It was developed to allow comparisons of the global warming impacts of different gases. Specifically, it is a measure of how much energy the emissions of 1 ton of a gas will absorb over a given period of time, relative to the emissions of 1 ton of carbon dioxide (CO₂).

changes in the hydrological cycle and precipitation patterns over this region.

- Thus, aerosols are heating up the Himalayan climate, and will remain a key factor driving climate change over the region.

Aerosols

- They are tiny solid or liquid particles suspended in air or as a gas.
- Aerosols can be natural, such as fog or gas from volcanic eruptions, or artificial, such as smoke from burning fossil fuels.
- Aerosol particles are either emitted directly to the atmosphere (primary aerosols) or produced in the atmosphere from precursor gases (secondary aerosols).
- Aerosol particles are tiny, but numerous, and often comprise of a number of inorganic and organic substances.
 - ✓ Key aerosol groups include sulfates, organic carbon, black carbon, nitrates, mineral dust, and sea salt.
- Aerosols have masked about 50 percent of the warming that would otherwise have been caused by greenhouse gases trapping heat near the surface of the Earth.
- True aerosol particles range in diameter from a few millimicrometres to about 1 micrometre (equal to 10⁻⁴ cm).
- Particles with a diameter of less than 0.1 micrometre are sometimes referred to as Aitken nuclei.
- Visible forms of atmospheric aerosol plumes include smoke, smog, haze and dust.
- ✓ Although most aerosols reflect sunlight, some also absorb it.
- An aerosol's effect on light depends primarily on the composition and color of the particles. Broadly speaking, bright-colored or translucent particles tend to reflect radiation in all directions and back towards space.
- Darker aerosols can absorb significant amounts of light.
- Pure sulfates and nitrates reflect nearly all radiation they encounter, cooling the atmosphere.
- Black carbon, in contrast, absorbs radiation readily, warming the atmosphere but also shading the surface.
 - ✓ There is only one aerosol — soot, also known as black carbon — that actually helps contribute to global warming by boosting the warming effects of greenhouse gases in the atmosphere.
- Organic carbon, sometimes called brown carbon or organic matter, has a warming influence on the atmosphere depending on the brightness of the underlying ground.
- Dust impacts radiation to varying degrees, depending on the composition of the minerals that comprise the dust grains, and whether they are coated with black or brown carbon. Salt particles tend to reflect all the sunlight they encounter.
- Although absorption, like reflection, tends to reduce sunlight at the ground level, the enhanced atmospheric heating eventually warms up the surface, and counteracts the cooling caused by reflection.
- They also participate in chemical processes and influence the electrical properties of the atmosphere.

How do aerosols affect climate?

- Aerosol particles, such as dust, play an important role in the precipitation process, providing the nuclei upon which condensation and freezing take place.
- They affect climate by reflecting or absorbing incoming solar radiation and enhancing the brightness, and thus reflectivity, of clouds.

Hindu Kush-Himalaya-Tibetan Plateau (HKHTP)

- The Hindu Kush-Himalaya-Tibetan Plateau region contains the largest ice mass outside

Antarctic and Arctic polar regions, and has witnessed a pronounced retreat in glaciers, which also feed into most major rivers of Asia.

- A 2019 report by the International Centre for Integrated Mountain Development (ICIMOD) found that the Hindu Kush Himalayas are warming faster than the global average, and that

the consequences of it in the region were severe.

- ✓ That ICIMOD report highlighted that 1.5 degrees Celsius is “too hot” for the Hindu Kush Himalayas.
- This would affect half the glaciers in the HKH region, destabilising Asia’s rivers and endangering the lives and livelihoods of billions of people.

3. Amazon River Dolphins

Current Context

Recently, the carcasses of over 100 river dolphins were found floating in a tributary of the Amazon River in Brazil in circumstances that experts suspect were caused by severe drought and heat.

About

- The world’s largest waterway, Amazon River, is currently in its dry season and several specimens of river flora and fauna are dealing with record high temperatures in Lake Tefe, exceeding 39 degrees Celsius (102 degrees Fahrenheit).
- Amazon river’s striking pink and grey colored dolphins are among the few freshwater dolphins found in the world.

Amazon River Dolphin

- The Amazon river dolphin (*Inia geoffrensis*), also known as the boto, bufeo or pink river dolphin, is a species of toothed whale which is native to and is exclusively of South America classified in the family Iniidae.
- Three subspecies are currently recognized: **I.g. geoffrensis (Amazon river dolphin), I.g.**

boliviensis (Bolivian river dolphin) and I.g. humboldtiana (Orinoco river dolphin) while position of Araguaian river dolphin (*I.g. araguaiaensis*) within the clade is still unclear.

- They are distributed in the Amazon basin, the upper Madeira River in Bolivia, and the Orinoco basin, respectively.
- The Amazon river dolphin is the largest species of river dolphin, with adult males reaching 185 kilograms in weight, and 2.5 metres (8.2 ft) in length.
- These animal species use **echolocation** which lets the animal determine the size and shape of any surrounding item or object.
- Conservation status - IUCN: **Endangered**

About Ganges River Dolphin

- The **Ganges river dolphin was officially discovered in 1801.**
- The Ganges river dolphins once lived in the Ganges-Brahmaputra-Meghna and Karnaphuli-Sangu river systems of Nepal, India, and Bangladesh. But the species is extinct from most of its early distribution ranges.
- The Ganges river dolphin can only live in freshwater and is essentially blind.

The Amazon River

- The Amazon River is the largest river in South America and the second-largest river in the world after the Nile River.
- The Amazon River is a freshwater river, and it is responsible for approximately one-fifth of the amount of freshwater entering oceans globally.

- They hunt by emitting ultrasonic sounds.
- Females are larger than males and give birth once every two to three years to only one calf.
- The Ganges river dolphin is important because it is a reliable indicator of the health of the entire river ecosystem.
- The Government of India declared it the **National Aquatic Animal in 2009**.
- Scientific Name: **Platanista gangetica**
- Habitats: **Freshwater rivers**
- **Conservation Status:**
 - ✓ **Indian Wildlife (Protection), Act 1972:** Schedule I.
 - ✓ International Union for the Conservation of Nature (IUCN): **Endangered**.
 - ✓ Convention on International Trade in Endangered Species (CITES): Appendix I (most endangered).
- ✓ **Convention on Migratory Species (CMS):** Appendix II (migratory species that need conservation and management or would significantly benefit from international co-operation).
- **Government Initiatives:**
 - ✓ **Project Dolphin:** It has helped increase the dolphin population.
 - ✓ **Dolphin Sanctuary:** Vikramshila Ganges Dolphin Sanctuary has been established in Bihar.
 - ✓ **National Ganga River Dolphin Day:** The National Mission for Clean Ganga celebrates 5th October as National Ganga River Dolphin Day.

4. Blueprint for Indian Maritime Blue Economy

Current Context

Recently, Prime Minister Narendra Modi unveiled the 'Amrit Kaal Vision 2047', the long-term blueprint for the Indian **maritime blue economy** while inaugurating Global Maritime India Summit 2023 in Mumbai.

About

- The blueprint outlines strategic initiatives aimed at enhancing port facilities, promoting sustainable practices, and facilitating international collaboration.
- Next Generation Mega Port, International Container Trans-shipment port, island development, inland waterways, and multi-modal hubs would be undertaken under Vision 2047 leading to a reduction in cost of doing business and environmental degradation.
- The PM also laid the foundation stone for projects worth more than Rs 23,000 crore that are aligned with the growth of India's maritime blue economy.
- Coastal Shipping Modes are also being modernised in India and the coastal cargo traffic had doubled in the last decade, thereby providing a cost-effective logistic option for the people.
- The government is taking major steps to enhance economic productivity by making the logistics sector more efficient and effective.
- Effort are also underway to make the major ports in India carbon-neutral via a net-zero strategy for the sector.

Blue economy

- The "blue economy" refers to the sustainable use and conservation of ocean and marine resources for economic development. It encompasses various sectors like fisheries, aquaculture, tourism, shipping, renewable energy, and marine biotechnology.
- India, with its vast coastline and maritime resources, has significant potential in the blue economy.

Importance of Blue Economy for India

- India's blue economy supports 95% of the country's business through transportation and contributes an estimated 4% to its Gross Domestic Product (GDP).
- 80% of world trade happens using the seas, 40% of the world's population live near coastal areas, and more than 3 billion people access the oceans for their livelihood.
- Ocean protect biodiversity, keep the planet cool, and absorb about 30% of global CO₂ emissions.
 - ✓ At least 3-5% of global GDP is derived from oceans.

Current Status of Maritime Sector in India

- India has currently 12 major and 200 non-major/intermediate ports. Jawaharlal Nehru Port Trust is the largest major port in India, while Mudra is the largest private port.
- India is one of the world's top 5 ship recycling countries and holds 30% share in the global ship recycling market.
- Approximately 95% of India's merchandise trade is done through sea ports.
 - ✓ Ports in India handle approximately **95% (by volume)** and **68% (by value)** of India's external trade.
- As per the **World Bank's Logistic Performance Index (LPI) 2023** report, India's ports' efficiency and productivity has increased with better turnaround time. Jawaharlal Nehru Port has become the first 100% Landlord Major Port.
- India is going to become one of the top five ship-building nations in the coming decade.

India's Initiatives Related to Maritime Sector

- **National Policy for India's Blue Economy-2021.** The policy aims to enhance contribution of the blue economy to India's GDP, improve lives of coastal communities, preserve marine biodiversity, and maintain the national security of marine areas and resources.

- **Deep Ocean Mission** aims to develop technologies to harness living and non-living resources from the deep oceans. A plan to mine the metals in the Indian oceans, including Copper, Nickel, Cobalt, and Manganese, is estimated to be \$110 billion.
- **SAGAR: 'Security and Growth for All in the Region'** to focus on cooperative measures for sustainable use of oceans.
- **Sagarmala Project** to promote port-led development in the country through harnessing India's 7,500 km long coastline, 14,500 km of potentially navigable waterways and strategic location on key international maritime trade routes.
- India aims at becoming '**Global Hub for Green Ship**' building by 2030 with the launch of **Green Tug Transition Programme (GTTP)**.
 - ✓ It aims to convert all tugboats working in the country into '**Green Hybrid Tugs**', running on non-fossil fuel like Methanol, Ammonia, and Hydrogen.
- **Maritime India Vision 2030** is a comprehensive roadmap to transform India into a maritime powerhouse and leverage its extensive coastline for economic development and global trade. The initiative envisions a thriving and sustainable maritime sector in India by the year 2030.
- **O-SMART (Ocean—Services, Modelling, Application, Resources and Technology):** The programme aims to provide sustainable and environment-friendly solutions for islands. MoES has come up with innovative ways of planning and designing coastal infrastructure. This infrastructure is climate- and natural disaster-resilient.
- **Green Voyage 2050 Project:** It is a partnership project between the Government of Norway and International Maritime Organisation (IMO) launched in May 2019 aiming to transform the shipping industry towards a lower carbon future.

India is part of the Green Voyage 2050 project.

- **India-Norway on Blue Economy for Sustainable Development:** The Norway-India cooperation contributes to creating economic growth and jobs while protecting the marine environment and reducing our greenhouse gas emissions.

through major and non-major ports, ship recycling, and shipbuilding endeavours.

- Going forward, the focus remains on enhancing efficiency, productivity, and environmental sustainability, emphasizing deep-sea resource utilization and eco-friendly technologies.
- Collaborative efforts with international partners will further bolster India's maritime capabilities, cementing its status as a dynamic and green maritime force.

Way Forward

- India's maritime sector is on the rise, evident

5. Climate Change causes \$850 bn annual loss in infrastructure globally: CDRI Report

Current Context

Climate change has led to an annual average global loss (AAL) in infrastructure sector to the tune of \$850 billion, implying that 14% of the 2021-22 GDP growth is at risk, according to a report released by Coalition for Disaster Resilient Infrastructure (CDRI).

Key findings in the Report

- The first of its kind report puts in perspective problem faced by the Global South and its poor infrastructure governance.
- The biennial report has estimated that about 67% of the global value of infrastructure assets is concentrated in **high-income countries**.
- The upper and lower middle-income countries account for 25% and 7%, respectively.
 - ✓ While they carry the highest relative risk with an average annual loss estimated at 0.4%, compared to 0.1% in high income countries.
- The report has come out with the **first-ever publicly available future probabilistic Risk Model: Global Infrastructure Risk Model and Resilience Index (GIRI)**, quantifying the average annual losses due to disasters.
- The report has analysed nine infrastructure sectors and claims that to achieve the sustainable development goals (SDGs), nations need to invest \$9.2 trillion annually in resilient infrastructure till 2050, of which \$2.9 trillion is required in developing countries alone, including India.
- This is the **first Global South-driven report that** will influence national policies and infrastructure governance.
 - ✓ Many of these high-risk countries are located in sub-Saharan Africa and the Middle East.
- The report says high-income countries could witness an increase in annual loss by 11% due to climate change but this figure could increase to 22% in middle-income and 33% in low-income countries.
- Governments can use this report to understand the risk they face, and to realize that it is critical to ensure that all infrastructure is fully resilient.
- While average annual infrastructure loss of **30% is associated with hazards** like earthquakes &

tsunamis, around 70% is associated with **climate-related disasters** like cyclones, floods, storms etc.

- It has been estimated that about 80% of the risk is concentrated in the power, transport, and telecommunications sectors where asset building only accounts for 15-30% of overall expenditure over its design lifecycle while up to 70-85% is attributable to operation and management.

Challenges of the Global-South

- Low- and middle- income countries (LMIC)) face a number of complex challenges, including a significant infrastructure deficit that impedes social and economic development, according to the report.
 - ✓ These countries also have low-quality infrastructure as a result of poor infrastructure governance.
- They also have much more limited resources and technical capacities to cope with climate challenges.
 - ✓ According to the Global Climate Risk Index, eight out of the ten countries most affected by the quantified impacts of extreme weather events in 2019 belong to the low- to lower-middle income category and half of them are LDCs.
- In 2009, at the 15th Conference of the Parties (COP 15) in Copenhagen, developed countries decided to commit to a goal of mobilizing jointly USD 100 billion a year by 2020 to address the climate mitigation and adaptation needs of developing countries.
 - ✓ However, this goal has never been met.

Solutions

- Means to reduce loss and damage from climate change include increasing resilience before the

occurrence of an extreme weather or slow-onset event – for example, by strengthening flood defences – and establishing mechanisms to provide financial or social protection support to those who have already experienced loss and damage.

- Insurance is one important tool but is not affordable or accessible to all.
- There are also opportunities to reduce loss and damage after extreme weather events by incorporating **resilience into recovery**, such as rebuilding infrastructure to be more climate-resilient in the future.
- Developing countries claim that developed countries have historical responsibility for climate change.
 - ✓ As such, they have called for compensation from developed countries to help them address loss and damage that have already occurred and to minimise future loss and damage.

Coalition for Disaster Resilient Infrastructure (CDRI)

- The Coalition for Disaster Resilient Infrastructure (CDRI), established in 2019, is a partnership of national governments, UN agencies and programmes, multilateral development banks and financing mechanisms, the private sector, and knowledge institutions.
- It aims to promote the resilience of infrastructure systems to climate and disaster risks, thereby ensuring sustainable development.
- The report puts CDRI on the global map with 20 global partners bringing together a unique body of evidence to unpack the 'resilience dividend' making a compelling economic, political, and financial case radically upscale investment in Infrastructure.

6. Environment Impact Assessment (EIA) and Himalayas

Current Context

The Teesta dam breach in Sikkim in early October and the recent floods and landslides in Himachal Pradesh are a stark reminder of the havoc our development model is wreaking on our environment and ecology especially in the mountains.

The Indian Himalayan Region (IHR)

- The Indian Himalayan Region (IHR) is spread across 2 Union Territories and 11 Indian States. From north-west to north-east direction, it includes Ladakh (UT), Jammu and Kashmir (UT), Uttarakhand, Himachal Pradesh, Sikkim, West Bengal Hills, Assam Hills, Arunachal Pradesh, Nagaland, Manipur, Mizoram, Tripura, and Meghalaya.
- It spreads over a length of about 2500 km and has a width of 220-330 km. Nearly 50 million people reside in this hill region, which is characterized by a diverse demographic, and versatile economic, environmental, social and political system.

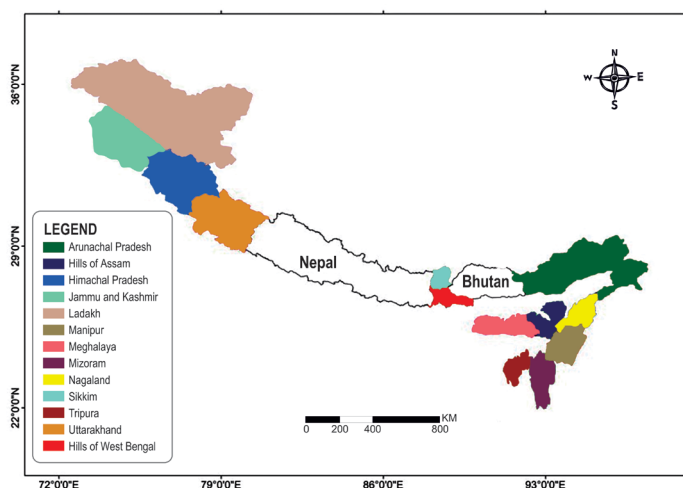
Vulnerability of the region

- As an area of immense ecological importance to the entire country (it serves as a water tower and the provider of ecosystem services), this region is treated like any other part of the country.

- The Fourth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC) has concluded that there is an unequivocal evidence of current trends of global warming of earth's atmosphere caused by anthropogenic emissions.
 - ✓ The IPCC also estimates that global average surface temperatures would increase in the range of 1-6.3C over the next 100 years.
- Increasing temperatures and changing precipitation patterns in the Indian Himalayan Region can be expected to influence even more profoundly the regional mountain ecosystems and some sections of human populations. The changes can be expected to be complex.
- The Himalayas are inherently vulnerable to extreme weather conditions such as heavy rains, flash floods, and landslides and are seismically active.
- Climate change has added another layer of vulnerability to this ecosystem.
- Despite this understanding of the fragility and vulnerability of the Himalayas, there is no mention of a different set of environmental standards needed if the project is located in the IHR.

Special needs of the Indian Himalayan Region (IHR)

- The region's vulnerabilities and fragility have not been considered separately.
 - ✓ While some industries mentioned in the schedule to the notification cannot be set up in the IHR States due to the industrial policies of the respective States, other industries and



projects have to meet the same threshold in the rest of the country.

- The EIA process would need comprehensive, reliable data and would deliver results only if it is designed to seek the most appropriate, relevant and reliable information regarding the project. Hence, the base line data on the basis of which future likely impacts are being predicted are very crucial.
- General conditions mandated for all projects at the end of the notification could also have had a clause about the IHR or mountains above a certain altitude, or with some specified characteristics that could increase the liability of the project proponent.
- Notifications have categorised projects under various heads such as mining, extraction of natural resources and power generation, and physical infrastructure.
 - ✓ Unfortunately, the threshold limits beyond which EIA is warranted for all these projects is the same across the country.

Environment Impact Assessment (EIA)

- Environment Impact Assessment (EIA) is defined by the United Nations Environment Programme (UNEP) as a tool to identify the environmental, social, and economic impacts of a project before it is implemented.
- This tool compares various alternatives for the proposed project, predicts and analyses all possible environmental repercussions in various scenarios.
- The EIA also helps decide appropriate mitigation strategies.

In India

- In India, a precursor to the EIA began in 1976-77 when the Planning Commission directed the Department of Science and Technology to assess the river valley projects from the environmental point of view.
- On January 27, 1994, the **Union Ministry of Environment, Forests and Climate Change under the Environment (Protection) Act, 1986 (EPA)**, promulgated the **first EIA notification making Environmental Clearance (EC) mandatory** for setting up some specified new projects and also for expansion or modernisation of some specific activities.
- The hallmark of the 2006 notification was the decentralisation of the process of EC. State governments were also given powers to issue EC in certain cases. Under 2006 notification, all projects were divided into two categories:
 - ✓ Category 'A' at Central level- The project appraised by the impact assessment agency and Expert Appraisal Committee.
 - ✓ Category 'B' at State level- The project appraised by the State Environment Impact Assessment Authority (SEIAA).
- The draft EIA notification proposes to be an update to the EIA of 2006, which specifies a "minimum of 30 days" for people to respond.
 - ✓ The current version of the update, which will likely become law in 60 days, gives a "minimum of 20 days" of notice period.
 - ✓ It also requires that the public-hearing process be wrapped up in 40 days, as opposed to the existing norm of 45 days.

7. E-waste

Current Context

Recently, the Indian Cellular and Electronic Association (ICEA) published a comprehensive report, "Pathway to Circular Economy in the Indian Electronic Sector," which emphasizes the urgent need to transform e-waste management and leverage its potential.

About e-waste

- Electronic waste (e-waste) is a generic term used to describe all types of old, end-of-life or discarded electrical and electronic equipment, such as household appliances, office information and communications equipment, entertainment and consumer electronic equipment, lighting equipment, electric and electronic tools.
- India is the third largest generator of e-waste in the world after China and the United States.
- In 2020-2021, India produced 3.4 lakh tonnes of e-waste.
- Only 22.7 per cent of the e-waste out of the total 10,14,961.21 tonnes generated in 2019-20 in India was collected, dismantled, and recycled or disposed off.
 - ✓ This e-waste is comprised of 21 types of electrical and electronic equipment (EEE) notified Under the E-Waste (Management) Rules, 2016.
- However, the data show that not even 25 per cent of the e-waste generated is being managed properly.

WHAT IS E-WASTE	
Electronic waste (e-waste) is electrical and electronic equipment, whole or in parts, discarded as waste by consumer or bulk consumer Equipment such as centralised data processing, mainframes, computers, laptops, printers, used terminals, cellular phones and consumer electrical and electronics such as television sets, refrigerator, air conditioner, washing machine and fluorescent and other mercury containing lamps when discarded are e-waste	
e-waste generation has been increasing over the past few years ▶ in 2018-19, it was 8,478 metric tonnes per annum (mTA) ▶ in 2019-20, it was 17,028 mTA ▶ in 2020-21, it was 20,816 mTA ▶ In the state, 25 e-waste processing units are authorised by the Rajasthan State Pollution Control Board so far, to handle and process the e-waste e-waste contains useful materials of economic benefits such as plastics, iron, glass, aluminium, copper, precious metals and also hazardous substances such as lead, cadmium, mercury and other toxic materials 	How e-waste affects health & environment ▶ Emissions from e-waste create environmental damage ▶ Toxic chemicals from e-waste enter the soil food pathway ▶ Those are non-biodegradable and cause soil pollution Objective of the e-waste management policy ▶ Enforcement of existing legislations for e-waste management ▶ To increase community participation and people's awareness for effective e-waste management ▶ To establish e-waste parks ▶ Creating green jobs and eliminate practices which are harmful to human health and the environment ▶ To focus on authorised channel for e-waste management, establishment of collection centres, mainstreaming the informal sector and providing proper safety to the e-waste workers 

- E-waste comprises 70% of our overall toxic waste.

Issues related to e-waste

- Environmental risks:** E-waste can be toxic, is not biodegradable and accumulates in the environment, in the soil, air, water and living things. For example, open-air burning and acid baths being used to recover valuable materials from electronic components release toxic materials leaching into the environment.
- Climate change:** It is also worth considering the effects electronic goods have on climate change. Every device ever produced has a carbon footprint and is contributing to human-made global warming. Manufacture a tonne of laptops and potentially 10 tonnes of CO₂ are emitted.
- Lack of recycling:** E-waste is not biodegradable. The lack of recycling weighs heavily on the global electronic industry and as devices become more numerous, smaller and more complex, the issue escalates. Currently, recycling some types of e-waste and recovering materials and metals is an expensive process.
- Lack of awareness:** Majority of individuals think that e-waste doesn't harm them.
- Lack of funding:** The Government of India don't have enough fund in order to establish adequate e-waste infrastructure and processing units of e-waste.
- Ineffective legislation:** There is absence of any public information on most SPCBs/PCC websites. Even the basic E-waste Rules and guidelines have not been uploaded.
- High imports:** 70-80% of e-waste in developed countries meant for recycling is sent to developing countries such as India, China, Ghana and Nigeria.

E-waste Management Rules, 2022

- It would be applicable to all manufacturers, producers, refurbishers, dismantlers and

E-waste Management Rules, 2016

- Over 21 products, including compact fluorescent lamp (CFL) & mercury containing lamps, were included under the purview of schedule -I of the rules.
- The rules also extended to components or consumable or parts or spare of electrical and electronic equipment along with their products.
- The rules for the first time brought producers under the ambit of the Extended Producer Responsibility (EPR).
- The rules provisioned the target for the producer, which was missing in the first version of the rule.
- It included additional stakeholders like Manufacturers, Dealers and Refurbishers and Producer Responsibility Organizations.

recyclers involved in manufacturing, sale, transfer, purchase, refurbishing, dismantling, recycling and processing of e-waste or electrical and electronic equipment.

- The rule is applicable to all electrical devices and radiotherapy equipment, nuclear medicine equipment and accessories, Magnetic Resonance Imaging (MRI), electric toys, air conditioners, microwaves etc.

- The new rule restricts the use of hazardous substances like lead, mercury, and cadmium.
- EPR certificate will allow the offsetting of e-waste responsibility to a third party.
- Manufacturers would use the technology so as to make the end product recyclable and shall ensure that components or parts made by different manufacturers are compatible with each other so as to reduce the quantity of e-waste.
- State government will earmark industrial space for e-waste dismantling and recycling facilities.
- Manufacturers will make the end product recyclable.
- The Central Pollution Control Board shall conduct random sampling of electrical and electronic equipment placed on the market to monitor and verify the compliance of reduction of hazardous substances provisions.

8. Graded Response Action Plan

Current Context

The Commission for Air Quality Management (CAQM) has proposed to exempt gensets that have not converted from diesel to clean fuel from the Graded Response Action Plan (GRAP) in order to operate emergency services.

Graded Response Action Plan (GRAP)

- It is a sequential response mechanism to chart out State-response to abrupt rise of air-pollution to alarming levels, in the National Capital Territory of Delhi, and in adjoining areas.
- GRAP works only as an emergency measure. As such, the plan does not include action by various state governments to be taken throughout the year to tackle industrial, vehicular & combustion emissions.
- The plan is incremental in nature therefore, when the air quality moves 'Poor' to 'Very Poor', the measures listed under both sections must be followed.
- GRAP has been successful in doing two things that had not been done before-
 - i. creating a step-by-step plan for the entire Delhi-NCR region, and
 - ii. getting on board several agencies- all pollution control boards, industrial area authorities, municipal corporations, regional officials of the India Meteorological Department, and others.
- The plan requires action and coordination among 13 different agencies in Delhi, Uttar Pradesh, Haryana

and Rajasthan (NCR areas). Before implementing any measures, EPCA holds a meeting with representatives from all NCR states.

Actions Under GRAP

1. Severe+ or Emergency (PM 2.5 > 300 g/m or PM10 > 500 g/m for 48+ hours)

- Stop entry of trucks (except essential commodities)
- Stop construction work. Introduce odd/even scheme for private vehicles.

2. Severe (PM 2.5 > 250g/m or PM10 > 430g/m)

- Close brick kilns, hot mix plants, and stone crushers.
- Maximise power generation from natural gas to reduce generation from coal.
- Mechanised cleaning of roads and sprinkling of water.

3. Very Poor (PM2.5 > 120 g/m or PM10 > 350 g/m)

- Stop the use of diesel generator sets.
- Apartment owners to discourage burning fires in winter.

4. Poor (PM2.5 > 60 g/m or PM10 > 100 g/m)

- Heavy fines for garbage burning and enforcing pollution control regulations in brick kilns and industries. Mechanised sweeping and water sprinkling on roads.

• Other measures undertaken:

- NGT ordered a ban on old vehicles within the city.
- Open burning has been largely curtailed.
- Completion of the eastern and western peripheral expressways for vehicles not destined for Delhi.

Effectiveness of GRAP

- The most significant success of GRAP has been in fixing accountability and deadlines. For each action to be taken under a particular air quality category, executing agencies are clearly marked.
- Coordination among as many as 13 agencies from four states is simplified because of the clear demarcation of responsibilities.
- Three major policy decisions that can be credited to EPCA & GRAP are-
 - i. the closure of the thermal power plant at Badarpur,
 - ii. bringing BS-VI fuel to Delhi before the deadline set initially, and
 - iii. the ban on peat coke as a fuel in Delhi-NCR.

Commission for Air Quality Management (CAQM)

- The Commission for Air Quality Management (CAQM) in National Capital Region and Adjoining Areas, is a Statutory body under Ministry of Environment, Forest & Climate Change.
- It dissolves the erstwhile Environment Pollution Prevention and Control Authority (EPCA) which was established in 1998.
- The Commission has been set up for Air Quality Management in National Capital Region and Adjoining Areas for better co-ordination, research, identification and resolution of problems surrounding the air quality index and for matters connected therewith or incidental thereto.
- It can impose fines, and restrict setting up industries in vulnerable regions

Tackling Air-Pollution

Nation-wide measures:

1. Pollution Index by CPCB and SPCBs
2. Bharat Stage VI norms for vehicles
3. National Clean Air Program
4. National Air Quality Monitoring Program
5. National Ambient Air Quality Standards
6. SAFAR System of monitoring pollutants
7. National Air Quality Index

Delhi NCR specific measures

1. PUSA Decomposer
2. Super SMS and Happy Seeder
3. Smog Towers
4. Green Crackers enforced in Delhi NCR by Supreme Court

- Strictly enforce a ban on firecrackers.

- It supersedes all existing bodies undertaking aligned functions, with just the National Green

Tribunal being able to hear cases where CAQM is involved.

9. National Action Plan for Green Shipping

Current Context

The National Action Plan for Green Shipping promotes eco-friendly practices and incentives for low-emission ships, positioning India's maritime sector for a prosperous and environmentally responsible future, Director General of Shipping said while speaking at the 13th edition of the South Asia's largest maritime exhibition and conference, the INMEX SMM India 2023 recently.

Key Details

- The Indian Navy is steadfast in championing advancements in the shipping sector while wholeheartedly encouraging innovation, providing support for start-ups, and advocating for collaborations to sculpt a greener, more efficient maritime future.
- The recent achievements in the shipping sector include doubling major ports' capacity, substantial waterway growth, increased cruise passengers and seafarers, expanded solar power, and lighthouse tourism.
- This progress is fueled by transformative reforms like **Sagarmala** and digitization initiatives, with sustainability being the key, as seen through the **Swachh Sagar Portal** for environmental data.
- India's maritime sector will play a pivotal role in achieving a \$20 trillion economy by 2047, with a 9% projected growth rate.

efficient port management, and equipment management.

- It involves pooling-in of huge effort and resources from every element of the industry - the regulators, port authorities and communities, to make it a success.

Need of the hour - Green Shipping

- Marine diesel increases sulphur dioxide emissions, calling for the adoption of Green Shipping as an alternative strategy.
- Emission intensity of CO₂, mistreatment of waste, oil, waste water, chlorofluorocarbons and nitrogen oxides are major concerns regarding sustainability of the sector.
- Shipping accounts for approximately 3% of CO₂ emissions along with 13% and 15% of SO_x and NO_x emissions from anthropogenic sources, respectively.
- The maritime sector emits 940 million tonnes of CO₂ and contributes 5% of all greenhouse gas emissions, according to the European Commission.

Green Shipping

- It is the transportation of freight or people through ships using minimum resources and energy as possible, to protect the environment from the pollutants generated in the process.
- It spearheads the promotion and adoption of cleaner practices to enforce emission control,

International precedents

- The **International Maritime Organization (IMO)** regulates standards, particularly with regard to sulphur content.

- Maritime trade was also excluded under the **Paris Agreement of 2015**, but could be included in future agreements.

Indian scenario

- India is the inaugural country under IMO Green Voyage 2050 project to conduct a pilot project related to Green Shipping.
- For this, the Ministry of Ports, Shipping, and Waterways envisages to make India a Global Hub for Green Ship building by 2030 with launch of Green Tug Transition Programme (GTTP) under which, India's first Centre of Excellence in Green Port & Shipping (NCoEGPS) has been set up.
 - ✓ The program will start with 'Green Hybrid Tugs', powered by Green Hybrid Propulsion systems, and subsequently adopt non-fossil fuel solutions like (Methanol, Ammonia, and Hydrogen).
 - ✓ It is to foster carbon neutrality and a circular economy in the shipping sector in India.
- India intends to increase the share of renewable energy to 60% of the total power demand of the major ports from a meagre 10% at present.
- Maritime Vision Document 2030 was launched in this regard for the sustainable maritime sector and a vibrant blue economy.
- The Ministry of Ports, Shipping & Waterways (MoPSW) has introduced the 'Harit Sagar' Green Port Guidelines 2023 to foster sustainable development in India's port industry.
- The ports have also aimed to reduce carbon emissions per ton of cargo handled by 30% by 2030.
 - ✓ Paradip Port, Deendayal Port, and V.O. Chidambaram Port etc. are to be developed as Hydrogen Hubs – capable of handling, storing, and generating green hydrogen by 2030.

Way Forward

- Embracing alternative fuels is one of the most impactful ways to reduce shipping's carbon footprint.
- Improving port infrastructure and operations are a sine-quo-non for reducing emissions and noise pollution.
- Optimizing vessel designs and boosting efficiency via advanced hull designs, optimized propulsion systems, and integrated energy-saving technologies translates into emissions reductions, making the sector more environmentally friendly.

10. National Water Awards, 2023

Current Context

The Department of Water Resources, River Development and Ganga Rejuvenation (DoWR, RD & GR), Ministry of Jal Shakti has launched the 5th National Water Awards (NWA), 2023 on the Rashtriya Puraskar portal.

About National Water Awards (NWAs)

- The National Water Awards (NWAs) were introduced to recognize and encourage exemplary work and efforts made by States, Districts, individuals, organizations, etc. across the country in accomplishing the government's vision 'Jal Samridh Bharat'.
- It aims to sensitize the public about the importance of water and motivates them to adopt the best water usage practices.
- The award winners in different categories will be

presented with a citation, trophy, and cash prize.

- The objective of the National Water Awards is to encourage the stakeholders to adopt a holistic approach toward water resource management in the country as surface water and groundwater play a significant role in the water cycle.
- The inaugural National Water Awards were launched in 2018, and the distribution ceremony took place on February 25, 2019, in New Delhi, with 82 winners recognized across 14 categories.
- In the year 2022, 4th National Water Awards were launched on 30th July, 2022 on Rashtriya Puraskar Portal of Ministry of Home Affairs.

Eligibility

- The National Water Awards (NWAs) are open to a wide range of entities and individuals, including:
 - ✓ States
 - ✓ Districts
 - ✓ Village Panchayats
 - ✓ Urban Local Bodies
 - ✓ Schools and Colleges
 - ✓ Institutions (other than schools or colleges)
 - ✓ Industries
 - ✓ Civil society organizations
 - ✓ Water User Associations
 - ✓ Individual

Trophy and Citation

- For the categories - 'Best State' and 'Best District', winners will be felicitated with a trophy and citation.
- In the remaining categories - 'Best Village Panchayat', 'Best Urban Local Body', 'Best School/College', 'Best Institution (other than school/college)', 'Best Industry', 'Best Civil Society', 'Best Water User Association', 'Best Industry', and 'Best Individual for excellence,' winners will be felicitated with cash prize along with trophy and citation.

- The cash prizes for the 1st, 2nd, and 3rd winners are Rs. 2 lakhs, Rs. 1.5 lakhs, and Rs. 1 lakh, respectively.

Selection Process

- All applications received for the National Water Awards are scrutinised by a Screening Committee of the DoWR, RD & GR.
- The shortlisted applications are placed before a Jury Committee headed by a retired Secretary level officer.
- Thereafter, ground truthing of the shortlisted applications is carried out by the organisations of DoWR, RD & GR viz. Central Water Commission (CWC) and Central Ground Water Board (CGWB).

Need for water conservation

- Overuse of water is the major reason for the depletion of the ground water.
- Climate change is likely to exacerbate this pressure on water resources, even as the frequency and intensity of floods and droughts in the country increases.
- The country has 18 percent of the world's population, but only 4 percent of its water resources, making it among the most water-stressed in the world.
 - ✓ A large number of Indians face high to extreme water stress, according to a recent report by the government's policy think tank, the NITI Aayog.
- India's current water requirement is estimated to be around 1,100 billion cubic meters per year, projected to go up to 1,447 billion cubic meters by 2050.
 - ✓ Being an agrarian country, irrigation by far is the largest user of India's water reserve with usage of 78% of total water reserve, followed by domestic sector (6%) and industrial sector (5%).

- According to the Central Ground Water Board (CGWB), with 230 billion metre cube of groundwater drawn out each year for irrigating agricultural lands in India, many parts of the country are experiencing rapid depletion of groundwater.
 - ✓ The total estimated groundwater depletion in India is in the range of 122-199 billion metre cube.
- Government initiatives for the conservation of water
 - Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS)
 - Pradhan Mantri Sinchayee Yojana (PMKSY)
 - Atal Mission for Rejuvenation and Urban Transformation (AMRUT)
 - Unified Building Bye Laws (UBBL)
 - Atal Bhujal Yojana
 - Jal Shakti Abhiyan
 - Paani Bachao Paisa Kamao

11. Solar Energy and Electric Vehicle Boost

Current Context

The window to limit human-caused warming to a globally agreed goal is narrowing but still open because of the huge growth of solar energy and electric vehicles sales worldwide, according to a report by the Paris-based International Energy Agency.

About

- The report emphasizes the necessity of increasing investments in climate action, with the required annual investment rising from \$1.8 trillion in 2023 to \$4.5 trillion by the early 2030s.
- The report highlights the urgency of addressing climate change, emphasizing the need for accelerated action to curb global warming and its devastating consequences.
- Solar energy and electric vehicle (EV) sales have grown significantly on a global scale, aligning with emissions reduction goals to limit global warming to 1.5C above pre-industrial levels.
- The report found that solar power capacity increased nearly 50% in the last two years and electric car sales increased by 240%.
- A three-fold increase in renewable power is needed by 2030.
- A 75% reduction in methane emissions from the energy sector is essential, given methane's potency as a greenhouse gas.
- Despite advancements in renewable energy and EVs, carbon dioxide emissions from the energy sector, which includes coal, oil, and gas production, remain alarmingly high. These emissions reached a new record of 37 gigatons in the past year.

Global Climate Agreements

- **Montreal Protocol** aims to stop producing substances that damage the ozone layer, such as chlorofluorocarbons (CFCs).
 - ✓ In 2016, parties agreed via the **Kigali Amendment** to also reduce their production of hydrofluorocarbons (HFCs), powerful greenhouse gases that contribute to climate change.
- **The UN Framework Convention on Climate Change (UNFCCC)** in 1992 established an

annual forum, known as the Conference of the Parties, or COP, for international discussions aimed at stabilizing the concentration of greenhouse gases in the atmosphere. These meetings produced the Kyoto Protocol and the Paris Agreement.

- **Kyoto Protocol** was the first legally binding climate treaty. It required developed countries to reduce emissions by an average of 5 percent below 1990 levels.
- The **Paris Agreement** requires countries to set emissions-reduction pledges, known as nationally determined contributions (NDCs) to limit global warming to under 2C, with a stricter goal of 1.5C. The ultimate aim is global net-zero emissions by mid-century, known as climate or carbon neutrality.

Solar energy and India's initiatives

- India is the world's third largest producer of renewable energy, with 40% of its installed electricity capacity coming from non-fossil fuel sources.
- Solar power installed capacity increased approximately 30 times from 2.6 GW to 70.10 GW since 2014.
- India's solar power generation capacity has now surpassed the 70,000 Mega watt mark and Rajasthan is leading with the highest installed base of the renewable energy technology among all the states.
- **International Solar Alliance:** The International Solar Alliance is an action-oriented, member-driven, collaborative platform for increased deployment of solar energy technologies.
- **Kisan Urja Suraksha evam Utthaan Mahabhiyan (PM-KUSUM):** The PM-KUSUM scheme was launched by the Ministry of New and Renewable Energy (MNRE) to support installation of off-grid solar pumps in rural areas and reduce dependence on grid, in grid-connected areas.
- **National Solar Mission:** India launched the National Solar Mission in 2010, which aims to

promote the development and use of solar energy in the country. It sets ambitious targets for solar power capacity installation.

- **Solar Parks:** The Indian government has established solar parks and ultra-mega solar power projects to facilitate large-scale solar power generation.
- **Sustainable rooftop implementation of Solar transfiguration of India (SRISTI) scheme** to promote rooftop solar power projects in India.
- Permitting **Foreign Direct Investment (FDI)** up to 100 percent under the automatic route.
- The Government is creating new sub-station capacity under the **Green Energy Corridor Scheme** for evacuation of renewable power; notification of standards for deployment of solar photovoltaic systems and setting up of Project Development Cell for attracting and facilitating investments.

Electric vehicles in India

- Electric vehicles (EVs) are automobiles that are powered by electricity stored in rechargeable batteries, which drive electric motors to propel the vehicle.
- EVs are an eco-friendly alternative to traditional internal combustion engine vehicles, producing zero tailpipe emissions and reducing reliance on fossil fuels.
- Over the last three years, electric vehicle sales in India have surged, with a remarkable increase of more than 2,218%.
- As of 2022-23, the cumulative sales of EVs in India have crossed the milestone of 1 million units. Two-wheelers constitute more than 60% of all EV sale.
- The Government has set a target to achieve 30% electric vehicle penetration in the country by 2030.

India's initiatives

- **Faster Adoption and Manufacturing of Electric Vehicles in India Phase II (FAME India Phase II)** Scheme to promote hybrid/electric technology in transportation so as to

reduce dependency on fossil fuels and to address issues of vehicular emissions.

- **Production Linked Incentive (PLI) Scheme for Advanced Chemistry Cell (ACC):** The scheme incentivises the establishment of Giga scale ACC manufacturing facilities in the country for 50 Giga Watt hour (GWh). These ACCs will be used in batteries which are aimed to promote the widespread adoption of EVs.
- The **National Electric Mobility Mission Plan (NEMMP)** sets out the target to achieve 6-7 million sales of hybrid and electric vehicles year on year from 2020 onwards by providing fiscal incentives.
- The **National Mission on Transformative Mobility and Battery Storage** seeks to create a comprehensive ecosystem for the adoption of EVs and support the establishment of giga-scale battery manufacturing plants in India.

- The **Vehicle Scrappage Policy** provides incentives for the scrapping of old vehicles and the purchase of new electric vehicles.
- The **Go Electric campaign** aims to create awareness on the benefits of EVs and EV charging infrastructure. India is among a handful of countries that support the global EV30@30 campaign, which aims for at least 30% new vehicle sales to be electric by 2030.

Way Forward

- The boost in solar energy adoption and electric vehicle sales offers hope for achieving climatic goals.
- However, the journey toward a sustainable and climate-friendly future requires continued commitment to renewable energy, cleaner transportation, and global cooperation.

4.2. DISASTER MANAGEMENT

1. Joshimath subsidence raises alarm bells

Current Context

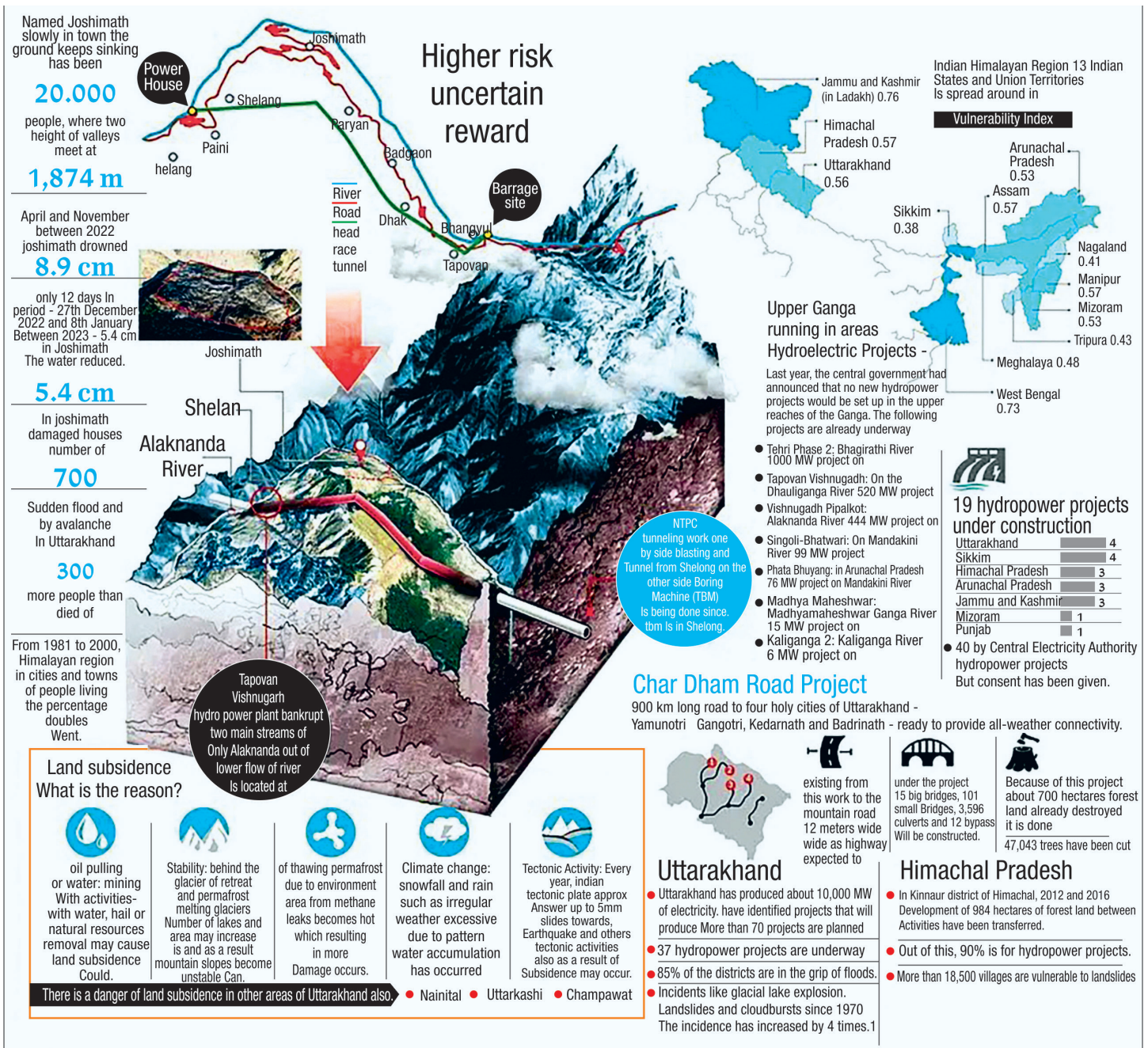
Recently, an **Expert Committee** assessed that land subsidence was caused by a wide variety of reasons and thereby, recommended making the city a 'No New Construction Zone'.

About

- Earlier in the year, Joshimath had been declared a **landslide-subsidence zone**.
 - ✓ A 35-member team conducted a "Post Disaster Needs Assessment" recently to assess the damage caused and to identify the assistance required for the long-term recovery and reconstruction. The team consisted of professionals from the National Disaster Management Authority, UN agencies, Central Building Research Institute, National Institute of Disaster Management, and other agencies.
- Land subsidence has affected around **65 per cent** of the houses in the pilgrimage town of Joshimath in Uttarakhand.
- According to the assessment report, **1,403 of the total 2,152 houses in Joshimath have been affected** due to land subsidence and these need immediate attention.
 - ✓ A total of **472 houses need to be reconstructed and 931 houses need to be repaired/retrofitted**.
 - ✓ "Damaged houses must be retrofitted in line

with 'build back better' principles in order to enhance their resilience against not just

landslides, but also other disasters, the report read.



Vulnerability of the region

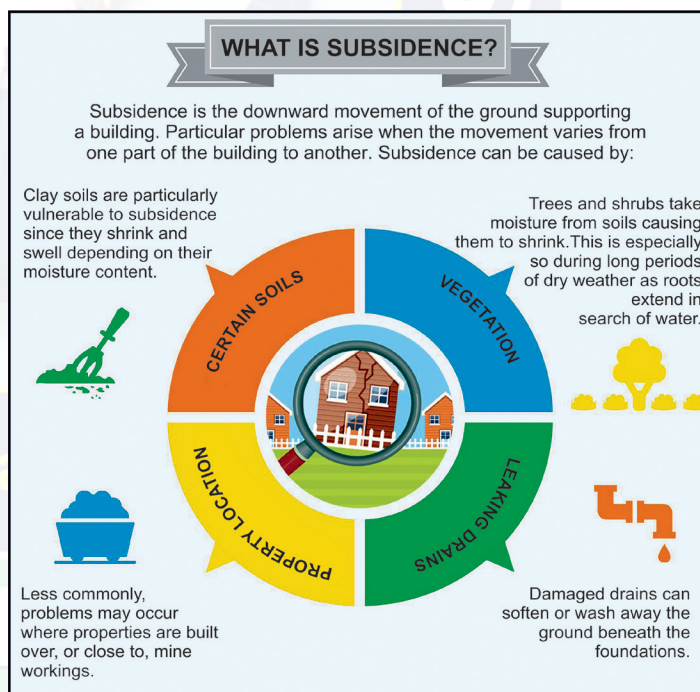
- A number of houses and civil structures in an area located near Joshimath-Auli road began to display major cracks due to land subsidence, prompting the relocation of more than 355 families.

- The report said the main causes of damage to buildings in Joshimath include the use of weak building materials like mud-based mortars, insufficient reinforcement, structural flaws, and the location of buildings on steep slopes.
- ✓ Some buildings do not have strong support

structures like reinforced concrete (RC) or wooden bands to keep them stable.

- ✓ Some buildings have very long walls that aren't well supported and light roofs which cause the building to expand and contract, leading to damage when the ground moves.
- The Committee also **urged the state government to completely ban new construction** in the town till the end of the monsoon season and allow relaxation only for light-weight structures after post-monsoon reassessment of ground conditions.
- The report highlights that **although building bylaws exist, they are not mandatory for residential buildings** as people obtain permits only when they need a loan or for other government requirements.
 - ✓ One of the primary reasons for Joshimath's current situation is the absence of a building permit system.
 - ✓ Had there been risk-based building bylaws in place and existing buildings were in compliance with them, the extent of damage would have been less, and retrofitting would have been less expensive.
- Another issue of concern identified in **the report is the lack of town planning and absence of risk-informed land use maps.**
 - ✓ The roads are too narrow, and there are hardly any open spaces in the neighbourhoods. This makes the town highly unsafe since access in emergency situations is almost impossible.
- **Internal erosion in the underneath soil** caused instability in the entire structure of the city, the report said.
- The report also noted that Joshimath's expansion has **disrupted the flow of the natural drain flowing from above.**
 - ✓ Drain water is continuously seeping into the ground which has increased the level of damage due to excessive rainfall over the past 10 years.

- The agencies represented in the Committee emphasized the immediate need for the development of a **prospective plan** with the objective of creating a safe and resilient Joshimath for the next 10-15 years.
- **The Himalayan town lies in seismic zone V** and is also prone to landslides and flash floods
- **The Central Building Research Institute (CBRI)** warned against indiscriminate construction, not just in Joshimath but other hill cities and towns, and recommended a review of the principles of town planning in the Himalayan region.
- Meanwhile, **the Geological Survey of India (GSI) and the National Institute of Hydrolog (NIH)** gave a "clean chit" to the NTPC's 520 MW Vishnugad hydroelectric project on the Alaknanda River in Chamoli district.



- ✓ Locals and experts had said that work for the project – along with drilling and using explosives for the Char Dham highway project – destabilized the region.

Key Observations

- **Incidents of land subsidence in Joshimath were reported in the 1970s too.**
 - ✓ Garhwal Commissioner Mahesh Chandra Mishra's panel submitted a report in 1978, stating that major construction works should not be carried out in the city and the Niti and Mana valleys as these areas are situated on moraines (a mass of rocks, sediment, and soil transported and deposited by a glacier).
- **Joshimath in Uttarakhand has been facing the issue of land subsidence for almost five decades, the Geological Survey of India (GSI) said in a recent report.**
 - ✓ In the report, GSI identified 81 cracks in Joshimath. Of these, 42 cracks are recent, related to the recent occurrence of subsidence reported on January 2, 2023, while the remaining cracks are old.
- **The National Remote Sensing Center (NSRC) of the ISRO** has released satellite images of the city of Joshimath, revealing a preliminary land subsidence analysis that indicates that the entire city is in danger of completely sinking.
 - ✓ According to preliminary analysis, Joshimath sank by 8.9 cm between April and November 2022, during which time ground subsidence was sluggish.
 - ✓ However, the rate of soil subsidence accelerated between December 27, 2022, and January 8, 2023 where the town sank by 5.4 cm in only 12 days.

2. Cloud Burst in Sikkim

Current Context

Recently, a cloud burst over Lhonak Lake in North Sikkim resulted in a disastrous flash flood adjacent to the Teesta River in the Lachen Valley.

About

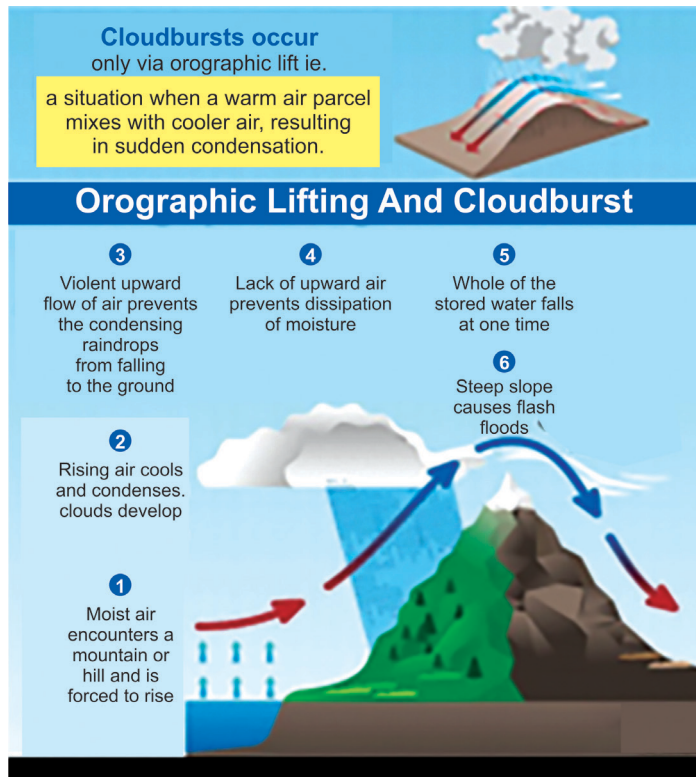
- Around 14 were killed and 102, including at least 23 Army personnel, went missing after the Lake burst due to incessant rains, leading to the release of water in downstream areas.
- This caused the rise of water levels in Teesta river that flooded at least four districts, including Mangan, Gangtok, Pakyong and Namchi, according to the Sikkim State Disaster Management Authority (SSDMA).
- Numerous studies have highlighted South Lhonak Lake's rapidly growing size due to glacier melting and marked it as susceptible to **Glacial Lake Outburst Flood (GLOF)**.
- With the rising global temperatures, glaciers in Sikkim Himalayan have been melting rapidly,

giving rise to many glacier lakes and expanding the already existing ones in the region.

Cloud Burst

- Cloud bursts, according to the **National Aeronautics and Space Administration (NASA)**, are brief but intense periods of heavy rainfall that occur when a large amount of rainwater is released from a convective cloud in a short span of time.
- They are typically associated with thunderstorms and can lead to flash floods, landslides, and other forms of water-related disasters.
- Cloudbursts are not uncommon events, particularly during the monsoon months. Most of these happen in the Himalayan states where the

local topology, wind systems, and temperature gradients between the lower and upper atmosphere facilitate the occurrence of such events.



Causes of Cloud Burst

- Cloud burst occurs when moisture-rich air travels up a mountainous region, forming a vertical column of clouds known as **Cumulonimbus clouds**. These clouds usually cause rain, thunder and lightning.
- This upward movement of clouds is also known as '**orographic lift**'. Due to these unstable clouds, heavy rainfall may occur over a small area.
- The upward movement of clouds provides the required energy for a cloud burst. It usually happens at 1,000-2,500 metres above the sea level. The moisture is usually provided by low-level eastern winds associated with a low-pressure system over the Gangetic plains.
- **The frequency of such events has been increasing in recent years partly due to climate change.**
 - ✓ Increasing incidents of cloud bursts in

Jammu and Kashmir, Himachal Pradesh and Uttarakhand are a clear evidence of climate change.

- The damage caused by cloud bursts is also increasing because of unplanned development in mountain regions.
- Global warming is leading to more evaporation of water and because of this dense cumulonimbus clouds are forming, resulting in intense rainfall. It is also resulting in prolonged droughts in other regions.

NDMA Guidelines

- Establish and enhance meteorological monitoring and forecasting systems to detect and notify authorities about potential cloud bursts.
- Prepare and communicate emergency plans to communities in vulnerable areas, ensuring they know evacuation routes and safe locations.
- Design and maintain drainage systems, embankments, and other infrastructure to handle heavy rainfall and prevent flooding.
- Implement regulations to prevent construction in high-risk areas and promote sustainable land use to minimize the impact of cloud bursts.
- Raise awareness about cloud bursts and their risks among local communities, encouraging them to take preventive measures.

GLOF

- Glacial lakes are large bodies of water that sit in front of, on top of, or beneath a melting glacier. As they grow larger, they become more dangerous because glacial lakes are mostly dammed by unstable ice or sediment composed of loose rock and debris.
- In case the boundary around them breaks, huge amounts of water rush down the side of the mountains, which could cause flooding in the downstream areas. This is called glacial lake outburst floods (GLOF).
 - ✓ In 2013, one such event took place in Uttarakhand's Kedarnath when the region

witnessed flash floods along with a GLOF caused by the Chorabari Tal glacial lake, killing thousands of people.

- GLOF can be triggered by several reasons, including earthquakes, extremely heavy rains (Cloud Burst) and ice avalanches etc.

3. Afghanistan Earthquake

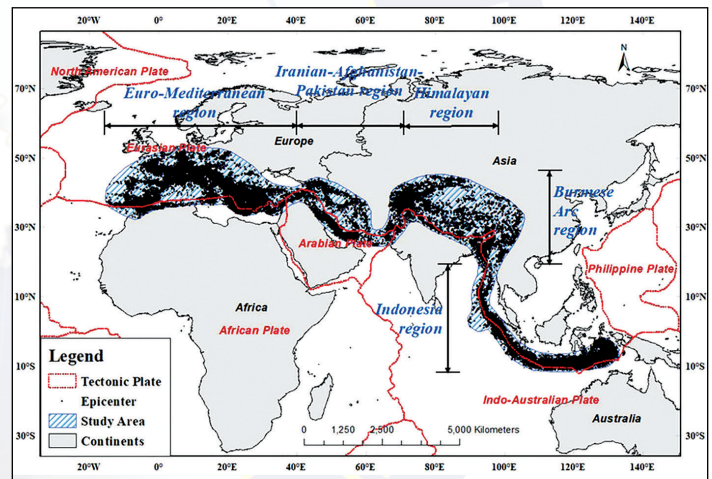
Current Context

A powerful **6.3 magnitude** earthquake struck western Afghanistan on 15 October 2023, just over a week after strong quakes and aftershocks killed thousands of people and flattened entire villages in the same region.

About

- The United States Geological Survey said the quake had an **epicentre 33km northwest of Herat City**.
- The earthquakes on October 7 flattened whole villages in Herat, in one of the most destructive quakes in the country's recent history.
- The initial quake, numerous aftershocks and a second 6.3-magnitude quake** on October 11 flattened villages, destroying hundreds of mud-brick homes that could not withstand such force. Schools, health clinics and other village facilities also collapsed.
- More than 90% of the people killed a week ago were women and children.
- The earlier quakes killed more than 2,000 people across the province. The epicentre was in Zenda Jan district, where 1,294 people died, 1,688 were injured and every home was destroyed.

- Along with the Hindu Kush, it includes a number of mountain ranges, such as the Alps, Atlas Mountains and the Caucasus Mountains.



Convergent Plate boundary

- The Earth's crust is especially lively in Afghanistan because it is where the Arabian, Indian and Eurasian tectonic plates meet.
- The boundary between the **Indian and Eurasian plates** exists near Afghanistan's border with Pakistan.
- Recent earthquakes formed when the Indian plate crashed violently with the Eurasian plate.
- Collisions like this shake and squeeze the ground upwards.
- Along with causing earthquakes, this movement creates mountains like the Himalayas or the

Location of Afghanistan more prone to earthquakes

- Afghanistan is earthquake-prone because it's located in the mountainous Hindu Kush region, part of the **Alpine belt**.
- This belt is the **world's second most seismically active region** after the Pacific Ring of Fire.
- The Alpine belt** runs about 15,000 kilometres, from the southern part of Eurasia through the Himalayas and into the Atlantic.

Hindu Kush and Pamir mountain ranges in northeast Afghanistan.

Tectonic Plate

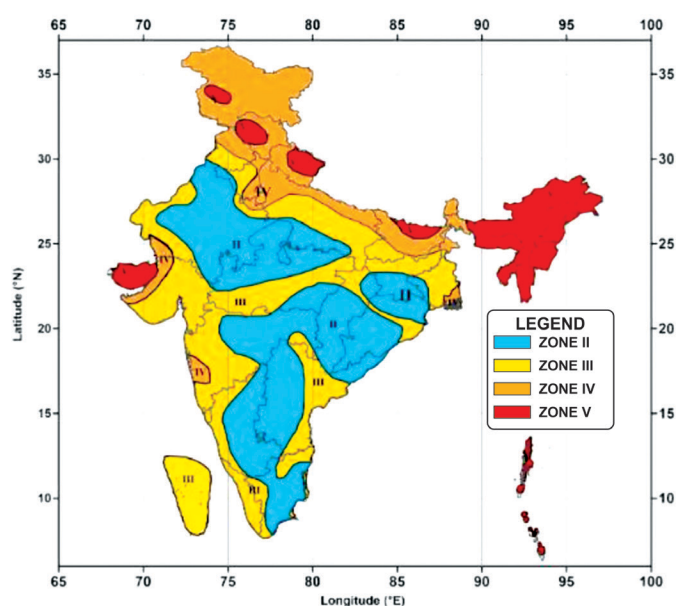
- A tectonic plate (also called lithospheric plate) is a massive, irregularly shaped slab of solid rock, generally composed of both continental and oceanic lithosphere.
- Plate thickness also varies greatly, ranging from less than 15 km for young oceanic lithosphere to about 200 km or more for ancient continental lithosphere (for example, the interior parts of North and South America).
- Plates can be moving towards each other or away from each other, based on which the plate boundaries can be called as convergent or divergent boundaries.

Earthquake

- An earthquake is an intense shaking of the ground caused by movement under the earth's surface.
 - ✓ **Hypocentre:** The location below the earth's surface where the earthquake starts is called the hypocentre.
 - ✓ **Epicenter:** The location directly above the hypocentre on the surface of the earth is called the epicentre.
- It happens when two blocks (tectonic plates) of the earth suddenly slip past one another releasing stored-up 'elastic strain' energy in the form of seismic waves.
- These spread through the earth and cause the shaking of the ground.
- They are measured on scales called the –
 - ✓ **Moment Magnitude Scale (M_w),** based on the total moment (a product of the distance a fault moved and the force required to move it) release of the earthquake.
 - ✓ **The Richter scale (magnitude scale):** energy released - 0-10.
 - ✓ **The intensity scale/Mercalli scale:** visible damage - 1-12.
- Earthquakes continue to remain the most common natural hazard that cannot be predicted as no early warning systems can be developed.

India's proneness to earthquake

- A total of **59% of the land mass of India** (covering all states of India) is prone to earthquakes of different intensities.
- As per the seismic zoning map of the country, the total area is classified into four seismic zones. Zone V is seismically the most active region, while zone II is the least. **Approximately, 11% area of the country falls in zone V, 18% in zone IV, 30% in zone III and remaining in zone II.**



Government Agencies engaged in earthquakes

- **The National Centre for Seismology** under Ministry of Earth Sciences is the nodal agency of Government of India (GoI), for monitoring earthquakes in and around the country.
 - ✓ For this purpose, NCS maintains a **National Seismological Network (NSN)** consisting of 115 observatories spread across the country.
- Additionally, **National Disaster Management Authority (NDMA)** of India is engaged with conducting regular awareness campaigns every year through print, electronic as well as social media.
- Besides, the Government of India is poised to follow guidelines by the **Bureau of Indian**

Standards (BIS), Building Materials & Technology Promotion Council (BMTPC) and Housing and Urban Development Corporation (HUDCO) etc. for design and

construction of earthquake risk resistant structures to minimize the loss of life and damage to property caused by earthquakes.

4.3. GEOGRAPHY

1. Zealandia

Current Context

Recently, a newly refined map of Zealandia was created by a small international team of geologists and seismologists, who used the data from rock samples on the ocean floor, as the eighth continent is majorly submerged in water.

About

- This eighth continent of the world named Zealandia is 94 per cent under the sea and the remaining 6 per cent are the islands which include New Zealand and other Pacific Ocean islands that fall nearby.



- The report further said that previously, volcanic forces separated the supercontinent of Gondwana to create the continents we now have in place, about 83 million years earlier.
- In order to refine the existing maps of Zealandia, the research team studied the collection of rocks and sediment samples from the ocean floors, most of which came from drilling sites, while others came from the shores of the islands in the area.
- The examination of the samples revealed geological patterns in Western Antarctica, suggesting that a subduction zone may exist near Campbell Plateau on New Zealand's West Coast.
- Earlier, a 2021 study suggested that Zealandia is 1 billion years old, about twice as old as geologists proclaim.

Zealandia

- Zealandia is thought to have been formed around 83 million years ago, during the Late Cretaceous Period.
- It is a long, narrow microcontinent that is mostly submerged in the Southern Pacific Ocean.
- Zealandia broke off from the Antarctica about

100 million years ago, and then from Australia about 80 million years ago.

- Zealandia was originally part of the ancient supercontinent of Gondwana, which was formed about 550 million years ago and essentially lumped together as a cumulative landmass in the Southern Hemisphere.
 - ✓ It occupied a corner on the eastern side, where it bordered several others, including half of West Antarctica and all of eastern Australia.
 - ✓ Zealandia was submerged around 30 million to 50 million years after it broke off from Gondwana.
- Zealandia is also substantially larger than the Arabian Peninsula, the world's largest peninsula, and the Indian subcontinent.

Geographical features

- It extends from the southern part of New Zealand, northward to New Caledonia, and west to the Kenn Plateau off Australia's east.
- Apart from New Zealand, the other regions which are in close proximity to the continent include

New Caledonia and other Australian territories belonging to the Lord How Island.

- The first evidence of its presence was in 1642 when Abel Tasman, a Dutch Sailor, went on a mission to discover a huge continent, situated in the Southern Hemisphere.
- Continental crust (SiAl) is usually around 40 km deep – significantly thicker than the oceanic crust (SiMa), which tends to be around 10 km.
- Zealandia is a very tectonically active region. Part of the microcontinent is on the Australian plate, while the other part is on the Pacific plate.
 - ✓ The northern part of Zealandia is very volcanic. There are six major areas with active volcanoes, the largest being the Taupo Volcanic Zone on the North Island.
- The submerged part of Zealandia is rich in mineral deposits, although New Zealand's government strictly controls undersea mining activity.
 - ✓ There are many natural gas fields as well, scattered throughout Zealandia. The Maui natural gas field in the Tasman Sea is the largest of them all.

5. ECONOMY

1. India's first Regional Rapid Transit System (RRTS)

Current Context

Recently, Prime Minister of India inaugurated the priority section of Delhi-Ghaziabad-Meerut RRTS Corridor at Sahibabad RapidX Station, Uttar Pradesh.

Regional Rapid Transit System (RRTS) Project

- The RRTS is developed by the National Capital Region Transport Corporation (NCRTC), a joint venture of the Government of India and governments of Delhi, Haryana, Rajasthan and Uttar Pradesh.
- A total of eight RRTS corridors have been identified to be developed in NCR, out of which three corridors have been prioritised to be implemented in Phase-I including:
 - ✓ Delhi – Ghaziabad – Meerut Corridor
 - ✓ Delhi – Gurugram – SNB – Alwar Corridor
 - ✓ Delhi – Panipat Corridor.

Delhi-Ghaziabad-Meerut RRTS Corridor

- The total length of the Delhi-Meerut corridor is 82 kilometres which will be covered in just an hour. It comprises 24 stations.
- It will connect Delhi to Meerut in less than an hour

of travel time going through the urban centres of Ghaziabad, Muradnagar, and Modinagar.

- The 17 Km priority section of Delhi-Ghaziabad-Meerut RRTS Corridor will connect Sahibabad to 'Duhai Depot' with stations at Ghaziabad, Guldhar and Duhai on the way.
- The foundation stone for Delhi-Ghaziabad-Meerut corridor was laid by the Prime Minister on 8th March 2019.
- The project has been constructed at a cost of Rs 30,274 crore.
- The Asian Development Bank, New Development Bank and Asian Infrastructure Investment Bank have also funded this project.

Regional Rapid Transit System (RRTS)

- In line with the Prime Minister's vision to transform regional connectivity in the country through construction of new world class transport infrastructure, the Regional Rapid Transit System (RRTS) project is being developed.
- RRTS is a new rail-based, semi-high-speed, high-frequency commuter transit system.
- Delhi's iconic Lotus Temple is an epitome of sustainability as its design allows flow of natural sources of light and air circulation.
 - ✓ On similar lines, RRTS rolling stock will have lighting and temperature control systems to enhance passenger experience with less energy consumption.



- According to NCRTC, the RAPIDX services will be the nation's "first railway system" with a maximum operational speed of 160 kmph along its entire length.
- The average speed of RAPIDX trains on the RRTS will be 100 kmph, surpassing both metro trains and Indian Railways' passenger trains.
- With a design speed of 180 Kmph, RRTS is a transformational, regional development initiative, which is designed to provide high-speed trains for intercity commuting every 15 minutes, which can go up to a frequency of every 5 minutes as per requirement.
- RRTS are entirely being manufactured under the government's 'Make in India' policy.

Features

- RAPIDX trains will feature six coaches, each RAPIDX train will have one premium coach with a host of features like reclining seats, coat hooks, magazine holders, footrests and separate entry and exit points on the platform.
 - ✓ Entry to this coach will be accessible only through a premium lounge on the platform.
- In every RAPIDX train, a train attendant will be deputed to ensure a safe and secure commute.
- One coach in every RAPIDX train is reserved for women; it is the coach next to the premium coach.
- A designated space for wheelchairs and stretchers has been provided in the last coach.
- For commuters travelling with young children, a diaper-changing station has been provided in the women's washroom at every station.
 - ✓ Other several commuter-centric facilities include overhead luggage racks, Wi-Fi, mobile

and laptop charging facility at every seat.

- Artificial Intelligence (AI)-enabled Door Frame Metal Detectors (DFMDs) will be used for security screening of commuters at stations.
- The trains will also come equipped with a vending machine facility.
- Commuters will be able to travel using paper QR code-based journey tickets, National Common Mobility Card (NCMC) cards, and digital QR code-based tickets that can be availed through the NCRTC's mobile app, 'RAPIDX Connect'.
- Further, a Lost & Found Centre has been established in RAPIDX and any lost item can be collected from the same station within 24 hours.
 - ✓ For the priority section, the Lost & Found Centre is located at the Ghaziabad RAPIDX Station.

Importance of RRTS

- RRTS being developed in the country, is a state-of-the-art regional mobility solution, and is comparable to the best in the world.
- It will provide safe, reliable and modern intercity commuting solutions in the country.
- In line with PM GatiShakti National Master Plan, the RRTS network will have extensive multi-modal integration with Railway stations, Metro stations, Bus services etc.
- Such transformative regional mobility solutions will boost economic activity in the region; provide improved access to employment, education & healthcare opportunities; and help in significant reduction of vehicular congestion & air pollution.

2. Government Eases Angel Tax

Current Context

The government has eased some of the provisions of the angel tax introduced in this year's Budget on investments into startups by non-resident investors at a premium over their fair market value.

About

- It has introduced five different valuation methods for shares and offered a 10% tolerance for deviations from the accepted share valuations.
- As per a notification issued by the Central Board of Direct Taxes, Rule 11UA under the Income Tax Act has been amended, with some changes to the draft norms, bringing relief to prospective foreign investors in startups.

Impact

- The introduction of five alternative valuation methods for the valuation of equity shares, which so far could only be valued based on NAV and Discounted Free Cash Flow methods, should provide more flexibility to merchant bankers for the valuation of a company.
 - ✓ The option to value equity shares by any of these five methods is not available to resident investors.
- Indian companies and investors were facing severe practical difficulties in executing a simple transaction involving infusion of capital on account of lack of clarity on these rules. Hopefully the investors will now get a push to consummate their investment in Indian firms.
- The amended rule brings in more clarity for both investor and investee basis which an appropriate valuation method can be adopted, thereby, reducing the chances of any future litigation and addressing illegitimate or non-genuine transactions while promoting investments in eligible startups.
- One issue that needs to be seen is whether these announcements can be regarded as clarificatory in

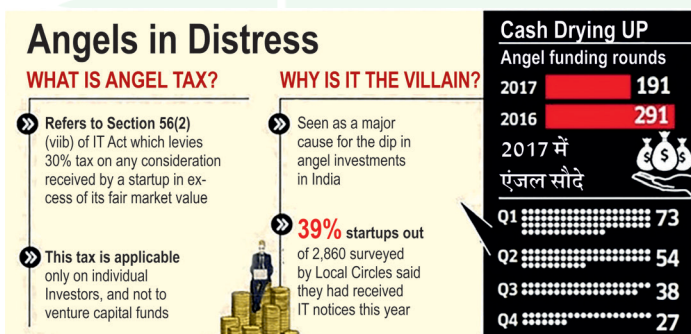
nature and hence retrospective in interpretation or whether these would be applicable from immediate effect as per the plain reading of the notification.

Angel Tax

- Angel taxes are taxes levied on funds raised by startups if they exceed the fair market value of the company.
- It was proposed in Budget 2023-24 to extend the provisions of 'angel tax' to transactions involving foreign investors.
- If an Indian unlisted company receives an excess premium on the sale of shares to a foreign investor, it will be subject to tax as the premium is considered "income from other sources".
- Before this proposal, Angel tax was imposed only on investments made by a resident investor. Now, it will include foreign investors in the ambit of tax.
 - ✓ When a startup raises funding from a foreign investor, it will also be counted as income and be taxable after the amendment.
- Exceptions are also made where foreign investors need not pay any angel tax while investing in a government-recognised, DPIIT registered startup in India.

What an Angel Tax means for the economy?

- It can impact the funding of startups, in context of the declining funding trend in startups.
 - ✓ India's startups dropped by 33 per cent to \$24 billion in 2022 as compared to the previous year.
- It creates apprehension among the startups as the imposition of angel tax impacts the fair market valuation of the company. Thus, it can damage confidence in the startup ecosystem.
- Angel taxes impact the FDI inflows as investors may not want to deal with an additional tax liability while funding a startup.



Who are Angel Investors?

- Angel investors are high-net-worth individuals who invest their personal income in business startups or small and medium-scale companies.

3. IMF raises India's growth forecast to 6.3%

Current Context

The International Monetary Fund (IMF) has upgraded India's growth forecast for FY24 to 6.3% from 6.1% due to stronger-than-expected consumption in the April-June quarter.

About

- The forecast for FY25 remains unchanged at 6.3%. India is expected to continue being the fastest-growing major economy. The global economy is projected to slow down, with growth forecasts revised downwards.
- IMF's upgrade is the latest in several revisions for India that have seen FY24 growth forecasts edge up to near the Reserve Bank of India's 6.5% estimate.

Key Details

- Growth in India is projected to remain strong, at 6.3 percent in both 2023 and 2024, with an upward revision of 0.2 percentage point for 2023, reflecting stronger-than-expected consumption during April-June, IMF said in the World Economic Outlook (WEO), released recently.
- The IMF's 2023-24 growth forecast for India is now the same as what the World Bank had projected in its India Development Update on October 3, 2023.
- India's 2024-25 GDP growth forecast has been left unchanged at 6.3% in the October WEO data.
- While the IMF's upward revision of India's 2023-24 GDP growth comes in the wake of a strong 7.8% growth in the quarter ending June 2023, the annual growth number is still lower than the 6.5% projection by RBI's Monetary Policy Committee.

What is the International Monetary Fund?

- The IMF was set up along with the World Bank after the Second World War to assist in post-war reconstruction efforts, being known as the Bretton Woods twins.
- Created in 1944, the IMF is accountable to the 190 countries that make up its near-global membership.

✓ India joined on 27th December 1945.

- The IMF's primary purpose is to ensure the stability of the international monetary system — the system of exchange rates and international payments that enables countries (and their citizens) to transact with each other.
- ✓ The Fund's mandate was updated in 2012 to include all macroeconomic and financial sector issues that bear on global stability.
- **Reports by IMF:**
 - ✓ Global Financial Stability Report.
 - ✓ World Economic Outlook.

World Economic Outlook

- It is a bi-annual survey by the IMF that is usually published in the months of April and October.
- It analyzes, postulates and predicts global economic developments during the near and medium term.

Highlights of the latest publication

- The baseline forecast is for global growth to slow from 3.5 percent in 2022 to 3.0 percent in 2023 and 2.9 percent in 2024, well below the historical (2000-19) average of 3.8 percent.
- Advanced economies are expected to slow from 2.6 percent in 2022 to 1.5 percent in 2023 and 1.4 percent in 2024 as policy tightening starts to bite.
- Emerging market and developing economies are projected to have a modest decline in growth from 4.1 percent in 2022 to 4.0 percent in both 2023 and 2024.
- Global inflation is forecast to decline steadily, from 8.7 percent in 2022 to 6.9 percent in 2023 and 5.8

percent in 2024, due to tighter monetary policy aided by lower international commodity prices.

- Core inflation is generally projected to decline more gradually, and inflation is not expected to return to target until 2025 in most cases.
- Monetary policy actions and frameworks are key at the current juncture to keep inflation expectations anchored.
- Chapter 2 documents recent trends in inflation expectations at near- and medium-term horizons

and across agents.

- It emphasizes the complementary role of monetary policy frameworks, including communication strategies, in helping achieve disinflation at a lower cost to output through managing agents' inflation expectations.
- Given increasing concerns about geoeconomic fragmentation, Chapter 3 assesses how disruptions to global trade in commodities can affect commodity prices, economic activity, and the green energy transition.

4. Index inclusion bring foreign inflows

Current Context

Recently, financial services company announced that 23 Indian Government Bonds, with a combined nominal value of \$330 billion, have been found eligible to be added to the Global Bond Index Emerging Markets Index (GBI-EM).

About

- India as part of its emerging market global bond indices marks the end of nearly a decade of negotiations between the government and the international index provider.
- The bonds will be included in the indices over 10 months, starting 28 June 2024, with 1% weight being added per month, and is expected to reach the maximum weight of 10% by 31 March 2025.

- Economists and brokerages estimate this move will drive inflows worth as much as \$40 billion over the next 18-21 months.
- It became the first global index provider to include them on its emerging markets index. The decision sets the stage for billions of dollars of inflows just when the bond market is straining under record government borrowings.

What is the Global Bond Index?

- A global bond index is a financial benchmark that provides a comprehensive measure of the performance of a specific segment of the global bond market.
 - ✓ These indices typically track a diverse range of fixed-income securities, such as government bonds, corporate bonds, municipal bonds, and other debt instruments, from various countries and regions worldwide.
- Examples of global bond indices include the Bloomberg Barclays Global Aggregate Index and the J.P. Morgan Global Aggregate Bond Index.
 - ✓ These indices cover a wide range of bond



India's inclusion in JPMorgan's global emerging-market bond index could prompt \$25 billion of inflows from foreign investors, the bank said in a research report. Given India's large weight in the index, the process would likely be staggered over 10 months, Arthur Luk, a JPMorgan Chase & Co. strategist said.

markets and play a crucial role in the investment world by guiding asset allocation decisions and risk management strategies for bond investors.

- It was the first time Indian G-Secs were added to a major global bond index.

Inclusion in Global Bond Index brings several advantages

- This could be a push-factor to prompt foreign inflows into India and foreign investors are likely to be more active in the Indian fixed-income market.
- The move buttresses India's aspirations for a bigger global heft as it boasts one of the world's fastest rates of economic growth and positions itself as an alternative to China.
- The inclusion will open up the nation's public finances to greater scrutiny from foreign investors, likely increasing the volatility of local markets.
- It should structurally augur well for rates and forex markets, leading to lower cost of borrowings for the economy and more accountable fiscal policy-making.
- Inclusion in the indexes could facilitate about USD24 billion in passive inflows between June 2024 and March 2025. Flows could be greater if other indexes also move to include Indian government securities.
- The inclusion in the widely tracked index is likely to benefit India by roughly around \$20-40 billion in the next 18- to 24-month period as Indian bonds will be accessible to foreign investors while the rupee is likely to be strengthened, thus boosting the economy.
- ✓ This could be lowering bond yields and supporting the currency,
- It creates an additional source to fund the current account deficit and fiscal over the next one or two years.
- ✓ But once this initial adjustment is done, it will lend relatively higher volatility to the Indian bond market and Indian foreign capital too.

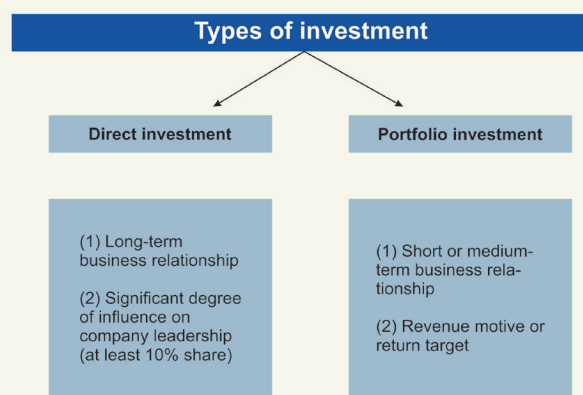
- India's fixed income markets could see inflows upwards of \$40 billion over the next one-and-a-half years.

Government Bond

- Government bonds are debt securities issued by a government to raise funds for various purposes, such as financing budget deficits, funding infrastructure projects, or managing government expenses.
- The Reserve Bank of India issues bonds on behalf of the government of India. These are tradeable and fungible government securities or G-Secs.
- In common parlance, government securities with a maturity of less than one year are called Treasury bills, and those with longer maturity are called Government Bonds.

Foreign inflows

- Foreign inflow refers to the flow of capital, investments, or funds from foreign sources into a country's economy. It can take various forms, and the types of foreign inflow include:



Source: Author's own diagram.

| Bertelsmann Foundation

- Foreign Direct Investment (FDI)- FDI involves foreign entities making long-term investments in businesses, infrastructure, or assets within a host country.
- Foreign Portfolio Investment (FPI)- FPI refers

to investments in financial assets like stocks, bonds, and other securities by foreign individuals or institutions.

Government Bond	Treasury Bill
Long-term instrument that the Zambian Government issues to borrow money for a period of more than one year. Bought at a price that is either less, equal or more than the face value. The Zambian Government pays a fixed rate of interest called the coupon every six months and the face (par) value on maturity date.	Short-term instrument that the Zambian Government issues to borrow money for a period of one year or less. Bought at a price less than the face (par) value. On maturity date, the Government pays the holder of the Treasury bill an amount of money equal to the face value. The interest earned on the Treasury bill is the difference between the price you pay to buy it and the face (par) value you receive on maturity date.

- These investments are typically considered more short-term compared to FDI.
- Foreign Aid and Grants- Foreign governments, international organizations, or non-governmental organizations may provide aid or grants to support various projects or initiatives in a recipient country.
- Foreign Loans and Borrowing- Government or private entities in one country may borrow funds from foreign lenders, such as international banks or governments.

- Foreign Remittances- This type of inflow consists of funds sent by individuals working abroad to their families or recipients in their home country.
- Foreign Exchange Reserves- Foreign exchange reserves are assets held by a country's central bank in foreign currencies.
- Foreign Donations and Philanthropy- Foreign individuals, organizations, or foundations may donate funds to support charitable, educational, or social causes in a foreign country.
- Foreign Trade and Exports- When a country exports goods and services to foreign markets, it generates income in the form of foreign exchange earnings.

Conclusion

- The admission of government bonds into global bond indices can significantly attract foreign capital inflow.
- This influx of funds can strengthen India's financial markets, foster economic development, and enhance its global integration, fostering a positive economic environment for the nation.

5. India 4th in Startups

Current Context

India ranks fourth in the world in the number of startups that have received over \$50 million of disclosed venture capital (VC) investment, according to the first edition of Startup Genome's Scaleup Report.

Key findings

- In the survey involving 12,400 startups, India is ranked fourth with 429 scaleups, after the US (7,184), China (1,491), and the UK (623).
- The report stated that India recorded 429 scaleups, with a VC investment of \$127 billion and a total value of tech investment worth \$446 billion.
- The report said that India has startups with 50 percent or more of their customers from outside their continent, and has the highest scaleup rate.
- ✓ Startups with a local connectedness index score of 6 or above achieve a scaleup of 5.1% compared to 3.8% for those with a score of 2 to 4 - a 34% boost.
- This is certainly clear that in India, B2C startups can achieve unicorn status and billion dollar exits without going out of the country.

Current Scenario in India

- India has emerged as the 3rd largest ecosystem for startups globally, with over 99,000 DPIIT-

recognized startups across 670 districts of the country as of 31st May 2023.

- India ranks 2nd in innovation quality with top positions in the quality of scientific publications and the quality of its universities, among middle-income economies.
- **Indian Startup Ecosystem has seen exponential growth in past few years (2015–2022):**
 - ✓ 15x increase in the total funding of startups
 - ✓ 9x increase in the number of investors
 - ✓ 7x increase in the number of incubators
- India's startups today are not limited to only metros or big cities. 49 per cent of startups are from Tier-2 and Tier-3 cities.
- As of 31st May 2023, India is home to 108 unicorns with a total valuation of \$340.80 Bn.

Challenges

- The Indian startup ecosystem is facing several challenges despite recording an increase in the number of startups to 84,012 in 2022 from 452 in 2016, according to the Economic Survey Report 2022-23.
- Financial resources: Availability of finance is critical for the startups but it invariably becomes a problem.
- Revenue generation: Several startups fail due to poor revenue generation as the business grows. As operations increase, expenses grow with reduced revenues, forcing startups to concentrate on funding, thus, diluting the focus on the fundamentals of business.
 - ✓ As of January 2023, 47 companies world over have achieved the decacorn status.
 - ✓ Presently, India has five startups namely, Flipkart, BYJU's, Nykaa, Swiggy and PhonePe added in the decacorn cohort.
- **Supporting infrastructure:** There are a number of support mechanisms that play a significant role in the lifecycle of startups which include incubators, science and technology parks, business development centers etc. Lack of access to such support mechanisms increases the risk of failure.
- Regulations hurdles: Starting a business requires a number of permissions from government agencies. Although there is a perceptible change, it is still a challenge to register a company due to regulatory barriers and red-tapism. Regulations pertaining to labor laws, intellectual property rights, dispute resolution etc. are rigorous in India.
- Increased propensity of flipping: Transfer of entire ownership of an Indian company to an overseas entity, due to lack of viability.

Government initiatives to increase startups in India

- The Startup India Initiative has rolled out several programs with the objective of supporting entrepreneurs, building a robust startup ecosystem and transforming India into a country of job creators instead of job seekers.
- Startup India Action Plan: An Action Plan for Startup India was unveiled on 16th January 2016. The Action Plan comprises of 19 action items spanning across areas such as "Simplification and handholding", "Funding support and incentives" and "Industry-academia partnership and incubation".
- Startup India Seed Fund Scheme (SISFS): Easy availability of capital is essential for entrepreneurs at the early stages of growth of an enterprise. The Scheme aims to provide financial assistance to startups for proof of concept, prototype development, product trials, market entry and commercialization.
 - ✓ Rs. 945 crore has been sanctioned under the SISFS Scheme for period of 4 years starting from 2021-22.
- National Startup Award (NSA): National Startup Award is an initiative to recognize and reward outstanding startups and ecosystem enablers that are building innovative products or solutions and

scalable enterprises, with high potential of employment generation or wealth creation, demonstrating measurable social impact.

- Self-Certification under Labour and Environmental laws: Startups are allowed to self-certify their compliance for a period of 3 to 5 years from the date of incorporation.

- SCO Startup Forum: The inaugural edition was launched as part of the Shanghai Cooperation Organization (SCO) in 2020 to develop and improve startup ecosystems collectively.
- Prarambh: Designing a platform to startups and young minds to come up with new ideas, innovation and invention.

6. India retains 40th rank in the Global Innovation Index 2023

Current Context

India has maintained its 40th rank in the latest Global Innovation Index (GII) 2023 released by the World Intellectual Property Organisation (WIPO), making it a leading position holder among the lower middle-income group countries.

Key Findings

- The Global Innovation Index (GII) is built on a rich dataset: the collection of 80 indicators from international public and private sources – going beyond the traditional measures of innovation since the definition of innovation has broadened.
- The GII tracks the innovation ecosystem performance of 132 global economies and the most recent global innovation trends.
- The GII report states that India, Iran, Philippines, Turkiye, Vietnam and Indonesia are among the economies within the GII top 65 that climbed fastest in the rankings over the last decade.
- Top three innovation economies by respective income groups:

High income	Upper middle income	Lower middle income	Low income
Switzerland	China	India	Rwanda
Sweden	Malaysia	Vietnam	Madagascar
United States	Bulgaria	Ukraine	Togo

middle income group economies, and first among the 10 economies in Central and South America.

- In 2015, India stood at the 81st spot and has been rising ever since, in the past eight years.
- India holds top rankings in key indicators, including ICT services exports (at place 5), VC received (6), graduates in science and engineering (11) and global corporate R&D investors (13).
- Other parameters where India performed fairly better include— cultural and creative services, exports as percentage of trade (18th rank), intangible asset intensity (8th rank), and overall market sophistication (20th rank).
- The broad areas where a lot of improvement needs to happen are infrastructure (84th rank), business sophistication (57) and institutions (56).

India's Performance

- The GII listed India as among the 21 economies that outperformed for a 13th consecutive year on innovation, relative to the level of development.
 - ✓ The other countries who achieved the feat included Republic of Moldova and Vietnam.
- The country ranked first among the 37 lower-

Government Initiatives

- NITI Aayog has been working tirelessly to ensure the optimization of the national efforts for bringing policy-led innovation in different areas such as electric vehicles, biotechnology, nanotechnology, space, alternative energy sources, etc. It has also played a role in expanding the innovation ecosystem in states and districts. Government efforts for the innovation sector includes:
- The Atal Innovation Mission (AIM), a flagship initiative of NITI Aayog, is supporting two programs for setting up and scaling up of incubation centres.
- The Atal Incubation Centres (AICs) scheme supports setting up of green field incubation centres that nurture innovative startup businesses in their pursuit to become scalable and sustainable enterprises.
- NIDHI program (National Initiative for Developing and Harnessing Innovations) under which programmes for setting up of incubators, seed fund, accelerators and 'Proof of concept' grant for innovators and entrepreneurs have been launched.
 - ✓ Under NIDHI, PRAYAS (Promoting and Accelerating Young and Aspiring innovators & Startups) programme has been initiated in which established Technology Business Incubators (TBI) are supported with grants to promote innovators and entrepreneurs, with specially earmarked grants for 'Proof of Concept' and developing prototypes.

- SEED (Sustaining Enterprise and Entrepreneurship Development) Fund: Equity based funding support of up to Rs. 30 lakh to startups and enterprises through bio-incubators for scaling up.
- LEAP (Launching Entrepreneurial Driven Affordable Products Fund for Startups) Fund: Equity based funding support of up to Rs 1 crore to startups and enterprises implemented through incubators for scaling enterprises.

Global Innovation Index (GII)

- It is published by the World Intellectual Property Organization.
- It is a reliable tool for governments across the world to assess the innovation-led social and economic changes in their respective countries.
- This year, the NITI Aayog, in partnership with the CII and the World Intellectual Property Organisation (WIPO), is virtually hosting the India Launch of the GII 2023.

World Intellectual Property Organisation

- It works with the vision of encouraging creative activity and promoting the protection of Intellectual Property throughout the world.
- WIPO is one of the 15 specialised agencies of the United Nations.
- Currently, there are 193 members of the World Intellectual Property Organisation.
- Its Headquarter is in Geneva.

7. IndiaSkills 2023-24 launched

Current Context

The Union Minister for Education and Skill Development & Entrepreneurship launched the IndiaSkills 2023-24 and felicitated the World Skills 2022 winners at an event in New Delhi on October 17, 2023.

About

- This initiative seeks to empower a massive 2.5 million participants, marking a significant increase from the 250,000 participants in the previous year.
- The event also featured the felicitation of India's

winners at the WorldSkills 2022 competition, where the nation secured the 11th position on the global stage.

- It emphasizes the nation's commitment to nurturing a highly skilled and competent workforce, capable of excelling not only on the national stage but also on the global platform.
- IndiaSkills serves as the stepping stone to the prestigious WorldSkills competition, where participants who excel at the national level will represent India at the global stage.

WorldSkills Competition

- ✓ It is the largest skill competition in the world, held once every two years. It is conducted by WorldSkills International, which has 86 member countries.
- ✓ These competitions provide both a benchmark for high performance and an objective way to assess vocational excellence.
- ✓ India participated in 50 skills and secured 11th position with 2 Silver Medals, 3 Bronze Medals and 13 Medallions for Excellence at the WSC 2022, its best ranking so far at the WorldSkills Competition.

India Skills Competition

- It is held every two years at national level by NSDC in partnership with state governments and industries.
- Skilled youth from across the nation compete against each other in their respective skills and the winners of the national competition further nurture their skills over the next one year and prepare themselves to represent India at WorldSkills Competition.

Aims and objectives of India Skills

- To prepare Indian youth for WorldSkills Competitions and showcase their skills to the world.
- To revive and promote India's local/domestic skill sets.
- To make skill aspirational and rewarding for Indian youth.

- To decentralize the process of skill development and provide financial support to states.
- To create adequate infrastructure and capacity for organizing such competitions.

Need of Skill development among Indian youth

- A study conducted by the National Institute of Labour Economics Research and Development (NILERD) found that a significant proportion of trainees in the Industrial Training Institutes (ITIs) were not satisfied with the quality of training provided.
- The enrolment in skill institutes like ITIs, and polytechnics, remains low as compared to their enrolment capacity. This is due to low awareness level among youths about the skill development programmes.
- About 450 million youth (7 out of 10) are economically disengaged, due to lack of adequate skills to succeed in the labor market.
- Poor quality of training is a serious problem that can prevent people from developing the skills they need to succeed in the workforce.
 - ✓ Examples are Lack of qualified trainers, outdated training materials, insufficient resources and lack of industry-aligned training.
- While the government expected that some of the PMKVY-trainees would create their own enterprise, only 24% of the trainees started their business. Out of them, only 10,000 applied for MUDRA loans.
- According to various reports, out of the country labour force of 395.2 million, only 91.6 million are women.
- About 23 percent of firms cite workforce skills as a significant constraint to their operations. In some African and Latin American countries, this share rises to 40-60 percent.

Government initiatives toward skill development in India

- **National Policy for Skill Development and Entrepreneurship, 2015** aims to provide an umbrella

framework to all skilling activities being carried out within the country, to align them to common standards and link the skilling with demand centres.

- **National Education Policy 2020:** It emphasises on vocational education through integration and mainstreaming of vocational education with general education which will help students in acquiring various skills to meet the needs of the industries and to improve the quality of education.
- **The National Skill Development Mission** aims to create convergence across sectors and States in terms of skill training activities.
- **Pradhan Mantri Kaushal Vikas Yojana (PMKVY):** The objective of this Skill Certification scheme is to enable Indian youth to take up industry relevant skill training that will help them in securing a better livelihood. Individuals with prior experience are also assessed and certified under Recognition of Prior Learning (RPL).
 - ✓ PMKVY 3.0 (2021) will encourage and promote skill development throughout the country to address industry needs, meet market demands and impart skills in services and in new-age job roles that have become crucial with the advent of COVID-19 pandemic.
- Pradhan Mantri Kaushal Kendra (PMKK) is a

flagship scheme of the Government of India, launched in 2015, to provide skill training to the youth of India. The scheme aims to provide industry-relevant training to the youth and make them employable.

- Skill Acquisition and Knowledge Awareness for Livelihood Promotion (“SANKALP”) is a programme of the Ministry of Skill Development with loan assistance from the World Bank.
- Creation of Indian Skill Development Services (ISDS) has been created for the Training Directorate of the Ministry of Skill Development and Entrepreneurship (MSDE) and is a Group ‘A’ service.

Index of Industrial Production (IIP)

- The change in the volume of industrial product output over a specific time period is measured by the Index of Industrial Production.
- The **National Statistical Office (NSO)**, Ministry of Statistics, and Programme Implementation, compile and release it each month.
- The Base Year for IIP is **2011-2012**.
- Government agencies, including the Reserve Bank of India, the Ministry of Finance, and the Office of Economic Adviser (Department for Promotion of Industry and Internal Trade), use the IIP index for policy-making purposes.

8. Periodic Labour Force Survey

Current Context

Recently, the Ministry of Statistics and Programme Implementation (MoSPI) released its quarterly bulletin on the Periodic Labour Force Survey (PLFS), indicating that the urban unemployment rate during the first quarter of this fiscal (April-June) dropped to 6.6 percent.

Key Findings of PLFS

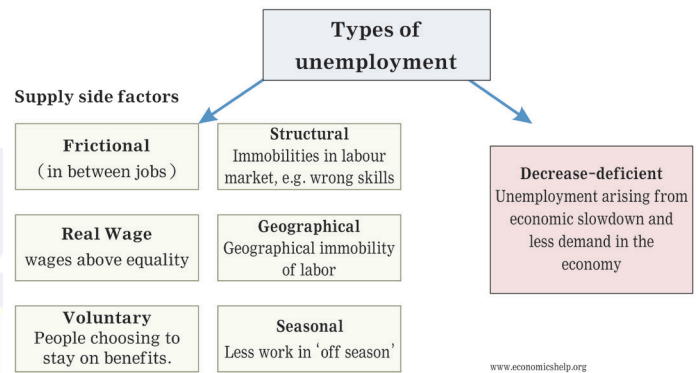
- **Labour Force Participation Rate (LFPR):**
 - ✓ LFPR in urban areas increased from 47.5% (April-June 2022) to 48.8% (April-June

2023) for individuals aged 15 and above.

- ✓ In April-June 2023, LFPR exceeded the pre-pandemic period's range of 46.2% to 47.8%.
- **Worker Population Ratio (WPR):**
 - ✓ WPR in urban areas increased from 43.9%

(April-June 2022) to 45.5% (April-June 2023) for individuals aged 15 and above.

- ✓ In April-June 2023, WPR surpassed the pre-pandemic period's range of 41.8% to 44.1%.
- **Unemployment Rate (UR):**
 - ✓ UR in urban areas decreased from 7.6% (April-June 2022) to 6.6% (April-June 2023) for individuals aged 15 and above.
 - ✓ In April-June 2023, UR was lower than the pre-pandemic period's range of 7.8% to 9.7%.



What is Periodic Labour Force Survey (PLFS)?

- The National Sample Survey Office (NSSO) launched PLFS in April 2017.
- **Dual objective:**
 - ✓ To estimate employment and unemployment indicators in both 'Usual Status' (ps+ss) and 'Current Weekly Status' (CWS) in rural and urban areas annually.
 - ✓ To estimate key employment and unemployment indicators (Worker Population Ratio, Labour

Labour Force Participation Rate

- **(LFPR):** LFPR is defined as the percentage of persons in labour force (i.e. working or seeking or available for work) in the population.
- **Worker Population Ratio (WPR):** WPR is defined as the percentage of employed persons in the population.
- **Unemployment Rate (UR):** UR is defined as the percentage of persons unemployed among the persons in the labour force.
- **Usual Status:** The activity status of a person is determined on the basis of the activities pursued by the person during the specified reference period. When the activity status is determined on the basis of the reference period of last 365 days preceding the date of survey, it is known as the usual activity status of the person.
- **Current Weekly Status (CWS):** The activity status determined on the basis of a reference period of last 7 days preceding the date of survey is known as the current weekly status (CWS) of the person.

Force Participation Rate, Unemployment Rate) in a short three-month time interval for urban areas, focusing on CWS.

- **Frequency of Data Release:** A total of eighteen Quarterly Bulletins of PLFS were published, covering the period from December 2018 to March 2023.
- **Contents of Quarterly Bulletins:** The quarterly bulletins provide estimates of labour force indicators, including LFPR, WPR, UR, and the distribution of workers by broad employment status and industry of work in the CWS for urban areas.
- **Current Bulletin (April-June 2023):** The latest quarterly bulletin, the nineteenth in the series, pertains to the period April-June 2023, and continues to focus on labour force data in urban areas with a three-month interval.

Examples of Government Initiatives to fight Unemployment

- **Aatmanirbhar Bharat Package:** Comprehensive package with long-term schemes to create employment opportunities. Fiscal stimulus of over Rs. 27 lakhs crore.
- **Aatmanirbhar Bharat Rojgar Yojana (ABRY):** Launched in October 2020 to incentivize employers for creating new employment. Implemented through Employees' Provident Fund Organisation (EPFO).
- **Pradhan Mantri Mudra Yojana (PMMY):** Facilitates self-employment with collateral-free

loans up to Rs. 10 lakhs. Over 34.08 crore loans sanctioned.

- **Garib Kalyan Rojgar Abhiyaan (GKRA):** Launched to boost employment for returnee migrant workers and affected individuals in rural areas. Generated 50.78 crore person days of employment.
- **PM Gati Shakti:** Transformative approach for economic growth and sustainable development. Focused on infrastructure development, clean energy, and job opportunities.
- **Production Linked Incentive (PLI) Schemes:** Budget 2021-22 introduced PLI schemes with an outlay of Rs. 1.97 lakh crore. Expected to generate

employment and boost output.

- **Targeted Government Schemes for Employment:** Prime Minister's Employment Generation Programme (PMEGP), Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS), Pt. Deen Dayal Upadhyaya Grameen Kaushalya Yojana (DDU-GKY), Deen Dayal Antodaya Yojana-National Urban Livelihoods Mission (DAY-NULM) etc.
- **Flagship Initiatives:** Make in India, Start-up India, Digital India, Smart City Mission, Housing for All and Infrastructure Development and Industrial Corridors.

9. RBI extends prompt corrective action framework to government NBFCs

Current Context

The Reserve Bank of India has decided to extend the 'prompt corrective action (PCA) framework for non-banking financial companies (NBFCs)' to government NBFCs (except those in base layer) with effect from October 1, 2024.

Prompt Corrective Action

- The objective of the PCA framework is to enable supervisory intervention at appropriate time and require the supervised entity to initiate and implement remedial measures in a timely manner, so as to restore its financial health.
- The PCA framework is also intended to act as a tool for effective market discipline.
- The PCA framework does not preclude the Reserve Bank of India from taking any other action as it deems fit at any time in addition to the corrective actions prescribed in the framework.
- The RBI introduced the PCA framework in 2002 as a structured early-intervention mechanism for banks that become undercapitalised due to poor asset quality, or vulnerable due to loss of profitability.
- The framework was reviewed in 2017 based on the

recommendations of the working group of the Financial Stability and Development Council on Resolution Regimes for Financial Institutions in India and the Financial Sector Legislative Reforms Commission.

Corrective actions

- Parameters used in the PCA include:
 - Capital Adequacy Ratio (CAR):** It is used to boost the financial system's stability and protect depositors around the world.
 - CET-1 Ratio:** It is the percentage of common equity capital, net of regulatory adjustments, to total risk-weighted assets as defined in RBI Basel III guidelines.
 - Non-Performing Asset:** It's a loan where the interest payment is past due for more than 90 days.

- iv. **Tier 1 Leverage Ratio:** It is the link between a core capital of a bank and total assets
- **Corrective actions include:**
 - ✓ **Risk Threshold 1**
 - i. Here the dividend distribution and remittance of profits will be restricted.
 - ii. The owners, promoters, and parent entities for the foreign banks will be needed to bring capital.
 - ✓ **Risk Threshold 2**
 - i. All above actions to follow.
 - ii. Restriction of the branch expansion will be applied whether it is overseas or domestic.
 - ✓ **Risk Threshold 3**
 - i. All consequent steps of Thresholds 2 and 3 to follow.
 - ii. The restriction will be on the capital expenditure, other than for technological upgradation within the Board approved limits.
- **Discretionary Actions:**
 - i. Undertake resolution of NBFC by amalgamation, reconstruction, splitting.
 - ii. File an insolvency application under the IBC and issue show-cause notice for cancellation of certificate of registration and winding up of the NBFC.
 - iii. Recommend to promoters/shareholders to bring in new management/board;
- iv. Remove managerial persons under the RBI Act, as applicable;
- v. Seek removal of director and/or appointment of another person as director in his place;
- vi. Supersede the board under the RBI Act and appoint an administrator among others.
- PCA restrictions will be withdrawn if no breaches in risk thresholds in any of the parameters are observed as per the four continuous quarterly financial statements. However, one of the statements should be annual audited financial statement (subject to assessment by RBI) after a RBI-led supervision.

NBFC

- A Non-Banking Financial Corporation (NBFC) is a company that is registered under the Companies Act, 1956 and is involved in the lending business, hire-purchase, leasing, insurance business, receiving deposits in some cases, chit funds, stocks, and shares acquisition, etc.
- The functions of the NBFCs are managed by both the Ministry of Corporate Affairs and the Reserve Bank of India.
- Examples of NBFC in India-
 - i. Bajaj Finserv,
 - ii. Power Finance Corporation Limited,
 - iii. Mahindra & Mahindra Financial Service,
 - iv. Shriram Transport Finance Company,
 - v. Muthoot Finance Ltd, etc.

10. Trends in Bond Yields

Current Context

Indian government bond yields continue to settle for lower as traders continue to make fresh investments after the recent spike in yields, while easing U.S. peers provided comfort.

About

- The benchmark 10-year bond yield IN071833G=CC

closed at 7.3049% after ending the previous session at 7.3471%.

- ✓ It had touched a seven-month high of 7.3952%

on speculations about the Reserve Bank of India's (RBI) bond sale announcement.

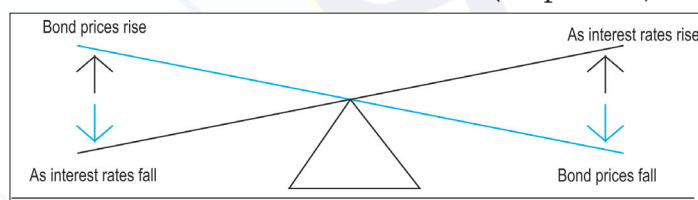
- However, the recent surge in yields provided a value-buying opportunity for traders, leading to yields easing in the last two sessions.

Key Details

- Bonds could find buyers at higher yields due to factors like inclusion in global bond indices, positive real rate environment, softening core inflation and relatively balanced demand-supply dynamics in second half of the year.
- The 10-year benchmark U.S. yield extended declines to below 4.55% on safe-haven demand due to the conflict in the Middle East, while remarks from Federal Reserve officials reassured investors that the Fed may not hike rates further.
- Broader market sentiment also received support as oil prices did not show any major rise despite the conflict between Israel and the Islamist group Hamas, with the benchmark Brent crude contract trading below \$90 per barrel.
- Market participants now await the inflation prints for U.S. and India to further gauge the respective central banks' policies.
 - ✓ The RBI kept monetary policy unchanged at 6.50% recently but signalled interest rates would remain high until inflation was closer to 4% target policy actions.

be issued by a country's government or by a company to raise funds.

- The rate of interest paid by bond issuers on the bond's face value is known as Coupon Rate.
- Bonds are debt investments, issued by Corporates or Governments directly to investors, instead of obtaining loans from a bank.
- The investor purchases bonds and loans money to the entity and in turn receives fixed interest.
- This is for a defined period of time (till maturity date) and a variable or fixed interest rate (coupon rate).



What are bond prices and interest rates?

- **Bond Prices:**
 - ✓ They are the Face value; the money amount the bond will be worth at its maturity. It is also the reference amount the bond issuer uses when calculating interest payments.
 - ✓ A bond's price fluctuates on a daily basis, just like that of any other publicly-traded security.
 - ✓ **Factors upon which, market price of a bond depends upon are:**
 - i. the credit quality of the issuer
 - ii. the length of time until expiration
 - iii. the coupon rate compared to the general interest rate environment at the time.
- **Interest rates:**
 - ✓ The price of a bond primarily changes in tandem with consequent changes in interest rates in the market.
 - ✓ Investors in the market will bid up the price of the bond until it trades at a premium that equalizes the prevailing interest rate environment.

What is Bond Yield?

- It is the return an investor realizes on a bond. The mathematical formula for calculating yield is the annual coupon rate divided by the current market price of the bond.
- Price and yield are inversely related: As the price of a bond goes up, its yield goes down, and vice versa.

What is a Bond?

- It is an instrument to borrow money. A bond could

6. SCIENCE & TECHNOLOGY

1. Government to support AI chip development via PPP model

Current Context

Recently, six working groups, which had been formed to mull the Indian government's artificial intelligence (AI) roadmap, submitted the first edition of their report.

About

- The report's recommendations included public-private partnerships (PPP) to make semiconductors for AI applications.
- The PPP model would be leveraged to build so-called "GPU clusters," masses of resource-intensive graphics processors that are used by AI applications. These clusters would be made available to Indian start-ups and researchers.
- **The India AI initiative** would focus on using artificial intelligence (AI) to solve challenges in agriculture, healthcare, education, fintech, security, and governance.
- **The India Dataset Platform:** The India AI initiative will collect a massive and diverse dataset of anonymized data for Indian researchers and startups to use to train their multi-parameter models.

What are Semiconductor Chips?

- Semiconductors are materials which have a conductivity between conductors and non-conductors or insulators.
- It can be pure elements, such as silicon or germanium, or compounds such as gallium arsenide or cadmium selenide.

Significance

- **Semiconductors are used in a wide range of industries and applications, including:**

Draft National Strategy on Robotics

- It emphasizes the importance of competitiveness, cost-efficiency, and computer vision for manufacturing in the new world.
- While robotics is a multidisciplinary technology that has the potential to transform and disrupt a wide range of sectors and industries, its adoption to date has been primarily driven by economic motivation.
- Robotics technologies used in manufacturing and other areas could have a significant impact by "reaping the benefits of deploying robotics at scale".
- It recommends fiscal interventions to facilitate local manufacturing of robotics hardware, building of 'demonstration facilities' to test and show off technologies, and building capacity in the robotics sector.

- ✓ **Computing:** microprocessors, memory chips, computers, servers, data centers, etc.
- ✓ **Communications:** cell phones, satellite systems, wireless communication systems, network equipment, data transmission hardware, etc.
- ✓ **Energy:** solar cells, renewable energy systems, power management applications, voltage regulators, power supplies, etc.
- ✓ **Automotive:** engine control units, sensors, safety systems, electric vehicles, autonomous vehicles, etc.
- ✓ **Healthcare:** medical imaging, monitoring, diagnostic equipment, medical implants, devices, etc.
- India's own consumption of semiconductors is expected to cross **\$80 billion by 2026 and \$110 billion by 2030.**

- In December 2021, the Indian government sanctioned Rs 76,000 crore under the **Production-Linked Incentive (PLI)** scheme to encourage the manufacturing of semiconductors and displays within India.
- Semiconductors and displays are the foundation of modern electronics driving the next phase of digital transformation under Industry 4.0.
- According to a report by Counterpoint Research and the India Electronics & Semiconductor Association (IESA), the manufacturing of semiconductor chips in India will be driven by domestic and export markets with significant demand from the consumer electronics, telecom, IT hardware, and industrial sectors.
- The growth of the semiconductor industry in India is expected to be driven by the increasing semiconductor content across consumer electronics and automobiles including EVs and, increasing demand for smartphones as the number of smartphones in India is projected to reach a billion by 2026.

Government initiatives to promote semiconductor ecosystem

- **Scheme for setting up of Semiconductor Fabs in India** provides fiscal support to eligible applicants for setting up of Semiconductor Fabs which is aimed at attracting large investments for setting up semiconductor wafer fabrication facilities in the country.
- **Scheme for setting up of Display Fabs in India** provides fiscal support to eligible applicants for setting up of Display Fabs which is aimed at attracting large investments for setting up TFT LCD/ AMOLED based display fabrication facilities in the country.
- **Scheme for setting up of Compound Semiconductors/Silicon Photonics/Sensors Fab and Semiconductor Assembly, Testing,**

Marking and Packaging (ATMP)/OSAT facilities in India provides a fiscal support of 30% of the Capital Expenditure to the eligible applicants for setting up of Compound Semiconductors/Silicon Photonics (SiPh)/Sensors (including MEMS) Fab and Semiconductor ATMP.

- **Design Linked Incentive (DLI) Scheme** offers financial incentives, design infrastructure support across various stages of development and deployment of semiconductor design for Integrated Circuits (ICs), Chipsets, System on Chips (SoCs), Systems & IP Cores and semiconductor linked design.
- **India Semiconductor Mission (ISM)** has been setup as an Independent Business Division within Digital India Corporation. ISM has all the administrative and financial powers and is tasked with the responsibility of catalysing the India Semiconductor ecosystem in manufacturing, packaging and design.



- **The Government has approved modernization of Semiconductor Laboratory, Mohali** as a brownfield fab.

Challenges faced by semiconductor industry

- **Supply chain disruptions:** Caused by the COVID-19 pandemic, geopolitical tensions, and trade disputes.
- **Technological complexity and miniaturization:** Constant pressure to innovate and ensure quality control, yield improvement, and time-to-market.
- **Talent shortage and skills gap:** High demand for skilled professionals with expertise in areas such as materials science, device physics, process engineering, and software development.
- India has very few semiconductor fabrication facilities, and the ones that exist are not as sophisticated as the latest in the world.
- **According to Deloitte's 2023 Semiconductor Industry Outlook report**, the semiconductor industry is facing significant challenges due to macroeconomic factors such as rising interest rates, high inflation, and lower consumer confidence.

2. Bioprinting human-like skin

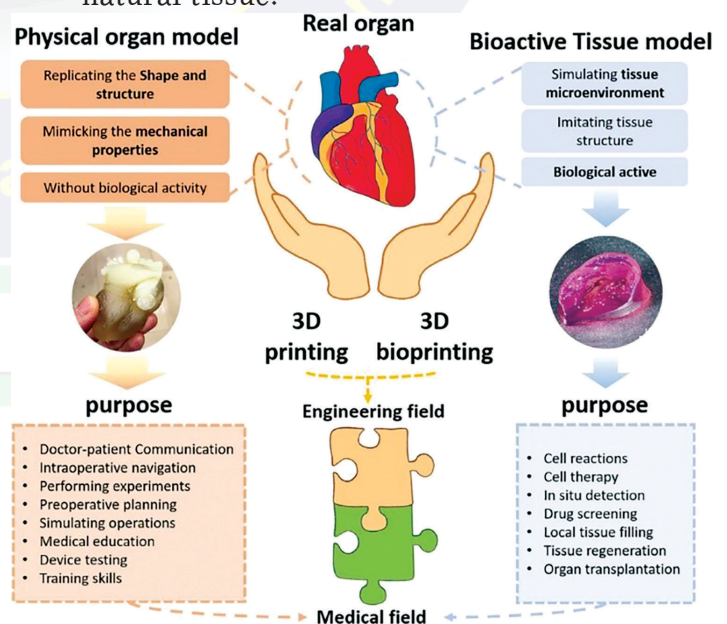
Current Context

In a remarkable development, a team of scientists may have achieved a groundbreaking advancement through the creation of Bioprinted skin that closely resembles natural skin.

About

- In a series of experiments conducted on mice and pigs, researchers observed that this newly developed skin exhibited a remarkable ability to expedite wound healing while minimizing scarring.
 - ✓ In these animal trials, the Bioprinted skin exhibited a remarkable ability to stimulate the rapid formation of new blood vessels and the generation of healthier-looking tissue, outcomes that surpassed the typical results achieved with grafts.
- This innovative technology holds the **potential to revolutionize the treatment of serious burns** and offer individuals the possibility of complete skin restoration.
- The prospect of treating these injuries by promoting the complete regeneration of damaged skin is an exciting avenue of research.
- Scientists from the Wake Forest Institute for

Regenerative Medicine are pursuing this ambitious goal by harnessing the potential of **Bioprinting Technology**, which employs advanced 3D printing techniques to craft tissue-like structures that closely mimic natural tissue.



- The research team successfully generated **Bioprinted skin utilizing all six major categories** of skin cells, in conjunction with **specialized hydrogels serving** as a bio-ink.
 - ✓ The resulting composite remarkably resembled full-thickness human skin, including all three skin layers—an achievement deemed groundbreaking by the researchers.

Importance

- Globally, burns are a serious public health problem.
 - ✓ An estimated 2,65,000 deaths occur each year from fires alone, with more deaths from scalds, electrical burns, and other forms of burns, for which global data are not available.
 - ✓ Over 96% of fatal fire-related burns occur in low- and middle-income countries.
- India has one of the largest burdens of burns with an estimated 70 lakh burn injuries cases per year, and an estimated 1.4 lakh deaths and 2.4 lakh disabilities, making burn injuries the second largest group of injuries after road accidents.
- While temporary and permanent skin grafts, involving the transplantation of undamaged skin from one area to the injury site, have been instrumental in saving lives and treating severe wounds, they typically fail to replicate the

natural aesthetics of skin.

- Comprehensive skin healing represents a substantial issue affecting millions of individuals worldwide, with limited treatment options available.
- These results demonstrate the feasibility of creating full-thickness human bioengineered skin, which not only accelerates the healing process but also yields more natural and aesthetically pleasing results.
- This Bioprinted skin could potentially offer individuals the prospect of complete recovery from severe burns and other significant skin injuries in the future.

Bioprinting Technology

- Bioprinting is an **Additive Manufacturing Process** similar to 3D printing – it uses a digital file as a blueprint to print an object layer by layer.
- But unlike 3D printing, bioprinters print with cells and biomaterials, creating organ-like structures that let living cells multiply.
- Although it is a relatively new technology, it has huge potential to benefit industries like regenerative and personalized medicine, drug discovery and cosmetics.
- Bioprinting involves the amalgamation of living cells, essential nutrients, and other biological components to recreate various types of tissue.

3. CAR T-cell Therapy

Current Context

ImmunoACT has received Central Drugs Standard Control Organisation's marketing authorisation approval of the first humanised CD19-targeted Chimeric Antigen Receptor T cell (CAR T-cell) therapy product for relapsed/refractory B-cell lymphomas and leukaemia in India.

About

- Laurus Labs has been the early backer of ImmunoACT and invested over \$18 million to support it to scale research and development as well as commercialisation efforts.
- NexCAR19 is the result of a collaborative effort across a decade between IIT Bombay and Tata

Memorial Centre (TMC).

- ✓ Designed and developed at IIT Bombay, NexCAR19 subsequently underwent integrative process development and manufacturing under cGMP at ImmunoACT.
- ✓ Clinical investigations and translational studies were conducted by teams at TMH.
- ImmunoACT was founded in 2018 under the aegis of SINE (Society for Innovation and Entrepreneurship) in IIT Bombay, with the intention to be able to translate academic research into a commercially viable product.

Significance

- ImmunoACT said it intends to make NexCAR19 (Actalycabtagene autoleucel), the CAR-T cell therapy, available to its partner hospitals as soon as possible.
- ✓ The indigenously-developed product will put the country on the world map of advanced cell-and-gene therapies.

Central Drugs Standard Control Organisation

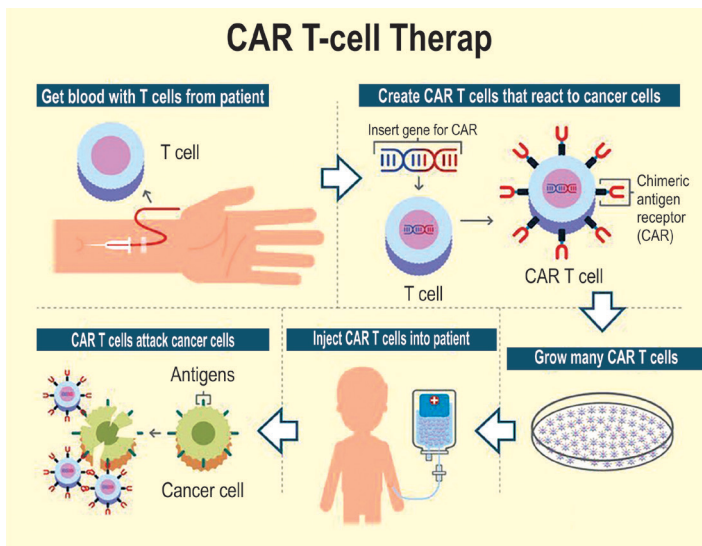
- It is the Central Drug Authority for discharging functions assigned to the Central Government under the Drugs and Cosmetics Act of 1940.
- The Central Drugs Standard Control Organisation, under the Ministry of Health & Family Welfare, is the National Regulatory Authority (NRA) of India.
- Under the Drugs and Cosmetics Act, CDSCO is responsible for :
 - i. Approval of Drugs.
 - ii. Conduct Clinical Trials.
 - iii. Laying down the standards for Drugs.
 - iv. Control over the quality of imported Drugs in the country.
 - v. Coordination of the activities of State Drug Control Organizations.
- Further CDSCO along with state regulators, is jointly responsible for the grant of licences to certain specialised categories of critical Drugs such as vaccines and sera, etc.
- Drugs Controller General of India (DCGI) heads the CDSCO which is responsible for approval of licences of specified categories of drugs.

T Cells

- T cells are a diverse and important group of lymphocytes that mature and undergo positive and negative selection processes in the thymus.
- There are several types of T cells; the most common and well-known are:
 - ✓ CD4+ T cells (helper T cells) and
 - ✓ CD8+ T Cells (cytotoxic T cells, or killer T cells).
- As the names suggest, helper T cells 'help' other cells of the immune system, whilst cytotoxic T cells kill virally infected cells and tumours.
- According to ImmunoACT, its vision is to provide a high quality and affordable CAR T-cell therapy platform to all sections of the society.
 - ✓ Patients in India and countries with limited resources will have access to this life-saving drug at an affordable cost.
 - ✓ In terms of technical achievement, it puts India on the elite list of select countries that have access to CAR-T therapy.
- The multi-centre Phase I/II pivotal clinical trial was conducted with 60 patients of r/r B-cell lymphomas and leukaemia.
 - ✓ The clinical data indicates about 70% overall response rate.
- The safety profile in terms of cytokine release syndrome and absence of neurotoxicity indicates a significant improvement over the other commercially approved CD19-directed CAR-T cell therapies.

CAR T-cell Therapy

- CAR T-cell therapies are a major breakthrough in cancer treatment as unlike chemotherapy which is heavily dependent on intake of drugs, it uses a patient's native cells which are modified in the laboratory to activate T-cells and target tumor cells.
- CAR T-cell therapy has been approved for **leukaemias** (cancers arising from the cells that produce white blood cells) and **lymphomas** (arising from the lymphatic system).



- T-cells are sourced from a patient's blood and then a special receptor gene that binds to a specific protein on the target cancer cells is added to the T-cells in the laboratory.
- This receptor is called a **Chimeric Antigen Receptor (CAR)**, grown in the laboratory in large numbers.
- CAR T-cell therapies are site-specific and

directly stimulates the patient's innate immune system to resist cancer, leading to improved clinical efficacy, hence acquiring the name "living drugs".

Scope of Improvement in CAR T-cell Therapy

- The difficulty of preparing CAR T-cell therapies manifests in their prolonged acquisition and development.
 - ✓ The first successful clinical trial was published a decade ago, and the first indigenously developed therapy in India was performed in 2021.
- The efficacy response across different kinds of leukaemias and lymphomas is inconsistent.
- Certain uncontrollable like for example, cytokine release syndrome, where a widespread activation of the immune system and collateral damage to the body's normal cells take place, are worrisome.
- Developing CAR T-cell therapy in India raises a big question on cost-effectiveness as well.

4. China's Tiangong space station

Current Context

China plans to expand its Tiangong space station by adding another three modules to the three that are already in orbit. The future plans for Tiangong were presented at the **74th International Astronautical Congress in Baku**.

About

- This expansion of the outpost's capacity and capabilities could make it a viable alternative to the International Space Station for in-orbit experiments and missions.
- This development aims to provide an alternative platform for near-Earth missions, particularly for astronauts from other nations, as the NASA-led International Space Station (ISS) approaches the end of its operational lifespan, expected

around 2030.

- The China Academy of Space Technology (CAST), a key unit of China's primary space contractor, said that they are planning to increase the lifespan of the space station from 10 years to 15 years now.

The Tiangong space station

- The Chinese space station, known as Tiangong, which translates to "Sky Palace," represents China's latest venture into space, succeeding the

International Space Station

- The International Space Station Program represents a collaboration of key space agencies from the United States, Russia, Europe, Japan, and Canada.
- It involves international flight crews, a range of launch vehicles, globally distributed launch and flight operations, training facilities, engineering and development resources, communication networks, and the international scientific research community.
- China is not a participant in the International Space Station program.

Tiangong-1 and Tiangong-2 modules. Currently, Tiangong boasts a mass of 96,000 kg, with dimensions of 55.6 meters in length and 39 meters in width.

- Tiangong orbits Earth at altitudes ranging from 340 to 450 kilometres, a trajectory similar to that of the ISS.
 - ✓ However, Tiangong is significantly smaller and lighter than the ISS, with only three modules compared to the ISS's 16.
- **The Chinese space station has three modules:**
 - ✓ The Tianhe core module (“heavenly river” crew module)
 - ✓ The laboratory cabin modules Wentian (“quest for heavens”) and
 - ✓ Mengtian (“dreaming of heaven”).
- It has been operational since late 2022, hosting up to three astronauts at a time.

Tianhe

- It was launched into orbit on April 29, 2021.
- This contains living quarters for three crew members and provides most of the space station's key functionalities, including power, propulsion, guidance, navigation and life support systems.
 - ✓ The Tianhe module also has a “Chinarm” robotic arm.

Wentian

- The Wentian science module hosts added navigation, propulsion and orientation controls

as a backup for some of Tianhe's functions.

- It also acts as a pressurised environment where researchers can conduct zero-gravity experiments.
- Some experiments can also be conducted outside of this module, like those that measure the effects of exposure to solar winds, cosmic rays and other space conditions.
 - ✓ Wentian also has a robotic arm called “indexing arm.”

Mengtian

- It was mainly designed for science experiments. It carried many cutting-edge physics experiments, including a facility that China claims can create the coldest matter in the universe.
- Mengtian launched into orbit and docked with the rest of the space station on November 3, 2022.

International Astronautical Congress (IAC)

- The International Astronautical Congress is an excellent platform that brings us all together, united in the face of global challenges and ready to explore the untapped potential of the space for the benefit of the humanity.
- The IAC 2023 was held in Baku, Azerbaijan (October 2-6), under the theme **Global Challenges and Opportunities: Give Space a Chance**.
- It was hosted by the **International Astronautical Federation**.

International Astronautical Federation

- Founded in 1951, the International Astronautical Federation is the world's leading space advocacy body with 468 members in 75 countries, including all space agencies, as well as industries, research institutions, universities, societies, associations, institutes and museums worldwide.
- Following its motto “Connecting @ll Space

People” and its theme “A space-faring world cooperating for the benefit of humanity”, the Federation advances knowledge about

space, supporting the development and application of space assets by promoting global cooperation.

5. IMPHAL (Yard 12706)

Current Context

Mazagon Dock Shipbuilders Limited (MDL) has delivered the Third Stealth Destroyer of **Project 15B Class Guided Missile Destroyer** i.e. Yard 12706 (IMPHAL) to the Indian Navy.

IMPHAL

- The ship is constructed using Indigenous Steel DMR 249A and is amongst the largest Destroyers constructed in India, with an overall length of 164 meters and a displacement of over 7500 tons.
- It is armed with **supersonic Surface-to-Surface ‘Brahmos’ missiles and ‘Barak-8’ Medium Range Surface-to-Air missiles.**
- The Destroyer is fitted with indigenously developed anti-submarine weapons and sensors, prominently the Hull mounted Sonar Humsa NG, Heavy weight Torpedo Tube Launchers and ASW Rocket Launchers.
- The ship boasts of a very high level of automation with sophisticated digital networks such as Gigabyte Ethernet based Ship Data Network (GESDN), Combat Management System (CMS), Automatic Power Management System (APMS) and Integrated Platform Management System (IPMS).

Features

- The ship is propelled by a powerful Combined Gas and Gas Propulsion Plant (COGAG), consisting of four reversible Gas Turbines, which enables her to achieve a speed of over 30 knots (approx. 55 Kmph).
- The ship can accommodate a crew of 312 persons,

has an endurance of 4000 Nautical Miles and can carry out a typical 42 days mission with extended mission time in out of area operation.

✓ **Further, IMPHAL is the first Naval Warship being commissioned with accommodation of women officers and sailors.**

- The ship is the **first amongst all P15B ships** which is to be fitted with upgraded Brahmos missiles having dual role capability of Long Range & Land attack.
- **Enhanced stealth features** have been achieved through shaping of hull and use of radar transparent deck fittings which make these ships difficult to detect.
- **The indigenous content in P15B Class Destroyers is 72%** which is a notch above their predecessors P15A (59%) and P15 (42%) Class Destroyers.
- The ship is equipped with two helicopters onboard to further extend its reach.
- The IMPHAL’s all-round capability against enemy submarines, surface warships, anti-ship missiles and fighter aircraft will enable it to operate independently without supporting vessels, and also to function as the flagship of a Naval task force.
- The ship is a potent platform capable of undertaking a variety of tasks and missions, spanning the full spectrum of maritime warfare.

Other ships

- The first ship of P15B (**Visakhapatnam**) was commissioned on November 21, 2021.
- The second ship (**Mormugao**) was commissioned on December 18, 2022.
- The third ship (**IMPHAL**) has been delivered to Indian Navy on October 20, 2023.
- The fourth ship (**Surat**) was launched on May 17, 2022 and is at an advance stage of outfitting.

Project 15B

- The Project 15B class of **guided-missile destroyers**, an improved variant of the Kolkata-class destroyers, are built by the Mazagon Dock Limited (MDL) for the Indian Navy.
- The contract for the construction of four Project 15B destroyers was signed in January 2011.

6. Long-term risks of Artificial Intelligence

Current Context

In a recent statement by the Center for AI Safety, more than 350 AI professionals have voiced their concerns over the potential risks posed by AI technology.

About

- Risk is a dynamic and ever-evolving concept, susceptible to shifts in societal values, technological advancements, and scientific discoveries.
- Understanding of AI risk can drastically change as the technology's capabilities become clearer. This underscores the importance of identifying the short- and long-term risks.
- **Immediate risks** involve tangible concerns, like ensuring that AI systems operate flawlessly in their day-to-day tasks, without malfunctioning.
- **Long-term risks** entail grappling with broader and more existential questions about AI's role in society and its potential implications for humanity as a whole.
- To effectively address these risks, a comprehensive approach is required. This approach should consider current challenges while also taking into account the potential future consequences of AI technology.

computer science that focuses on creating systems capable of performing tasks that typically require human intelligence. **These tasks can include:**

- ✓ **Machine Learning:** AI algorithms learn from data to make predictions or decisions.
- ✓ **Natural Language Processing:** AI understands and generates human language.
- ✓ **Computer Vision:** AI enables computers to interpret and analyze visual information.
- ✓ **Robotics:** AI controls robots to perform tasks autonomously.
- ✓ **Recommendation Systems:** AI suggests products, content, or services based on user behavior.
- ✓ **Autonomous Vehicles:** AI powers self-driving cars.
- ✓ **Healthcare:** AI aids in medical diagnoses and drug discovery.
- ✓ **Finance:** AI is used for fraud detection, trading, and risk assessment.
- ✓ **Virtual Assistants:** AI like Siri or Alexa provide voice-controlled assistance.

What is Artificial Intelligence?

- AI (Artificial Intelligence) is the field of

- ✓ **Gaming:** AI systems can excel in complex games like chess.

on AI in healthcare may lead to mis-diagnoses or the prioritization of cost-effective treatments over the best patient outcomes.

Long-term risks of AI

- **AI in essential infrastructure:** Consider a scenario where a city's water and electricity supply systems are heavily reliant on AI for management and maintenance. If these AI systems malfunction or are manipulated, it could lead to widespread disruptions, impacting public well-being.
- **Lack of international collaboration:** China, the United States, and the European Union have different approaches to AI regulation. If these regions don't collaborate on global AI governance, it could result in uneven AI development. For instance, one country may advance its AI capabilities without adhering to global ethical standards, leading to unforeseen consequences.
- **Military AI risks:** The development of autonomous military drones or AI-driven weaponry raises concerns about their potential misuse. Without clear international norms and regulations, these technologies could escalate conflicts or be used for destructive purposes.
- **Existential risks:** The development of super-intelligent AI systems that surpass human capabilities could potentially threaten humanity's existence, such as initiating global conflicts, resource misallocation, or causing environmental catastrophes.
- **Ethical considerations:** Facial recognition technology, powered by AI, has been used for surveillance by governments and corporations. This raises ethical questions about privacy, civil liberties, and human rights, as individuals' identities and actions can be tracked and analyzed without consent.
- **AI and healthcare:** AI is increasingly being used in medical diagnosis and treatment planning. If not properly regulated, the reliance

ARTIFICIAL INTELLIGENCE			
	PROS		CONS
	Efficiency and Accuracy		Uncontrollability
	Effective Data Acquisition and Analysis		AI Machines Don't (Currently) Have Any Emotion
	Reducing Costs (Cheaper Products & Services)		Degradation (unable to self-repair)
	Improving Human Decision Making		A Reduced Number of Jobs For Humans
	Improving Human Workflows		High Costs
	The Mechanical Advantage		Lacking Creativity and Out-of-the-Box Thinking
	Understanding High-Dimensional Data		Ethical Considerations
Source: justunderstandingdata			

- **Deepfakes:** The proliferation of AI-generated deepfake videos and audio recordings can lead to misinformation and manipulation. These technologies can be used to impersonate individuals, including political figures, and spread false narratives.
- **Social media manipulation:** AI-powered social media algorithms are designed to engage users, often leading to echo chambers and the spread of extremist ideologies. Over time, this can polarize societies and hinder rational discourse.

Key Policy Frameworks Governing AI in India

- **The Digital India Act** aims to establish a comprehensive legal framework for the digital economy in India, addressing a wide array of issues such as cybercrime, data protection, online safety, and intermediary regulation.
- The Ministry of Electronics and Information Technology (MeitY) released the draft **National Data Governance Framework Policy (NDGFP)**.
 - ✓ The primary objective of this policy is to foster an ecosystem for AI and data-driven research and start-ups in India, achieved by establishing an extensive repository of datasets.
- **Global Partnership on Artificial Intelligence (GPAI)** is an international initiative that involves multiple stakeholders and aims to steer the responsible development and utilisation of AI, emphasising

principles such as human rights, inclusion, diversity, innovation, and economic growth.

- ✓ **The GPAI Summit 2023 is scheduled to take place in New Delhi, India, from 12-14 December 2023.**
- **Telecom Regulatory Authority of India (TRAI)** released its recommendations on “**Leveraging Artificial Intelligence and Big Data in the Telecommunication Sector**” on 20 July 2023.
 - ✓ The recommendation paper calls for the immediate establishment of a common regulatory framework covering AI across all sectors.
- During her budget speech in February 2023, the Finance Minister announced that for countries looking for digital continuity solutions, India will facilitate setting up of their **Data Embassies in GIFT IFSC.**

7. Niemann-Pick disease

Current Context

Recently, parents of children suffering from Niemann-Pick disease, a rare genetic disorder that affects the body's ability to metabolise cholesterol and other fats, have urged the Union government to notify the ailment under the National Policy for Rare Diseases.

About

- This would provide financial support and access to the expensive enzyme replacement therapy, **Xenpozyme**.
- The disease affects one in 250,000 individuals and currently there are only approved treatments for a few rare diseases in India.
- **Committee of the Drug Controller General of India** gave permission to a pharma company to import and market the drug in India after it was approved by the US Food and Drug Administration.
 - ✓ **Xenpozyme** has been granted 'orphan drug' status in the US, Australia, Switzerland, Japan and Malaysia.

- According to Niemann Pick India Charitable Organisation, 16 children, including two from Delhi, have been identified as patients and are eligible for the treatment.

What is Rare disease?

- A rare disease is a health condition of low prevalence that affects a small number of people compared with other prevalent diseases in the general population.
- It is estimated that globally around 6000 to 8000 rare diseases exist with new rare diseases being reported in the medical literature regularly.
 - ✓ However, 80% of all rare disease patients are affected by approximately 350 rare diseases.

- Rare diseases include genetic diseases, rare cancers, infectious tropical diseases and degenerative diseases.
 - ✓ 80% of rare diseases are genetic in origin and hence disproportionately impact children.
- About 72 to 96 million people are affected by rare diseases in India.
- In India, while there are about 500 identified rare diseases, DCGI's approved treatment is currently available for only a few, including Gaucher disease, Pompe disease, MPS I and Fabry disease.

WHAT IS NIEMANN-PICK DISEASE

Refers to a group of inherited metabolic disorders in which abnormal amounts of lipids (fatty materials like waxes, oils, and cholesterol) build up in the brain, spleen, liver, lungs, and bone marrow



SYMPTOMS

- | | | | |
|---|--|---|--|
| <ul style="list-style-type: none"> ▶ Enlarged liver and spleen ▶ Difficulty coordinating movement ▶ Abnormal eye movements ▶ Lack of muscle control during voluntary movements, such as walking ▶ Poor muscle tone | | <ul style="list-style-type: none"> ▶ Stiff muscles and awkward movement ▶ Severe liver disease ▶ Frequent respiratory infections ▶ Slurred speech ▶ Difficulty with swallowing and feeding ▶ Brain degeneration | |
|---|--|---|--|

National Policy for Rare Diseases

- The Government has launched National Policy for Rare Diseases (NPRD), 2021 for the treatment of rare disease patients.
- The salient features are categorized into 3 groups:
 - ✓ **Group 1:** One-time curative treatment

available.

- ✓ **Group 2:** Long-term/life-long treatment required, with relatively lower cost and documented benefits.
- ✓ **Group 3:** Definitive treatment available, but with challenges of patient selection, high cost, and life-long therapy.

- Financial support of up to Rs. 50 lakhs available for patients of all categories of rare diseases, for treatment at any Centre of Excellence (CoE) mentioned in NPRD-2021, outside the Umbrella Scheme of **Rashtriya Arogya Nidhi**.

The National Rare Diseases Committee

- It is a five-member panel who will work together to address the challenges faced by patients with rare diseases established by the Delhi High Court to implement the rare diseases policy and ensure efficient treatment for patients.

Rare Diseases International

- Rare Diseases International (RDI) is a global alliance of patient organisations. It brings together national and regional rare disease groups and federations to ensure greater equity for all persons living with a rare disease and their families across the globe.
- To receive financial assistance, patients should approach the nearest Centres of Excellence (CoEs) for assessment.
- Eight Centres of Excellence (CoEs) have been identified for diagnosis, prevention, and treatment of rare diseases.
- Five Nidan Kendras have been set up for genetic testing and counselling services.

8. Pink Bollworm (PBW)

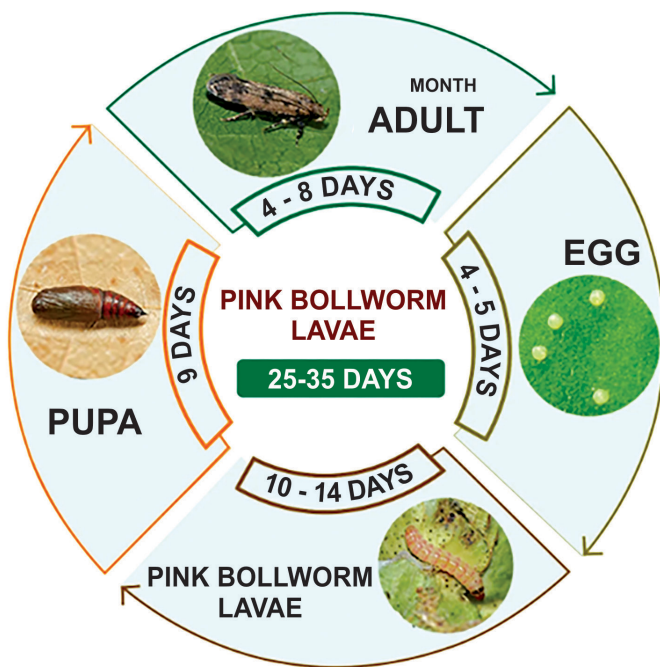
Current Context

North India's cotton production is under threat again due to pink bollworm infestations in Rajasthan and Haryana.

About

- The infestation by this insect pest has been common in the cotton belt of northern Rajasthan, Haryana and Southwestern Punjab since 2021. But the damage reported is much more widespread and serious this time.
- The Rajasthan government declared that farmers in Hanumangarh and Ganganagar districts, whose crops have been affected, will get relief within 10 days.
- In Haryana, there is a 50 percent damage in 25 percent of the areas where cotton is cultivated.
- The pink bollworm infestation is higher this year because of early rains making it conducive for the worms to grow and fester.
- Bt cotton – which incorporates genes from soil bacteria that code for proteins toxic to the American bollworm, has off-late been found to have lost its efficacy against PBW.

LIFE CYCLE OF PINK BOLLWORM



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Pink Bollworm

- The Pink Bollworm or *Pectinophora gossypiella* is a pest that feeds on the reproductive parts of cotton plants, where the fibers are produced.
- The PBW larvae burrow into the developing fruits (bolls) of cotton plants, and the damage

The Genetic Engineering Appraisal Committee (GEAC)

- The Genetic Engineering Appraisal Committee (GEAC) is the statutory committee constituted under the "Rules for the Manufacture, Use/Import/Export and Storage of Hazardous Micro Organisms/Genetically Engineered Organisms or Cells (Rules, 1989)" framed under Environment (Protection) Act, 1986.
- The Committee functions under the Ministry of Environment, Forest and Climate Change (MoEF&CC).
- It is responsible for appraisal of activities involving large scale use of hazardous microorganisms and recombinants in research and industrial production from the environmental angle.
- The Committee is also responsible for appraisal of proposals relating to release of genetically engineered (GE) organisms and products into the environment including experimental field trials.

affects both the weight and quality of the harvested bolls containing the lint fibre and seeds inside.

- ✓ When the larvae mature, they cut out the boll and drop to the ground and cocoon near the soil surface.
- The worm eats cotton seeds and thus prevents the development of cotton staple fibre around it well before the cotton boll opens.
- ✓ Bollworm is a deadly pest that appears when the cotton plant is in the flowering stage after 65-70 days of sowing. It is monophagous or feeds only on cotton plants.
- It is considered to be one of the most destructive pests of cotton worldwide and is a major problem for the cotton industry in India.
- ✓ It has not been recorded from Russia, Central America, parts of south America and Australia.
- In India, it was first recorded in 1842.

Resistance to Bollworm by the use of Genetic Engineering

- Cotton has been genetically engineered to produce insect-killing proteins from the bacterium *Bacillus thuringiensis* (Bt) to control major lepidopteran pests, including the pink bollworm. The Bt proteins in genetically engineered crops are not toxic to people, other vertebrates, or most beneficial insects.
- The Genetic Engineering Appraisal Committee (GEAC), India's biotech regulator, gave approval to Bioseed Research India, Hyderabad, to conduct Biosafety Research Level-1 (BRL-1) trial for resistance against Pink Bollworm.
- ✓ This variety (Bt cotton) carries a gene Cry2Ai, taken from the bacterium *Bacillus Thuringiensis*, which helps the plant produce a protein that is toxic to the Pink Bollworm.

7. INTERNAL SECURITY

1. AFSPA extended in Arunachal, Nagaland

Current Context

The Ministry of Home Affairs (MHA) has extended the Armed Forces (Special Powers) Act (AFSPA) in parts of Arunachal Pradesh and Nagaland for another six months.

Key Details

- Tirap, Changlang and Longding districts in Arunachal Pradesh and the areas falling within the jurisdiction of Namsai and Mahadevpur police stations in Namsai district along the Assam border, are declared as “disturbed areas” under Section 3 of the AFSPA, 1958.
- Nine districts and 16 police stations in four districts of Nagaland were also declared as “disturbed areas” after a review of the law and order situation in the State.
- Earlier on April 1, MHA had considerably reduced “disturbed areas” in the States of Assam, Manipur and Nagaland. The AFSPA had been applicable in the whole of Nagaland since 1995.

sovereignty and security of the nation.

Armed Forces (Special Powers) Act (AFSPA), 1958

- The AFSPA confers overwhelming powers to the armed forces deployed in “disturbed areas” to kill anyone acting in contravention of law and arrest and search any premises without a warrant and with protection from legal prosecution.
- The law first came into effect in 1958 to deal with the uprising in the Naga Hills, followed by the insurgency in Assam.
- The AFSPA is invoked when a case of militancy or insurgency takes place and the territorial integrity of India is at risk.
- **Origins of the Act:**
 - ✓ It is a British-era legislation dating back to the Quit India Movement (1942), which was issued via four ordinances in 1947.
 - ✓ After Independence, PM Nehru retained it to further notify it as an Act in 1958.

Rationale behind the extension

- Effective functioning of security forces deployed in counter-insurgency operations like in Nagaland, is a national security priority.
- Chinese aggrandizement centering Arunachal makes the region a potential flashpoint of conflict at any given time, thus necessitating heavy military presence with seamless response mechanisms.
- Armed forces operating in such environments require certain special powers and protection in the form of an enabling law.
- The Act plays a crucial role in maintaining law and order in disturbed areas, thus protecting

Disturbed Areas under AFSPA

- The Act was amended in 1972 and the powers to declare an area as “disturbed” were conferred concurrently upon the Central government along with the States as per Section 3 of the Act.
- Union Home Ministry issues periodic notifications to extend AFSPA only for Nagaland and Arunachal Pradesh.
- For Manipur and Assam, notifications are issued by the State governments.
- Tripura and Meghalaya revoked the Act in 2015 and 2018 respectively, with Meghalaya coming out of it after 27 years.

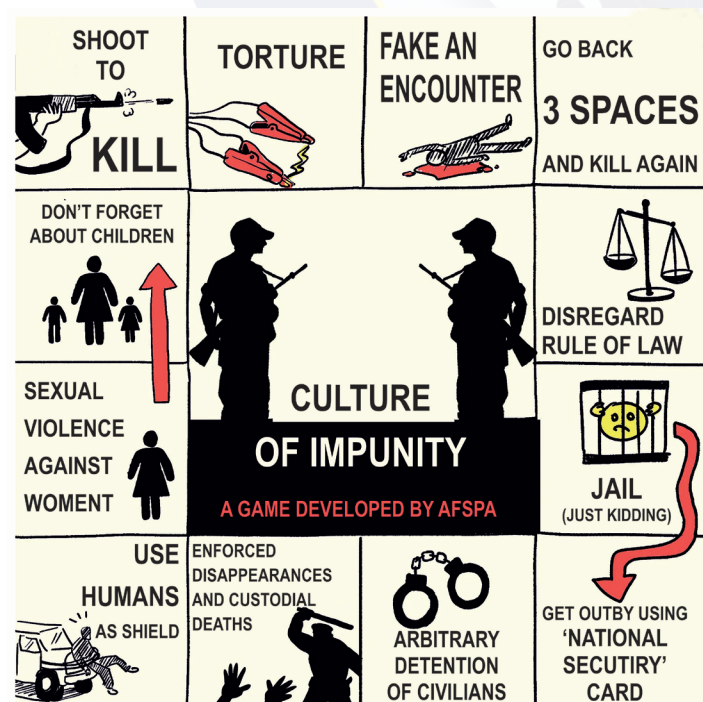
Criticism of the AFSPA Regime

1. Human Rights Violations

- The exercise of these extraordinary powers by armed forces has often led to allegations of fake encounters, sexual offences and other human rights violations by security forces in disturbed areas while questioning the indefinite imposition of AFSPA in certain states, such as Nagaland and J&K.
- A string of incidents in recent years have highlighted these concerns, ranging from the Mon killings to the fake encounter in Shopian in J&K.
 - ✓ In December 2021, a total of 14 civilians were killed in and after a botched Indian Army operation, according to MHA.

2. Misuse of Absolute Power

- The power to shoot on sight violates the Fundamental Right to Life, based on excessive emphasis on an officer's discretion.
- Even during a State of Emergency, the Right to Life and Liberty (Article 21) and certain rights under Article 20 cannot be suspended. But the absolute power given to armed forces dissolves these inherent rights.



3. Violates Constitutional Vision

- The power of arbitrary arrest and detention given to the armed forces goes against the spirit of Article 22, which provides safeguards for preventive and punitive detentions.
- The Supreme Court has clearly stated that the person arrested has to be submitted to the court within 24 hrs of the FIR.

4. Immunity against any Punitive Action

- The greatest outrage against the AFSPA is due to the immunity given to the armed forces.
- No prosecution, suit or another legal proceeding shall be instituted except with the previous sanction of the Central government.
- This immunity which protects and also facilitates the armed forces to take unwarranted decisions at times is clearly questionable.

Notable remedies

1. Recommendations of Jeevan Reddy Committee

- In November 2004, the Central government appointed a five-member committee headed by Justice BP Jeevan Reddy to review the provisions of the Act in the north-eastern states.
- The Committee recommended that:
 - ✓ The AFSPA should be repealed and appropriate provisions should be inserted in the Unlawful Activities (Prevention) Act, 1967.
 - ✓ The Unlawful Activities Act should be modified to clearly specify the powers of the armed forces and paramilitary forces and Grievance cells should be set up in each district where the armed forces are deployed.

2. 2nd ARC Recommendation

- The 5th report of the Second Administrative Reforms Commission (ARC) on public order has also recommended the repeal of the AFSPA. However, these recommendations have not been implemented.

3. Santosh Hegde Committee

- In 2013, a committee headed by Supreme Court Judge

Santosh Hegde was appointed to review the encounter killing of 1528 people in Manipur since 1979.

- The Santosh Hegde committee submitted its report in 2013, saying five of the six encounters were “not genuine”, that “disproportionate force” had been used against persons with “no known criminal antecedents”, and that the AFSPA gave “sweeping powers” to men in uniform without granting citizens protection against its misuse.
- Further, the committee was of the view that if greater power was given then greater would be the restraint and stricter would be the mechanism to prevent its misuse or abuse, but this possibility was absent in the case of Manipur.

4. Supreme Court Views on the Act:

- The Supreme Court has upheld the constitutionality of AFSPA in **Naga People's Movement of Human Rights vs. Union of India judgment (1998)**:
 - ✓ A suo-motu declaration can be made by the Central government, however, it is desirable that the state government should be consulted by the Central government before making the declaration.
 - ✓ The declaration has to be for a limited duration and there should be a periodic review of the declaration before the expiry of six months.
 - ✓ While exercising the powers conferred upon him by AFSPA, the authorized officer should use minimal force necessary for effective action under Section 4 against suspected of violating prohibitive orders.
 - ✓ A person arrested and taken to custody under

section 4 has to be handed over to the nearest police station within 24 hours of such arrest.

- **In Extra Judicial Execution Victim Families Association (EEVFAM) & Anr. Petitioners vs. Union of India & Anr (2016), the Supreme Court stated:**

- ✓ Every death in the ‘disturbed areas’, be it of a common person or insurgent, should be thoroughly enquired by the CID at the instance of the NHRC.
- ✓ Not every armed person violating the prohibitory order in a disturbed area is an enemy.
- ✓ Even though he is considered an enemy, a thorough investigation has to be conducted, since every citizen of India is entitled to all the fundamental rights including Article 21 of the Constitution.
- ✓ Even if the enquiry finds the victim to be an enemy, a probe should look into whether excessive or retaliatory force was used.
- ✓ There is no concept of absolute immunity for army personnel who commit a crime.
- The Supreme Court ordered an investigation (2017) into alleged unlawful killings by government security forces in Manipur state from 1979 to 2012.
 - ✓ The Court directed the Central Bureau of Investigation (CBI) to set up a five-member team to examine at least 87 killings by police, army, and paramilitary forces in response to a petition filed by victims’ families and non-governmental groups in Manipur seeking investigation into 1,528 killings.

2. Interpol issues Red Notice

Current Context

The Interpol issued a Red Notice against alleged Babbar Khalsa International (BKI) terrorist Karanvir Singh, at the request of Indian enforcement agencies.

About

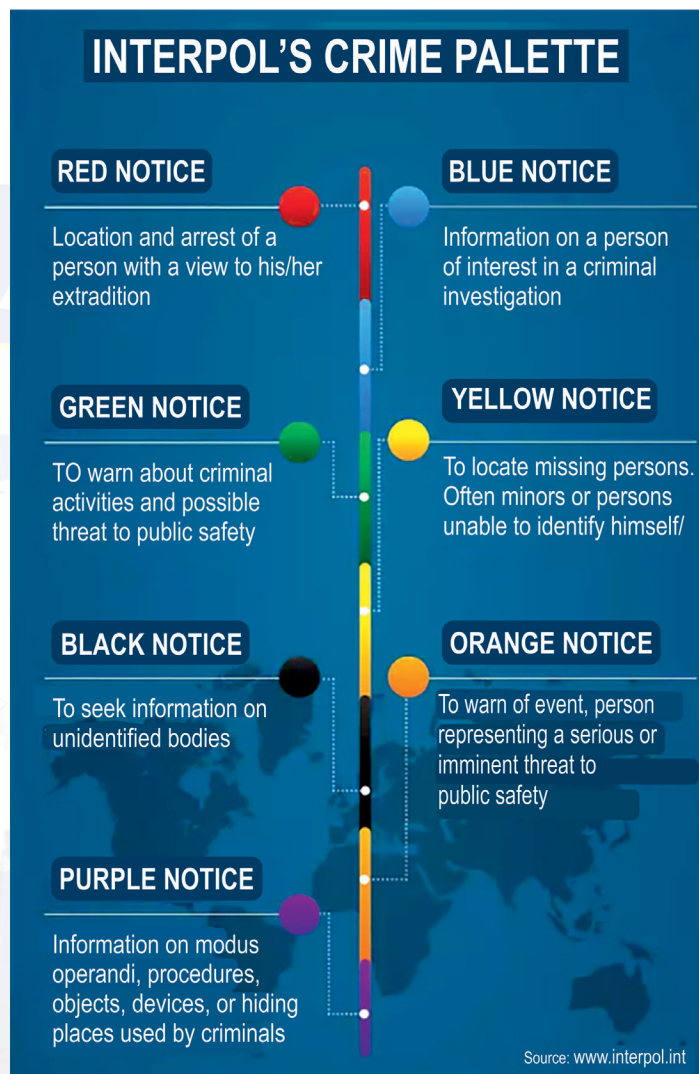
- Karanvir Singh is wanted by India on several charges, including criminal conspiracy and murder. The 38-year-old is believed to be hiding in Pakistan.
- Babbar Khalsa International (BKI) is a Khalistani terrorist group engaged in anti-national activities which jeopardises the security and territorial integrity of India.
- The development comes amid heightened tensions between India and Canada over the killing of Khalistani leader Hardeep Singh Nijjar in June.
 - ✓ Canadian Prime Minister Justin Trudeau has alleged India's hand in the murder of Nijjar, while New Delhi has called the claims "absurd" and "motivated".
- According to the Interpol notice, Karanvir Singh faces allegations of criminal conspiracy, murder, offences related to Arms Act, offences related to Explosive Substances Act, raising funds for terrorist act, and being a member of the terrorist gang.

Interpol

- The International Criminal Police Organisation (Interpol) was set up in 1923, to undertake secure information-sharing that facilitates criminal investigation of police forces across the globe.
- It is headquartered in Lyon, France, and has 195 member countries. India has been a member since 1949.

Functions

1. It keeps track of the movements of criminals and those under the police radar in various regions and tips off police forces which had either sought the Interpol's assistance or which in its opinion will benefit from the particulars available with it.



2. It aims to promote the widest-possible mutual assistance between criminal police forces.
 3. It engages in effective collection and dissemination of information received from various police forces.
- All contact of a country's law enforcement agency with Interpol is through the highest investigating body of the land.
 - ✓ The Central Bureau of Investigation (CBI) is the nodal agency in India with one of its senior officers heading its exclusive Interwing for liaising with the world body.

3. Positive Indigenisation List

Current Context

Recently, the Defence Minister released the fifth Positive Indigenisation List (PIL) of 98 items, which will be procured by the three-armed services from indigenous suppliers in a staggered manner, as per specified timeline.

About

- He also released the Indian Navy's updated indigenisation roadmap, named **Swavlamban2.0**.
- The latest indigenisation list lays special focus on import substitution of components of major systems which are being developed and is likely to translate into firm orders in the next five to ten years.
- The items in the list will provide ample visibility and opportunity to the domestic industry to understand the trend and futuristic needs of the Armed Forces and create requisite R&D and manufacturing capacity within the country.
- The NIIO and the Defence Innovation Organisation (DIO) entered into an agreement for jointly working on facilitating the infusion of Venture Capital into the defence ecosystem through the **iDEX Innovators Hub (iIH)**.

- 'INVenT' (iDEX-Navy Venture for Technology) was launched and a number of other MoUs were exchanged including with the academia and the industry.
- SBI NAVECash Card also launched – a one-of-its-kind dual-chip debit card developed by the State Bank of India (SBI) and the Indian Navy.
- Two INDUS X challenges under 'INDUS-X Mutual Promotion of Advanced Collaborative Technologies' (IMPACT) challenges jointly finalised by iDEX and United States Department of Defense (US DoD) were launched.

What is the fifth Positive Indigenisation List (PIL)?

- The positive indigenisation list essentially lists items that the armed forces — Army, Navy, and Air Force — will procure only from domestic manufacturers. These manufacturers could be from the private sector or Defense Public Sector Undertakings (DPSUs).
- The fifth PIL has been prepared by the Department of Military Affairs (DMA).
 - ✓ The DMA had earlier promulgated four Positive Indigenisation Lists comprising 411 military items.
- Some items on the list include a futuristic infantry combat vehicle, articulated all-terrain vehicles, several types of unmanned aerial vehicles, a medium range precision kill system for artillery, gravity rollers for the Mi-17V5 helicopter, and flares of P-8I, MiG 29-K aircrafts etc.

5th Positive Indigenisation List

Sl.No.	Description
With Effect from Dec 2028	
91.	Electro Explosive Device for Light Weight Torpedo
92.	Personal Rescue Beacon
93.	Indian Regional Navigation Satellite System (IRNSS) Receiver for Ships
94.	BMP II Based Armoured Vehicle Track (AVT) (LR)
With Effect from Dec 2030	
95.	Air Launched Anti-Radiation Combat Swarm Drone
96.	Precision Approach Radar for Aircraft Carrier
97.	High Altitude Pseudo Satellite (HAPS)
98.	Flares for MIG 29-K Aircraft

Significance

- Items in the list will help the domestic industry to understand future needs of the Armed Forces and develop R&D and manufacturing capacity within the country.
- The Positive Indigenisation Lists are a key reform in the Indian government's 'Aatmanirbhar Bharat Abhiyan' to achieve self-reliance in the defence sector and boost exports with the active participation of public and private sector.
- COVID-19 and the Ukraine war have forced industries to reimagine strategies, realign supply chains, and reduce vulnerability to shocks.
- The Positive Indigenisation Lists have signalled a strong resolve to promote a robust and self-reliant defence industry and cut down imports.

Indigenisation of the Defence Sector

- Indigenization of defense is a nation's effort to self-reliantly develop its own military technology and equipment, reducing reliance on foreign sources.
- This strategy involves fostering domestic defense industries, research, and innovation, bolstering national security and reducing external vulnerabilities.
- As per SIPRI (Stockholm International Peace Research Institute) data, India has been the world's largest arms importer since 1993, accounting for 11% of the total global imports in 2018-2022, despite the government's continuing thrust on "Make in India" in defence production.
- Reasons for low level of indigenisation in defence products
- Absence of a pragmatic overarching policy: Indigenisation is presently interpreted in different ways, and it is not always possible to save money by indigenising, especially in areas like special alloys and critical technologies.
- Absence of an overarching organisation: There are several agencies involved in indigenisation,

but their efforts are disjointed and lack synergy.

- Procedural complexities: Agencies involved in indigenisation continue to follow their own procedures and norms, which makes it difficult to select partners from the private sector, especially MSMEs.
- Budgetary constraints: It is difficult to earmark substantial sums of money for large-scale indigenous design, development and production of futuristic equipment, platforms, and weapon systems.

Government initiatives

- Defense Acquisition Procedure (DAP) boosts Make in India in defence by easing procurement of upgraded technology, products and services for the Tri-Services and other allied defence services, especially for MSMEs.
- **FDI Policy in Defense Industry:**
 - ✓ Allows for 74% FDI under the automatic route.
 - ✓ Up to 100% FDI through the Government route where it can provide access to modern technology.
- Mission DefSpace: Launched to promote defense-related innovations and developments in the space sector.
- Defence Excellence (iDEX) was launched in April 2018 to foster innovation and technology development in Defence and Aerospace by engaging Industries including MSMEs, Start-ups, Individual Innovators, R&D institutes and Academia.
- Government has also established two Defence Industrial Corridors, one each in Uttar Pradesh and Tamil Nadu to attract investments in Aerospace & Defence sector and established a comprehensive defence manufacturing ecosystem in the country.
- SRIJAN has been launched for Defence Public Sector Undertakings (DPSUs) with an industry

- interface to provide development support to MSMEs/Start-ups/Industry for import substitution.
- Public Procurement (Preference to Make in India) Order 2017 to encourage 'Make in India' and promote manufacturing and production of goods and services in India with a view to enhancing income and employment.
- India's defence procurement from foreign sources has reduced from 46% to 36% in the last four years, reflecting the government's focus on indigenisation.
- Five 'Positive Indigenisation Lists' of more than 4149 items of Defence Public Sector Undertakings (DPSUs).

4. Project Udbhav

Current Context

An ambitious effort for the integration of India's ancient strategic acumen into the contemporary military domain, Project Udbhav was launched by the Defence Minister recently.

About

- The objective of the Project is to synthesize ancient wisdom with contemporary military practices, forging a unique and holistic approach to address modern security challenges.
- It is a visionary initiative by the Indian Army that seeks to integrate age-old wisdom with contemporary military pedagogy.
- Project Udbhav, a collaboration between the Army and the United Service Institution of India (USI), a defence services think tank, was launched at the first Indian Military Heritage Festival (IMHF) organised by the USI.
- ✓ Chanakya's teachings on statecraft and warfare are studied by various institutions the world over.
- Similarly, the wisdom of Thirukkural, the classical Tamil text authored by Thiruvalluvar, the Tamil philosopher, advocates ethical conduct in all endeavours, including warfare.
- ✓ This aligns with modern military codes of ethics of just war and principles of Geneva Convention.
- Apart from ancient texts, a study of prominent military campaigns and leaders is also important. The empires of Chandragupta Maurya, Ashoka and Cholas flourished and expanded in influence, during their times.

Strategic Culture in Traditional India

- Project Udbhav will facilitate in-depth understanding of our knowledge systems and philosophies and also aim to comprehend their enduring connect, relevance and applicability in the modern day.
- Literature like Chanakya's Arthashastra underscores the importance of strategic partnerships, alliances and diplomacy, aligning with modern military practices such as international cooperation and soft power projection.
- The Naval Battle of Saraighat in 1671, led by Lachit Borphukan, stands as a stellar example of the use of clever diplomatic negotiations to buy time, employ psychological warfare, focus on military intelligence and exploiting the strategic weakness of the Mughals.
- The tenets expounded by the ancient knowledge system were also put to practise by Chhatrapati Shivaji and Maharaja Ranjit Singh who defeated numerically superior Mughal and Afghan invaders.
- ✓ While Shivaji's use of guerrilla tactics is well

acknowledged, less highlighted is his foresightedness in construction of a series of Naval Forts along the Western seaboard to ward off external threats.

Keynotes on the Initiative

- An initiative in this research was earlier taken by the Army Training Command, who after delving into the ancient Indian scriptures such as Arthashastra, Nitisara by Kamandaki and the Mahabharata compiled the 'Compendium of 75 Stratagems'.
- Other academic institutions like College of Defence Management have also conducted a study to establish linkages between Indian Culture and the art of strategic thinking. These studies will also provide valuable inputs for Project Udbhav.
- Project Udbhav will facilitate emergence of previously under-explored thoughts and theories related to strategic thinking, statecraft and warfare, foster deeper understanding and contribute to enriching military training curricula.

Significance

- Project Udbhav is an attempt to bridge the gap and sustain this knowledge creation, of Indian heritage, in terms of grand strategy, strategic thinking and discussions on statecraft.
- As part of Project Udbhav, a series of events and workshops, will dwell on various facets of our strategic culture and culminate in January 2024, with a publication, to document and institutionalise such knowledge.
- By marrying age-old wisdom with modern military pedagogy and operations, 'Project Udbhav' sets the stage for a robust, progressive and future-ready Indian Army that not only resonates with the nation's historical military sagacity but is also attuned to the demands and dynamics of contemporary warfare and diplomacy.
- With the launch of 'Project Udbhav', the Indian Army begins a new era, signifying their commitment to nurture a future where our military might and strategic thinking are enhanced by our rich and strategic past.

5. 'Trishakti Prahar' Exercise

Current Context

The Indian Army is preparing for a combat exercise called 'Trishakti Prahar' to test advanced weapon systems on the western front in Rajasthan.

About

- The exercise is organized by the 21 Corps, one of the four major "strike formations" within the 12-lakh strong Indian Army.
- The exercise, which included all of the Army's services, the Indian Air Force, and CAPFs, was designed to test the Security Forces' ability to fight using the most modern tools and weapons in a networked, integrated environment.
- The Indian Army is actively preparing for an extensive combat exercise aimed at testing cutting-edge weapon systems and technologies.
- This exercise, codenamed 'Trishakti Prahar,' serves as a platform to validate new concepts in long-range firepower, battle-readiness, and force-preservation.
- The exercise's final phase is scheduled for the first half of November and will involve more than 30,000 troops, including T-90S and Arjun main-battle tanks, a diverse array of howitzers, helicopters, and other military assets.

- Fighter jets, Apache attack helicopters, Chinook heavy-lift helicopters, and various aircraft from the Indian Air Force (IAF) and Navy will also participate.

Focus of the exercise

- The exercise will focus on integrated air-land and combined arms operations, rapid mobilization, deep-strike offensive capabilities, and precision high-volume strikes supported by intelligence, surveillance, reconnaissance, and electronic warfare capabilities.
- Additionally, the exercise will feature armed swarm drones and loitering munitions, including Kamikaze drones.
- Numerous modernization and technology-infusion initiatives are underway to ensure that the Indian Army remains agile and future-ready. Indigenous solutions and niche technologies are integral to this process.

Importance of the Exercise

- Incorporating lessons learned from the Russia-Ukraine conflict, the Army will emphasize enhanced mobility and effective shoot-and-scoot capabilities.
- The ongoing military standoff with China in eastern Ladakh, which has entered its fourth year, has prompted the Indian Army to engage in significant emergency procurements.
 - ✓ These procurements include a wide range of niche technologies, such as unmanned aerial

vehicles (UAVs/drones), precision-guided missiles, and loiter munitions.

- ✓ Communication and automatic spectrum monitoring systems have also been acquired to counter drone threats.

- The Russia-Ukraine war has also underscored the critical need for self-reliance in defense production, technologies, and research and development.
 - ✓ The importance of resilient supply chains for military sustenance has also become evident, given the evolving global security landscape.
- Furthermore, the need to prepare for multi-domain wars of longer durations has gained prominence, challenging the earlier assumption that conflicts would be short, intense, and swift.
 - ✓ The heightened tensions along the 3,488-km Line of Actual Control have prompted the Indian Army to reposition significant forces and firepower along the frontier with China.

Conclusion

- As the 'Trishakti Prahar' exercise unfolds, it not only signifies India's commitment to enhancing its military capabilities but also its determination to adapt to the ever-changing dynamics of modern warfare.
- The lessons learned from this exercise will undoubtedly contribute to a stronger and more prepared Indian defense establishment.

6. Uses and applications of drones

Current Context

As drone use across sectors has been increasing rapidly, coupled with the government's Production Linked Incentive (PLI) scheme to encourage manufacturing unmanned aerial vehicles (UAVs), India could become a serious global player in this sector.

Drones

- The Drone Rules (New Rules), 2021 defines drones as “an aircraft that can operate autonomously or can be operated remotely without a pilot on board.” Drones are also known as unmanned aircraft systems (UAS) or unmanned aerial vehicles (UAVs).
- Drones provide productivity and efficiency at low costs for a variety of activities.
- Unmanned aircraft systems are classified based on their maximum all-up weight, including payload, are as follows:
 - ✓ Nano unmanned aircraft system: weighing less than or equal to 250 grams;
 - ✓ Micro unmanned aircraft system: weighing more than 250 grams, but less than or equal to two kilograms;
 - ✓ Small unmanned aircraft system: weighing more than two kilograms, but less than or equal to 25 kilograms;
 - ✓ Medium unmanned aircraft system: weighing more than 25 kilograms, but less than or equal to 150 kilograms

Drone technology regulations

- Abolishing several approvals and permissions, the Ministry of Civil Aviation notified drone regulations in 2021 to make India a hub for drone research and development.
- Now, a remote pilot license is not required for the non-commercial use of micro and nano drones, and no permission is needed to operate drones in green zones.
- Drones can be used as unmanned flying taxis with payloads up to 500 kilograms. Further, the companies that operate drones have also been allowed foreign ownership.
- The government approved the Production-Linked Incentive (PLI) program with an allocation of Rs 120 crore for drones and their components for three fiscal years. The strategic, tactical, and

operational applications of this technology are addressed in the Scheme for the industry of drones and its components.

- With the aim of becoming a global drone hub by 2030, India has adopted an enabling policy ecosystem for drones since August 2021.
- **The Drone Regulations 3.0 includes:**
 - ✓ The Drone Rules (New Rules) in August 2021.
 - ✓ A production-linked incentive (PLI) scheme.
 - ✓ National Unmanned Aircraft System Traffic Management Policy Framework (UTM 2.0).
 - ✓ The certification scheme for unmanned aircraft systems (CSUAS).
 - ✓ The drone import policy and Drone (Amendment) Rules, 2022.
 - ✓ Additionally, the Insurance Regulatory and Development Authority of India (IRDAI) released a set of guidelines for drone insurance.
 - ✓ The Ministry of Agriculture released standard operating protocols (SOPs) to streamline the use of drones for spraying soil nutrients and pesticides.
 - ✓ The Indian Council of Medical Research (ICMR) released a guidance document for using drones in healthcare in June 2022.

Drones in Defence sector

- India's Defence Research and Development Organization (DRDO) has developed its own domestic Unmanned Aerial Vehicle (UAV) or Unmanned Aircraft Systems (UAS) program.
- **The project aims to develop a domestic arsenal to replace and augment the existing fleet of unmanned vehicles.**

Examples of these are:

- ✓ DRDO Lakshya
- ✓ DRDO Nishant
- ✓ DRDO Rustom

Drones and Internal Security

- The defence sector can use drones as a symmetric weapon against terror attacks. It can be integrated into the national airspace system to combat, and communicate in remote areas along with the counter-drone solutions.
- It helps in real-time surveillance of assets and transmission lines, theft prevention, visual inspection and maintenance, construction planning and management and can also be used to tackle poaching, monitor forests and wildlife, evaluate pollution, and collect evidence.
- UAVs are the most advanced systems for obtaining the real-time imagery of the ground and is useful in the internal security scenario.
- Presently, CRPF has a holding of 10 Micro-UAVs (NETRA) which have been deployed in LWE affected states, including Chhattisgarh.
- Besides National Technical Research Organisation (NTRO) is also providing their UAV coverage to CRPF for operations in LWE areas.
- Also, one Mini-UAV of BSF has been deployed in the LWE affected areas in Odisha.
- The Indian Air Force has inducted four new Heron Mark-2 drones, which have strike capability and can carry out surveillance along the borders with both China and Pakistan in a single sortie.

Need strict regulations

- Drones were recently used for the first time to

Other uses of Drones

- Drone based surveillance system introduced for Railway Security.
- Survey of India to use drones for mapping of inhabited areas of villages under "SVAMITVA" scheme.
- India deployed drones to deliver COVID-19 vaccines.
- The ICMR-led pilot project is being rolled out in Manipur, Nagaland and Andamans and Nicobar Islands.
- Drone was used for surveillance of COVID-19 hotspots and containment zones to ensure strict compliance of lockdown guidelines.
- The Board of Control for Cricket in India (BCCI) deployed drones for live aerial cinematography of the India Cricket Season in 2021.

drop explosives, causing blasts inside the technical area of the Air Force Station in Jammu.

- Pakistan-based outfits have frequently used drones to smuggle weapons, ammunition, and drugs into Indian territory over the past two years.
 - ✓ In 2019, 167 drone sightings were recorded along the border with Pakistan, and 77 such sightings were recorded in 2020, as per the government records.
- It is impossible to rule out the possibility of a drone attack, even in the world's safest cities, given the rapid spread of drone technology and the exponential expansion of its global market in recent years.
- In conflict zones, where non-state actors are active and have easy access to technology, drones are becoming a security risk.

KHAN SIR

8. HISTORY ART AND CULTURE

1. Yakshagana

Current Context

Tulasi Hegde, a 15-year-old girl from coastal Karnataka, has become a sensation in the world of Yakshagana, which is a traditional dance-drama form.

About

- Tulasi started performing on stage at the age of three and has since portrayed various complex characters from the Hindu epics like the Ramayana, the Mahabharata, and the Gita.
- She has given over 800 performances across India and aspires to popularize Yakshagana throughout the country.

Yakshagana

- Yakshagana, literally means, “**song of the yaksha**” (demi-gods/spirits), is a traditional folk dance-theatre form of Karnataka.
- It is a temple art form that depicts mythological stories and the Puranas. It is considered that Yakshagana has originated as a product of the Vaishnava bhakti movement.
- **The mela** or troupe consists of two main parts:
 - ✓ **Mummela** (foreground actors)
 - ✓ **Himmela** (singers and instrumentalists in the background).



- Yakshagana is performed in open-air theatres and in the village paddy fields after the winter crop has been harvested.
- In contemporary performances, southern coasts of Karnataka witness the “**Tenkutittu**” as the predominant style while for the northern regions, it is the “**Badagutittu**”.

Key Features

- Typically, the focus is on the “**Prasanga**” (a small sub-story) from the ancient Hindu epics of the Ramayana or the Mahabharata.
- The show consists of both stage performances by talented artists and commentaries performed by the lead singer or **Bhagavatha**, with traditional music.
- **Musical instruments** used in Yakshagana comprise of-
 1. Chande (drums)
 2. Jagatta or Chengila (cymbals)
 3. Chakratala or Elathalam (small cymbals)

Bhagavatha

- The Bhagavatha, part of the **Himmela**, is the lead singer and narrates the story through songs, while the dancers/actors (**Mummela**) enact the stories drawn from the Ramayana, the Mahabharata and the Puranas.
- Bhagavatha is the chief narrator of the story.
- Bhagavata sings in his magical high-pitched voice, invoking the Gods for the successful completion of the evening’s performance.

Other examples of Dance-Dramas

- | | |
|---|---|
| <ul style="list-style-type: none"> • Form • Giddha • Ghoomar • Garba • Dandiya Raas • Lavani • Nautanki • Bhavai • Tamasha | <ul style="list-style-type: none"> • Region • Punjab • Rajasthan • Gujarat • Gujarat • Maharashtra • Uttar Pradesh • Gujarat • Maharashtra |
|---|---|

4. Harmonium
 5. Maddale
 6. Taala (mini metal clappers) and Flute.
- **Costumes** used in Yakshagana are uniquely designed:
 - ✓ Large size headgear, coloured faces, elaborate costumes all over the body and musical beads on the legs (**Gejje**).
 - ✓ **Kavacha** decorates the chest, armlets for the shoulders and belts are made up of light wood and covered with golden foil.

✓ **Pagade**, a headdress or kirta worn during Yakshagana, by characters which have both heroic and playful characteristics, is a work of art.

- Yakshagana is generally presented in **Kannada**, but also performed in **Malayalam and Tulu** languages on certain occasions.
- **Popular “Melas”** (troupes) performing Yakshagana throughout the year include:
 1. Saligrama Mela,
 2. Dharmasthala Mela,
 3. Mandarthi Mela,
 4. Perduru Mela.
- Yakshagana was formerly known as **Bayatala** by some people in Karnataka. **The sister art forms** associated with Yakshagana are listed below:
 - Therukoothu (Tamil Nadu),
 - Kutiyattam and Chakyarkoothu (Kerala),
 - Veedhinataka (Andhra Pradesh).

2. Agamic Temples of Tamil Nadu

Current Context

Recently, the Supreme Court ordered status quo regarding appointment of archakas (priests) in Tamil Nadu temples governed by the Agamic tradition.

About

- The plea filed urged the Court to quash the TN Government order by which the state attempted to interfere with the hereditary scheme of appointing archakas of a particular denomination in Agama temples by throwing it open to those from other denominations, too, who had done a one-year certificate course for archakas in schools run by the government.
- The petitioner association pointed out that “prominent Shaivite and Vaishnavite temples in Tamil Nadu were built according to Agamas and

worship therein is as per Agamas”.

- The plea contended that despite rulings by the SC and Madras HC, the state government “in scant regard for law, are now attempting to appoint non-believers as archakas, only with a view to destroy temples in the state.
 - ✓ It is well settled that a secular Government does not have the power to interfere with essential religious practices, as such a right is well protected under the Constitution of India.
 - ✓ Agamas undoubtedly pertains to an essential religious practice, which cannot be tampered with by a secular Government.

- Appearing for the petitioner association, a senior advocate submitted that the Supreme Court had held in the 1972 case *Seshammal and Others vs State of Tamil Nadu* and the 2016 case *Adi Saiva Sivachariyargal Nala Sangam vs Government of Tamil Nadu* that the archakas of Agama temples have to be appointed as per the Agama traditions.

how far the agamas go back.

- ✓ Some may date as early as the Vedic age.
- ✓ Scholarly takes date them back to over 1100 BC while archaeological research indicates their existence during the Pallava dynasty era in the middle of the 1st millennium CE.

What are Agamas?

- The term “Agama” literally means translates to tradition - “that which has come to us,” reflecting its continuity across generations.
- They are a compilation of Hindu scriptures categorized into:
 - Vaishnava Agamas** (108) (also called Pancharatra Samhitas)
 - Saiva Agamas** (28)
 - Sakta Tantras** (68) (also known as Tantras).
- Agama texts shed light upon a great diversity of subjects, including cosmology, philosophy, yoga etc. and can be found in both Tamil and Sanskrit.
- Although Agamic traditions are often associated with Tantrism, the term “Tantra” specifically refers to Shakta Agamas.
- There is a great deal of mystery regarding

Key features of Hindu Agamas

- They have often been found to have opposed the hegemony of the Vedas, while asserting that they reveal the Vedas’ true essence.
- This has made the Agamic literary genre prevalent in **Shramaic/Heterodox traditions** such as Buddhism and Jainism.
- The Agamas outline three essential requirements for a place of pilgrimage:
 - **Sthala** : temple
 - **Tirtha** : water tank
 - **Murti** : deity image
- They account for detailed rules of sculpting, often throwing light upon the requisite quality of temple sculptures, the way to reach finesse in image sculpting while elucidating upon the architectural specification of temples and shrines.

3. Allah Baksh and Mewari Style Painting

Current Context

Recently, a four-volume set of books showcases nearly 2,000 never-before published miniature artworks of the Mahabharata which were commissioned by Udaipur’s Maharana Jai Singh and painted between 1680 and 1698 by his court painter Allah Baksh.

About

- “**The Mahabharata: Mewari Miniature Paintings (1680–1698)** by **Allah Baksh**” is authored by Chandra Prakash Deval and Alok Bhalla.
- They try to unravel the mystery behind the man who illustrated the epic with 4,000 paintings, done in the Mewari miniature style, which is now with the Government Museum in Udaipur.
- These radiant miniatures painted by Baksh follow almost every story in every chapter of the Mahabharata and have no precedent in India’s art tradition.
- The emphasis in these paintings is not on heroic posturing and spiritual pride, but on the pain that the earth and its creatures endure when human



beings tragically fail to fulfil their dharma.

- Each painting by Baksh has details of the costumes of the characters, the flora and fauna in the background, and the depiction of magical and mystical events.

Who was Allah Baksh?

- Allah Baksh was a 17th century painter who belonged to the reputed **Mewari School** of miniature painting.
- Under the patronage of Maharana Jai Singh of Mewar, he produced a painting each for all the couplets of the Bhagavad Gita.
- He was known for his meticulous attention to detail in his paintings.

Mewari Style Painting

- It was one of the most important schools of Indian miniature painting of the 17th and 18th centuries.
- It is a school in the Rajasthani style and developed in the Hindu principality of Mewar (in Rajasthan state).
- The works of the school are characterized by simple bright colour and direct emotional appeal.
- An increasing number of paintings were concerned with portraiture and the life of the

ruler, though religious themes continued to be popular.

- Sahibdin was one of the outstanding painters of the early phase.

Miniature Painting in India

- The word 'miniature' is derived from 'minium', the old Latin word for red lead paint, which was often used in the illuminated manuscripts of the Renaissance period.
- The corresponding verb meaning 'to colour with minium' was 'miniare'.
- As the manuscripts were small, over time 'miniatura' was used to refer not only to a manuscript illumination but to any small painting, and eventually to anything very small.
- Miniatures are small and detailed paintings. The Indian subcontinent has a long tradition of these miniature paintings, and many schools developed whose paintings are different in terms of composition and perspective.

Technique of Miniature Painting

- The painting should not be larger than 25 square inches.
- The subject of the painting would be painted in not more than one-sixth of the actual size.
- In most of the Indian miniature paintings, the human figurines are depicted in profile. They usually have bulging eyes, a pointed nose and slim waist.
- In the Rajasthani miniatures, the skin colour of the characters is brown, while in the Mughal miniatures the characters are generally fairer. Furthermore, the colour of divine beings like Lord Krishna is blue.

4. Gara Embroidery

Current Context

The 7th online edition of the 'Ehsaas – Threads of India 2023' exhibition was recently held with a special focus on the revival of Parsi Gara embroidery.

History of Gara Embroidery

- Parsi Gara embroidery is a style of embroidery that originated in Persia and was brought to India by the Parsi community.
- This rich craft traces its roots to the 19th century when Parsi traders and artisans migrated to India from Persia (modern-day Iran).
- When the Parsis first settled in Gujarat, Parsi men started trading with China. Initially, they went to buy tea from China and sell it in India.
- During the trade sojourns, they discovered a beautiful silk fabric called 'gaaj' or 'paaj'.
 - ✓ Such exquisite was its beauty that they ended up buying yards for their wives.
- The Parsis brought the embroidery technique to India while trading with China.
 - ✓ Soon, the embroidery style flourished in the textile centres of Mumbai and Surat.
- The name 'Gara' is derived from a Gujarati word for 'sari' or 'wrapper', reflecting its primary use in adorning saris.
- It is known for its intricate and highly detailed floral and nature-inspired designs.
 - ✓ Typically, Parsi Gara embroidery is done **on silk or georgette fabrics** using colourful silk threads.
- In the Parsi Gara embroidery technique, the motifs **often include flowers, birds, butterflies, and other elements of nature**, and they are meticulously stitched onto garments like saris, blouses, and dresses.
 - ✓ A Gara can be fully embroidered or have a border with partial embroidery.
- The commonly found motifs are the 'Chinaman' and woman, birds, and a lot of flora and fauna.
- Traditionally, gara saris come in dark colours like red, maroon and burgundy so that the white thread embroidery would be visible, but with the changing times, there are white-on-white gara saris and even white-on-black ones as well, though black is considered inauspicious.
- This embroidery style is highly regarded for its craftsmanship and is considered a symbol of Parsi cultural heritage.

Gara Embroidery

- Parsi Gara, also known as Parsi Gara embroidery or Parsi Gara work, is a traditional embroidery style originating from the Parsi community in India.



Elaborate Process

- Parsi Gara weavers first draw the design on paper, followed by the formation of the sample colour.
- The craftsmen study the designs and trace them on the sari. Making a Gara sari is an elaborate process, and it takes between two to eight months to complete one.

Hurdles Faced

- **Labour shortage:** There are only 55 trained master karigars (weavers) left since the process is labour intensive and they are paid only around Rs 400 per day.
- **Low demand:** With the diminishing demand for the craft, the children of these weavers are no longer interested or encouraged to carry forward the tradition of Parsi Gara embroidery.
 - ✓ Additionally, the demand has **diminished owing to the low birth rate** of the Parsi community.
- **Too expensive:** The saris/dupattas are very

expensive and it can go up to Rs 1,20,000.

Conclusion

- The Parsi Gara embroidery continues to be treasured for its beauty and craftsmanship and serves as a reminder of the rich cultural heritage of the Parsi community and their ability to adapt and contribute to the diverse tapestry of Indian culture.
- To revive this dying craft, an increase in demand and awareness is the key. The government can also help with the promotion of the Parsi Gara in international quarters.

5. Kalamkari

Current Context

In Tamil Nadu, the Karuppur kalamkari paintings and the Kallakurichi wood carvings recently received the geographical indication (GI) tags.

About

- The application for registering Karuppur kalamkari paintings for the tag was moved by the Tamil Nadu Handicrafts Development Corporation (Poompuhar).
- Kalamkari is slowly being adopted by designers and clothing brands, known for their exquisite shawls crafted using age-old techniques and the finest wool.
 - ✓ These brands minimize carbon footprint by using organic and chemical-free dyes, no energy-consuming machinery, and recycled plastic waste storage. Wooden brushes with horsehair are discarded.

- The tag is governed by **Geographical Indications of Goods (Registration & Protection) Act, 1999** in India.
- The Geographical Indications Registry, Chennai issues these tags.

Kalamkari

- Kalamkari, a traditional art form from **Andhra Pradesh and Telangana**, originated centuries ago to portray scenes from sacred text such as the Mahabharata, Ramayana and Bhagavatam. These paintings were often displayed in temples as decorative backdrops.
- The paintings are intricately made on a cotton cloth using pens or brushes made out of bamboo tree and coconut tree stems.
- Deriving its name from the word 'kalam,' which means pen, 'Kalamkari' refers to a particular, **intricate style of hand-painting onto cloth.**

Geographical Indication

- GI is a tag used to identify products originating from a definite geographical territory and have some special characteristics.



- Recognised as one of the most beautiful art forms in the world, it comprises hand-painted textiles using natural dyes. The pen is a short piece of bamboo or a stick from the date palm tree, pointed at the end to form a nib.
- This art form evolved almost 3000 years ago in Andhra Pradesh. During the 13th to 19th centuries, it was trendy in the Deccan region and was traded heavily along the coastal areas of Coromandel. From there, it travelled to the West where Kalamkari was a highly sought-after art form.
- Kalamkari is a 23-step process that uses only natural dyes. The cloth is first steeped in a mixture of buffalo milk and astringents to create Kalamkari. This is then dried in the sun. The colours red, black, brown, and purple are then outlined with a mordant before being applied to the cloth.
- Kalamkari uses only natural materials. These raw materials include cotton cloth, dried unripe fruit and milk to make the 'mordant,' charcoal sticks, black kasimi liquid, alum solution and natural pigments in red, indigo and yellow.
- **There are two distinct styles of Kalamkari art in India:** the Srikalahasti style and the Machilipatnam style.
- Two new categories of Kalamkari patterns have emerged, based on the states where they are created. **Andhra Pradesh and Gujarat** are two primary Indian states where two evolved and distinct styles of kalamkari are practised. While Gujarat draws inspiration from mythological characters and epics, Andhra Pradesh depicts palaces and forts, which are popular destinations in the country.
- **Kalamkari of Gujarat is also known as 'Mata Ni Pachedi'.** When the nomadic Vaghari community of Gujarat, who worship Mata, were not allowed to enter temples, they made their places of worship out of cloth illustrations of the Mother Goddess (Mata).
- One of the last surviving Kalamkari artists in Andhra Pradesh in the 20th century was **Lakshmaiah**, who is still known for his masterpieces like The Mahabharata and The Ramayana.
- In 2008, Machilipatnam Kalamkari received the GI Tag.
- Andhra Pradesh is still the country's primary centre for Kalamkari painting.

KHAN SIR

9. PERSONALITY, AWARDS AND SPORTS

9.1. PERSONALITY

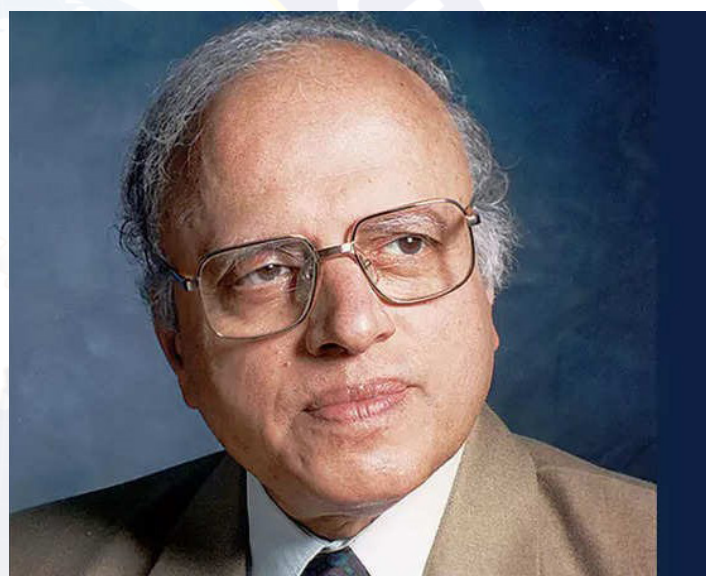
1. MS Swaminathan

Current Context

Mankombu Sambasivan Swaminathan (MS Swaminathan) died at the age of 98 in Chennai on 28th October, 2023.

About MS Swaminathan

- MS Swaminathan was a renowned agricultural scientist who played a pivotal role in India's 'Green Revolution'.
- He was an agronomist, plant geneticist, administrator, and humanitarian icon who played a crucial role in developing high-yielding varieties of paddy that helped ensure India's low-income farmers produce more yield.
- He was born in 1925, in Kumbakonam, a small city in the Cauvery River basin that is the primary grain-producing region in Tamil Nadu.



Major Research Contributions

- Swaminathan **started his career in 1949**, researching on the genetics of potato, wheat, rice and jute.
- **Potato:** His study concentrated on the genus Solanum, with a particular emphasis on the potato to modify genes and enable resistance to parasites and cold conditions.
- **Wheat:** Development of high yielding varieties (HYV) to suit native Indian Agro-climatic conditions.
- **Rice:** Efforts towards growing rice with Carbon Fixation capabilities, which would allow better photosynthesis and water usage, were started at IARI under Swaminathan.
 - ✓ Also played a role in the development of the world's first high-yielding Basmati rice.
- **Radiation botany:** The Genetics Division of the IARI under Swaminathan was globally renowned for its research on Mutagens.
 - ✓ He set up a Cobalt-60 Gamma Garden to study Radiation Mutation.
 - ✓ His early research on effects of radiation on cells and organisms partly formed the base of future Redox Biology.
- When India was on the verge of a mass famine leading to scarcity of food grains, MS

Green Revolution

- The Green Revolution began in the 1960s during which, agriculture in India was converted into a modern industrial system by the adoption of cutting-edge technology, such as the use of high yielding variety (HYV) seeds, mechanised farm tools, irrigation facilities, pesticides, and fertilizers.

Swaminathan along with **Norman Borlaug** and other scientists, developed the **High Yield Variety (HYV) seeds of wheat**.

- Swaminathan was given the title of the “**Father of Economic Ecology**” by the United Nations Environment Programme (**UNEP**).
- Dr. Swaminathan pioneered the **Green Revolution**, tripling wheat harvest in the first year itself.
 - ✓ In total, wheat harvest jumped from 12 million to 23 million in four crop seasons itself.
 - ✓ Apart from higher yields, Dr. Swaminathan's work with the farmers ushered India's golden age in farming technology – transforming the nation from a 'Begging Bowl' to the 'Bread Basket of the World'.

Awards

- For developing and spearheading the introduction of high-yielding wheat and rice varieties into India, he was awarded the **first World Food Prize Award in 1987** (given by World Food Prize Foundation) following which, he set up the MS Swaminathan Research Foundation in Chennai.
- He was given the **Shanti Swarup Bhatnagar Award** in 1961.
- Swaminathan was also awarded with the **Ramon Magsaysay Award** in 1971 and the **Albert Einstein World Science Award** in 1986.
- He was also conferred with the **Padma Shri** in 1967, **Padma Bhushan** in 1972 and the **Padma Vibhushan** in 1988.
- He also received the **H K Firodia award**, the **Lal Bahadur Shastri National Award** and the

Indira Gandhi Peace Prize.

- Beyond his work within India, Swaminathan was a spectacular figure globally, contributing to various international agricultural and environmental initiatives.
 - ✓ He was named one of the 20 most influential Asians of the 20th century by the Times magazine.

Recognition

- The visionary Indian agriculturalist held administrative positions in various agricultural research laboratories.
 - ✓ He served as the Director General of **Indian Council of Agricultural Research**.
 - ✓ He also served as the Principal Secretary of the **Ministry of Agriculture** in 1979.
- In 1988, Swaminathan became the President of the **International Union of the Conservation of Nature and Natural resources**.
- In 2004, Swaminathan was appointed as Chair of the **National Commission on Farmers** setup to look into farmer distress amid alarming suicide cases.
 - ✓ The Commission submitted its report in 2006 and suggested, among its recommendations, that the Minimum Selling Price (MSP) should be at least 50 percent more than the weighted average cost of production.
- Other stints that he was a part of, include:
 - ✓ Membership at the **Planning Commission** (1980-82)
 - ✓ Director General, **International Rice Research Institute**, the Philippines (1982-88).
 - ✓ Nominated to the **Rajya Sabha** (2007).

2. Manohar Singh Gill

Current Context

Former Chief Election Commissioner (CEC) Manohar Singh Gill, 86, passed away on October 15, 2023.

About MS Gill

- He was born in undivided Punjab, Aladinpur village in Tarn Taran district, on June 14, 1936.
- A distinguished figure in bureaucracy and politics, Gill's journey as a civil servant, Punjab-cadre, began in 1958.
- As a bureaucrat, he served as a member of the Indian Administrative Service from 1958 until his retirement in 2001 as the Chief Election Commissioner of India.
- He is perhaps the first former CEC to have joined politics. Gill entered the Rajya Sabha as a Congress member and was made the Union Sports Minister in 2008.

- After his retirement, Gill joined the Congress in 2004 and represented Punjab in the Rajya Sabha from 2004 to 2016, marking two successful terms as a member of Parliament, during which he held positions as Youth Affairs and Sports Minister and Minister of Statistics and Programme Implementation in the Manmohan Singh government.
- ✓ It was during his tenure that India hosted the **2010 Commonwealth Games** in New Delhi.



Contribution

- A former Indian Administrative Services (IAS) officer of Punjab cadre, Gill served as Chief Election Commissioner from 1996 to 2001.
 - ✓ He, along with G.V.G. Krishnamurthy, joined the poll panel when the Election Commission became a multi-member body.
 - ✓ Dr. M.S. Gill was the **11th Chief Election Commissioner of India.**
 - ✓ He succeeded T N Seshan as the CEC of India.
 - ✓ During his tenure as CEC, ECI successfully conducted the General Elections to the 12th Lok Sabha in 1998 and 13th Lok Sabha in 1999; 11th Presidential Elections and Vice-Presidential Elections in 1997, and General Elections to Legislative Assemblies in more than 20 states.
 - ✓ His major achievement was introducing electronic voting machines in India, an idea that largely helped curb polling malpractices in the country.

Prolific writer

- Gill was a prolific writer and scholar, known for his sharp intellect. He penned books such as
 - ✓ Himalayan Wonder: Travels in Lahaul and Spiti in 1972
 - ✓ Tales from the Hills: Lahaul's Enduring Myths and Legends in 2014
 - ✓ An Indian Success Story
- His work "Agriculture Cooperatives: A Case Study of Punjab" is among his best-known work on Punjab and farm issues in India.

Awards

- He was awarded the **Padma Vibhushan**, second highest civilian award, for his tenure as Election Commissioner in the year 2020.
- He was also awarded the **Nishan-e-Khalsa** on the 300th anniversary of the Khalsa.

9.2. AWARDS

1. 2023 Nobel Prizes

Current Context

The announcement of the Nobel Prize in Economic Sciences on 9 October 2023 wrapped up the highly anticipated series of award unveilings across six distinct categories.

Awardees

Category	Laureates	Achievements
• Physiology or Medicine	• Katalin Kariko and Drew Weissman	• Development of effective mRNA Covid-19 vaccines.
• Physics	• Pierre Agostini, Ferenc Krausz, Anne L’Huillier	• Pioneering work on electron dynamics in matter.
• Chemistry	• Mounqi G. Bawendi, Louis E. Brus, Alexei I. Ekimov	• Discovery and synthesis of quantum dots.
• Literature	• Jon Fosse	• Innovative plays and prose which give voice to the unsayable.
• Peace	• Narges Mohammadi	• Dedication to fight against the oppression of women in Iran and to promote human rights and freedom for all.
• Economic Science	• Claudia Goldin	• For her study to advance the understanding of the gender gap in the labor market.

Details

• Physiology or Medicine

- ✓ The 2023 Nobel Prize in Physiology or Medicine has been awarded to **Katalin Kariko, and Drew Weissman** for their discoveries concerning nucleoside base modification that enabled the development of effective **mRNA vaccines against COVID-19**.
- ✓ Through their groundbreaking findings, which have fundamentally changed our understanding of how mRNA interacts with our immune system, the laureates contributed to the unprecedented rate of vaccine development during one of the greatest threats to human health in modern times.

- ✓ Dr. Kariko has become **the 13th woman** to win the Nobel Prize in Medicine.

• Physics

- ✓ This year’s Nobel Prize for Physics was shared by three scientists—**Pierre Agostini, Ferenc Krausz and Anne L’Huillier**—for their “experimental methods that generate attosecond pulses for the study of electron dynamics in matter.”
- ✓ Their experiments granted the Laureates to observe extremely brief events that transpire in **a few tenths of attoseconds—a quintillionth (10¹⁸) of a second**.

• Chemistry

- ✓ The Nobel Prize for Chemistry has been

awarded to **Moungi G. Bawendi, Louis E. Brus and Alexei I. Ekimov for the discovery and synthesis of quantum dots.**

- ✓ Numerous uses for these quantum dots can be found in contemporary technology.
- ✓ **Quantum dots** have unique properties and now spread their light from television screens and LED lamps. They catalyse chemical reactions and their clear light can illuminate tumour tissue for a surgeon.
- ✓ The 2023 Nobel Prize laureates in chemistry have all been pioneers in the exploration of the nanoworld.
- **Literature**
 - ✓ **Jon Olav Fosse**, a Norwegian author, received the 2023 Nobel Prize in Literature for his “**Innovative plays and prose which give voice to the unsayable**”.
 - ✓ The themes of Fosse's work address the absurdity, futility, and still strength of the human experience. His dramatic action and extreme linguistic reduction reflect in the most basic words the most potent human feelings of worry and helplessness.
 - ✓ His writing style, characterised by simple, minimal, searing dialogue, is considered similar to Samuel Beckett and Harold Pinter, both of whom have won the Nobel earlier.
- **Peace**
 - ✓ Iranian activist **Narges Mohammadi** has been chosen by the Royal Swedish Academy for the coveted 2023 Nobel Peace Prize for her **fight against the oppression of women in Iran and to promote human rights and freedom for all.**
 - ✓ She worked as a journalist for several reformist publications and campaigned for the abolition of the death penalty, promotion of women's rights and the right to protest.
 - ✓ Mohammadi is the 19th woman to ever win the Nobel Peace Prize and the **second**

Iranian woman to win the award – after human rights activist Shirin Ebadi in 2003.

- **Economics**

- ✓ This year's Nobel Prize in Economics Sciences has been awarded to **Harvard University Professor Claudia Goldin** for research that has advanced the understanding of the gender gap in the labor market.
- ✓ Nobel Prize in Economics was not part of Alfred Nobel's 1895 will that established the other prizes.
- ✓ The economics award was **created in 1968 by Sweden's central bank** and was formally known as the **Bank of Sweden Prize in Economic Sciences** in memory of Alfred Nobel.

About Nobel Prizes

- These annual Nobel Prizes, spanning physics, chemistry, medicine, literature, and peace, originate from the will of **Alfred Nobel**, the Swedish dynamite inventor who passed away in 1896.
- Unlike the other Nobel Prizes that are selected and announced in Stockholm, founder Alfred Nobel decreed that the **Peace Prize be decided and awarded in Oslo by the five-member Norwegian Nobel Committee.**
- ✓ **The Peace Prize is the only one among the Nobel Prizes** to be awarded in Norway's capital Oslo, rather than Sweden's capital Stockholm.



- Five years after Nobel's death, in **1901**, the first Nobel Prizes were awarded.
- The Royal Swedish Academy of Sciences for Chemistry and Physics, the Swedish Academy for Literature, Sweden's Karolinska Institute for Physiology or Medicine, and the Norwegian Parliament for Peace were the institutions that Nobel appointed to administer the awards in various categories.
- The prizes carry a cash award of **11 million Swedish kronor** and are awarded on **December 10**.
- Winners also receive an 18-carat gold medal and diploma when they collect their Nobel Prizes at the award ceremonies in December.

2. Dadasaheb Phalke Award

Current Context

Veteran Bollywood actress Waheeda Rehman has been conferred with the **Dadasaheb Phalke Award**, which is given for "outstanding contribution to the growth and development of Indian cinema", for the year 2021.

About

- Waheeda Rehman has been critically acclaimed for her roles in Hindi films, prominent among them being *Pyaasa*, *Kaagaz ke Phool*, *Chaudhavi Ka Chand*, *Saheb Biwi Aur Ghulam*, *Guide* and *Khamoshi*.
- She has worked in more than 90 films. She made her acting debut in the Telugu film "*Rajulu Marayi* (1955)".
- She won the **Filmfare Best Actress Award** for her roles in "*Guide*" and "*Neel Kamal* (1968)".
- She also bagged the **National Award** for Best Actress (1971) and was honoured with the **Padma Shri** by government in 1972 and the **Padma Bhushan** in 2011.
- The **52nd the Dadasaheb Phalke Lifetime Achievement Award** for 2020 was given to Asha Parekh.
- "*Raja Harishchandra*", in 1913.
- The award was instituted by the government in 1969, and consists of a '**Swarna Kamal**', a cash prize of **Rs 10 lakh**, a certificate, a silk roll, and a shawl.
- The award is considered the highest honour in the Indian film fraternity. It is awarded for outstanding contribution to the growth and development of Indian cinema.
- **The first recipient of the award was Devika Rani Roerich in 1969.**
- The award is presented by the President of India.



Dadasaheb Phalke Award

- The Dadasaheb Phalke Award is part of the National Film Awards, a highly coveted collection of honours in the film industry.
- The Award is named after Dhundiraj Govind Phalke, the pioneering filmmaker who gave India its **first film—**
- He was born in 1870 at Trimbak in Maharashtra. He studied engineering and sculpture and developed an interest in motion pictures after watching the 1906 silent film "*The Life of Christ*".
- Before venturing into films, Phalke worked as a photographer, owned a printing press, and had

Dhundiraj Govind 'Dadasaheb' Phalke

even worked with the famed painter Raja Ravi Varma.

- In 1913, Phalke wrote, produced, and directed India's first feature film, the silent "Raja Harishchandra". A commercial success, it propelled Phalke to make 95 more films and 26 short films in the next 19 years.
- He is, hence, known as the **Father of the Indian Cinema**.

The National Film Awards

- The National Film Awards, established in 1954, is one of the most prestigious and much looked-forward-to events in the country.
- They are presented by the President of India each year for the films of the preceding year.
- It aims at encouraging the production of films of aesthetic & technical excellence and social relevance.
- It also aims to increase appreciation of different cultures and communities across India, thus promoting unity and integrity.

9.3. SPORTS

1. 19th Asian Games

Current Context

The 19th Asian Games were held in Hangzhou, China, from September 23 to October 8, 2023.

About

- Earlier, these games were scheduled to be held from September 10 to 25, 2022, but were postponed due to COVID-19 pandemic cases rising in China.
- **Theme of 19th Asian Games - "HEART TO HEART, @FUTURE"**.
 - ✓ The unique nature of this slogan is in keeping with Hangzhou's status as a city of Internet.
 - ✓ The message to the world is that people from different countries and regions can achieve a deeper understanding on the grand stage that is the Asian Games.
- **"Tides Surging"** was the official name of the Emblem. It represented the Qiantang River in Hangzhou, one of the three largest river tidal bores in the world.
- The **three mascots of Hangzhou 2022** were **Congcong, Chenchen, and Lianlian**.
 - ✓ They represented the three World Heritage Sites that are located in Hangzhou:
 - I. The Archaeological Ruins of Liangzhu City,
 - II. The Beijing Hangzhou Grand Canal,
 - III. The West Lake.

- With over 12,000 athletes from 45 countries and regions competing in 40 sports, 61 disciplines, and 481 events, the 19th Asian Games was the largest in history.
- China led the overall Asian Games 2023 medals tally with 201 Golds, ahead of Japan (52), the Republic of Korea (42) and India (28).



- ✓ **Only four countries** won over 100 medals in Hangzhou.
- The Hangzhou Asian Games was the third time

that China hosted the Asiad, following Beijing in 1990 and Guangzhou in 2010.

India's Performance

- India won **107 medals** including 28 gold medals in the Asian Games 2022 making this the best performance in terms of the total number of medals won in the continental multi-sport event.

Esports at Asian Games 2023

- Esports made its debut as a medal event at the Asian Games, with medals earned by participants contributing to the overall medal count.

Competitors engaged in seven distinct events:

- ✓ Arena of Valor Asian Games Version
- ✓ Dota 2
- ✓ Dream Three Kingdoms 2
- ✓ FIFA Online 4
- ✓ League of Legends
- ✓ PUBG Mobile Asian Games Version
- ✓ Street Fighter V: Champion Edition.

- However, India was only represented in four of these events: Dota 2, FIFA Online 4, League of Legends, and Street Fighter V: Champion Edition.

10. FACT POINTS

Test flight success of Abort Mission-1 (TV-D1)

- Test flight success of Abort Mission-1 (TV-D1) on 21 October 2023 heralds successive sequential trial flights before the final **“Gaganyaan”** launch, said Union Minister of State for Atomic Energy and Space, Dr Jitendra Singh in his first response soon after the entire exercise was accomplished as expected.
- A **single engine rocket** carrying an early **depressurised version of “Gaganyaan” Crew Module (CM)** to an altitude of around 17 kilometre was followed by final descent using a parachute for its splash down.
- The exercise tested the performance of the **Crew Escape System on the Crew Module** of the Gaganyaan mission, he said.
- Basically, it tested the **safety mechanism** that will allow the crew of the “Gaganyaan” mission to escape the spacecraft in case the mission is aborted due to a malfunction.

Website of “Kasturi Cotton Bharat” launched

- Piyush Goyal, Union Minister of Textile, Commerce & Industry, launched the **website of Kasturi Cotton Bharat** on October 21, 2023.
- This website provides a **digital platform for necessary information and updates** on this initiative and highlights the **registration process** for ginners to produce Kasturi Cotton Bharat Brand and its processes that make the branded Indian cotton unique.
- The Kasturi Cotton Bharat is a **joint initiative** by the **Ministry of Textiles, the Cotton Corporation of India, Trade Bodies & Industry** to work on the principle of self-regulation by owning complete responsibility of **Branding, Traceability and Certification of**

Indian Cotton to enhance its’ competitiveness in the global market and create a sustainable ecosystem for all stakeholders involved.

“Exercise Harimau Shakti-2023”

- Joint bilateral training exercise **“Exercise Harimau Shakti 2023”** between **Indian & Malaysian Armies** commenced in **Umroi Cantonment** on October 23, 2023.
- The **Malaysian Army** contingent comprises troops from **5th Royal Battalion** of Malaysian Army.
- The **Indian contingent** is being represented by **a Battalion of the Rajput Regiment**.
- **The last edition of the Exercise** was conducted in **Pulai, Kluang, Malaysia in November 2022**.
- **Ex Harimau Shakti**, scheduled till **5th November 2023**, will engage approximately 120 personnel from both sides.
- It is aimed at enhancing military capability for conduct of **Multi Domain Operations** in a sub conventional scenario.

Bharat National Cyber Security Exercise 2023

- The **Bharat National Cyber Security Exercise (NCX) 2023** was held in New Delhi from **October 9th to 20th October 2023**.
- This flagship event served as a **unifying platform for over 300 participants**, representing a diverse spectrum of government agencies, public organizations, and the private sector, all resolutely committed to the safeguarding of critical information infrastructure.
- Bharat NCX 2023 organised **intense training for the participants over six days** and a **red on blue Live Fire cyber exercise** over five days, wherein participants challenged their cyber skills against a determined adversary.
- The exercise also had a **Strategic Track for**

leadership level discussions on cyber threat landscape, incident response, crisis management to handle real world cyber challenges.

Sir JJ School of Art declared de novo Deemed University

- The Union Minister for Education and Skill Development & Entrepreneurship, on 19 October 2023, declared the **166-year-old Sir JJ School of Art** a de novo Deemed University and also unveiled the foundation stone of the new university.
- The **de novo category** is awarded to institutions devoted to **innovations in teaching and research in unique and emerging areas of knowledge**.
- With the Centre's approval in place, the 'Sir JJ School of Art, Architecture and Design' will become **Maharashtra's only government-run deemed-to-be University** and one among the handful institutes with the 'de novo' tag across the country.

Project “Heartland Tripura”

- In a bid to enhance the **employability and skills of the youth of Tripura**, a project named “Heartland Tripura” was launched on 19 October 2023, in partnership with **Deloitte India** and the **National Institute of Electronics and Information Technology (NIELIT), Agartala**.
- This project is poised to open new career and personal development opportunities for **undergraduate students in both engineering and non-engineering fields**.
- It is backed by the **Government of India** and the **State Government of Tripura**.
- The “Heartland Tripura” project will deliver a specific set of skill development certification courses through NIELIT – Agartala for the state.
- The **certification courses** offered under “Heartland Tripura” will cover a **wide range of new age technical and professional**

development skills such as cyber security, internal audit, analytics, and softer skills around business communication, executive presence, and grooming amongst others.

- The **project also aims** to identify target organizations for placements and build an advocacy network for private firms to hire from select colleges in Tripura.

6th Assembly of ISA to be held in New Delhi

- The **Sixth Assembly of the International Solar Alliance** will be held in New Delhi from **October 30 – November 2, 2023**.
- Ministers, missions and delegates from **116 Member and Signatory Countries of the ISA** will participate, along with delegates from prospective countries, partner organizations, private sector and other stakeholders.
- The ISA was **launched jointly by India and France** after COP21 in Paris.

ISA Assembly

- The ISA Assembly is the **apex decision-making body of ISA**, in which each Member Country is represented.
- **109 countries** are signatories to the ISA Framework Agreement, of which **90 countries** have submitted the necessary **instruments of ratification** to become full members of the ISA.
- **India holds the office of the President of the ISA Assembly**, with the Government of the French Republic as the **co-president**.

Cabinet approves MSP for Rabi Crops for Marketing Season 2024-25

- The Cabinet Committee on Economic Affairs, chaired by the Minister Narendra Modi, approved the increase in the **Minimum Support Prices (MSP)** for all mandated Rabi Crops for Marketing Season 2024-25.

- The Government has increased the MSP of Rabi Crops for Marketing Season 2024-25, to ensure **remunerative prices to the growers** for their produce.
- The **absolute highest increase in MSP** has been approved for **lentil (masur)** at Rs. 425 per quintal followed by **rapeseed & mustard** at Rs.200 per quintal.
- For **wheat and safflower**, an increase of Rs.150 per quintal each has been approved.
- For **barley and gram** an increase of Rs.115 per quintal and Rs.105 per quintal respectively, has been approved.

INS Sumedha at Lagos, Nigeria

- **INS Sumedha** made a port call at Lagos, Nigeria on 13 October 2023 as part of its deployment to Gulf of Guinea.
- The visit was **aimed to further strengthen diplomatic relations**, reinforce **maritime co-operation**, and **boost interoperability** between the two navies.
- This was the Indian Navy's **second deployment to the piracy prone Gulf of Guinea (GoG)** patrol after the maiden GoG patrol was undertaken by **INS Tarkash in October 2022**.
- **INS Sumedha** is **third of the indigenously designed and manufactured 'Saryu' Class Naval Offshore Patrol Vessel (NOPV)**.

Ferry services between Nagapattinam, India and Kankesanthurai, Sri Lanka launched

- Prime Minister Narendra Modi addressed the launch of ferry services between **Nagapattinam, India and Kankesanthurai, Sri Lanka** via video message on October 14, 2023.
- Underlining the **shared history of culture, commerce and civilization** between India and Sri Lanka, the Prime Minister pointed out that **Nagapattinam** and nearby towns have been **known for sea trade with many countries**

including Sri Lanka and the historical port of **Poompuhar** finds a mention as a hub in ancient **Tamil literature**.

- He also spoke about Sangam age literature like **Pattinappalai** and **Manimekalai** which describe the movement of boats and ships between the two countries.
- He also touched upon the great poet Subramania Bharti's song '**Sindhu Nadhiyin Misai**', which mentions a bridge connecting India and Sri Lanka.

Sagar Kavach 02/23

- A **two-day comprehensive Coastal Security Exercise Sagar Kavach 02/23** involving all maritime security agencies was conducted by the Indian Navy in **Andhra Pradesh, Tamil Nadu and the UT of Puducherry on October 11-12, 2023**.
- The **exercise aimed** to assess the efficacy and robustness of the coastal security mechanism while dealing with asymmetric threat emanating from the sea.
- Indian Naval Ships along with assets of the **Coast Guard** and **other coastal security agencies** were deployed to augment surveillance in the area.
- Enhanced security measures were instituted and extensive aerial surveillance undertaken by **Dornier aircraft and helicopters** operating from Visakhapatnam, Chennai and Ramnathapuram.
- The exercise witnessed close coordination and synergy among all coastal security stakeholders.

Indian Railways' PSUs, RITES Ltd and IRCON granted Navratna status

- **IRCON International Limited (IRCON)** and **RITES Ltd (RITES)**, both Central Public Sector Enterprise (CPSE) under the Ministry of Railways, have been announced as 15th and 16th **Navratna respectively among CPSEs**.
- The Ministry of Finance, on 12 October 2023,

conferred 'Navratna' status on RITES and IRCON.

- **RITES Ltd** is a leading transport infrastructure consultancy and engineering firm in India.
- It provides services in the diverse sectors of transportation, railways, export of rolling stock, highways, airports, metros, urban engineering & sustainability, ports & waterways, and energy management.
- The core competence of **IRCON** is in Railways, Highways & Extra High Tension substation engineering and Construction.
- With the grant of "Navratna" status, the companies should benefit in enhancing the market credibility and in undertaking larger size PPP projects.

"Data Analytics Dashboard" and "Poorvottar Sampark Setu" portal launched

- MoS, MDoNER, B. L. Verma virtually launched "MDoNER Data Analytics Dashboard" and "Poorvottar Sampark Setu" portal in New Delhi on October 12, 2023.
- "MDoNER Data Analytics Dashboard" has the data of **112 schemes across 55 Departments and Ministries**.
- It will help in (a) **Data driven decision making**; (b) **Ease of operations**; (c) **Centralized monitoring**; (d) **Policy level decision tool**; and (e) **Information integration**.
- It will keep a close watch on **NER Aspirational districts, North East border districts and the most backward districts in NER**.
- Creating a benchmark for key performance indicators of schemes in NER, the Dashboard will be equipped with the latest innovations in e-governance and display information across multiple departments and Ministries on a single platform.

Animated series Krish, Trish and Balti boy – Bharat Hain Hum

- Union Minister Anurag Thakur, on 11 October 2023, launched the trailer of **KTb- Bharat Hain Hum**, an animated series consisting of two seasons, produced by **Central Bureau of Communication, Ministry of Information and Broadcasting and Graphiti Studios**.
- The series consists of **52 episodes, 11 minutes each**, featuring stories from **Indian Freedom struggle from 1500s to 1947**.
- The series is hosted by the iconic animated characters **Krish, Trish and Balti boy**.
- The series has been created by the creator duo of **Munjal Shroff and Tilakraj Shetty** from Graphiti Studios.
- The series is being produced in the following **12 Languages**: Hindi (Master), Tamil, Telugu, Kannada, Malayalam, Marathi, Gujarati, Punjabi, Bengali, Assamese, Odia and English.
- The series will also be **dubbed** in the following **international languages**: French, Spanish, Russian, Arabic, Chinese, Japanese, and Korean.

Launch of new standardised Protocol for Management of Malnutrition in Children

- A new standardised **Protocol for Management of Malnutrition in Children (Protocol)** was launched on 10 October 2023 by Union Minister of Women and Child Development, Smt Smriti Zubin Irani.
- The Protocol for Management of Malnutrition in Children has been **jointly prepared** by the **Ministry of Women and Child Development and the Ministry of Health and Family Welfare, Government of India**.
- The protocol will be a core component of the efforts by MoWCD to reduce malnutrition through **Mission Saksham Anganwadi and Nutrition 2.0**.
- The newly launched protocol for identification and management of malnourished children provides **detailed steps for identification and**

management of malnourished children at the **Anganwadi level**, including decision making regarding referral, nutritional management and follow-up care.

Annual Joint HADR Exercise 2023 – (CHAKRAVAT 2023)

- The **Annual Joint HADR Exercise (AJHE)** is an outcome of PM's directive promulgated during **Combined Commanders' Conference-2015**.
- Since its **first edition in 2015**, the Annual Joint HADR Exercise, CHAKRAVAT, has transformed itself into a **multi-agency endeavour** involving participation of **all three Services, Paramilitary Forces, as well as several disaster response organisations, NGOs, academic institutions and international organisations**.
- The 2023 edition further synergised efforts at the national level among all stakeholders, as well as witness participation from eight countries of the **Indian Ocean Region**.
- The exercise has been conducted by Indian Army, Indian Navy (IN) and Indian Air Force (IAF) in **rotation since 2016**.
- The **last edition** of the exercise was conducted at Agra by IAF.
- The **2023 edition of the exercise** was hosted by the **Indian Navy at Goa from 9 to 11 October 2023**.
- The **Logo for this year's exercise** depicted crests and logos of all participating agencies and flags of all nations subsumed into one single entity to signify that HADR will hinge on joint and integrated action by all the agencies.

New Indian Air Force Ensign

- **8 Oct 2023**, the Chief of Air Staff unveiled the new IAF ensign.
- **Going back in history**, the RIAF Ensign comprised of the **Union Jack** in the upper left canton and the RIAF roundel (Red, White &

Blue) on the fly side.

- **Post-Independence**, the Indian Air Force ensign was created by replacing the Union Jack with the Indian tri colour and the RAF roundels with the IAF tri colour roundel in the lower right canton.
- A new IAF ensign has now been created to better reflect the values of the Indian Air Force.
- This reaffirmation will now be reflected by the inclusion of the **Air Force Crest in the top right corner of the Ensign, towards the fly side**.
- The IAF Crest has the national symbol, the **Ashoka lion** on the top with the words "Satyamev Jayate" in Devanagari below it.
- Below the Ashoka lion is a **Himalayan eagle with its wings spread**, denoting the fighting qualities of the IAF.
- A **ring in light blue colour** encircles the Himalayan eagle with the words "Indian Air Force" in Devanagari.
- The **motto of the IAF** is inscribed below Himalayan eagle in golden Devanagari.
- The IAF motto has been taken from **verse 24, Chapter 11 of the Bhagavad Gita** and means "Radiant Thou Touched Heaven" or in other words "Touching the sky with Glory".

'Aadi Mahotsav'

- Union Minister for Tribal Affairs, Arjun Munda inaugurated the **Aadi Mahotsav** - the National Tribal Festival - at Jamshedpur, Jharkhand on October 7, 2023.
- The mega event was organized by the **Tribal Cooperative Marketing Development Federation of India Limited (TRIFED)**, Ministry of Tribal Affairs, from **7th – 16th October 2023**.
- Aadi Mahotsav, an **annual celebration of tribal entrepreneurship, craft, culture, cuisine, and commerce**, serves as a vital platform to display the rich and diverse heritage of tribes from across the nation.

- This year the festival highlighted the talents of **336 tribal artisans and artists**, including **Particularly Vulnerable Tribal Groups (PVTGs)** and **Van Dhan Vikas Kendra (VDVK)** beneficiaries.

India re-elected as President of Asia-Pacific Institute for Broadcasting Development (AIBD) for a third successive term

- India has been re-elected as **President of AIBD GC for the 3rd successive term** to lead the prestigious international organisation.
- India has **already served two terms as President**, Asia-Pacific Institute for Broadcasting Development (AIBD) General Conference (GC) from **2018–2021 and 2021–2023**.
- **AIBD, established in 1977 under the auspices of UNESCO**, currently has **92 member organisations** from across 44 countries.
- **India** is one of the **founding members of AIBD** and **Prasar Bharati**, India's public service broadcaster, is the **representative body of the Ministry of Information & Broadcasting**, Government of India at AIBD.

World Cerebral Palsy Day observed

- **World Cerebral Palsy Day** is a global observance that shines a spotlight on cerebral palsy (CP) and its impact on individuals, families, and communities.
- Celebrated every year on **October 6th**, this day serves as a platform to raise awareness about CP, support those living with the condition, and advocate for greater inclusion and understanding.
- The day sheds light on the need for increased awareness, understanding and support for those with cerebral palsy.
- The **theme** for World Cerebral Palsy Day in 2023 is **"Together Stronger."**

Goa to host the 37th National Games with a record 43 sports disciplines

- Goa is set to make history by hosting the **37th edition of the National Games**, featuring a record-breaking **43 sporting disciplines**.
- Compared to the previous edition in Gujarat, which featured 36 disciplines, and Kerala's 2015 edition with 33, this year's National Games will be the **largest ever**.
- The Olympic-style multisport event will witness **participation from 28 states and 8 Union Territories** and is scheduled to take place from **October 26th to November 9th**.
- The 37th National Games will mark the **debut of several new sports disciplines** on the medal stage, including beach football, roll ball, golf, sepaktakraw, sqay martial arts, kalliয়ারাপটু, and pencak silat.
- Additionally, **yachting and taekwondo** are making a triumphant return to the Games after their exclusion during the last edition.
- To celebrate tradition, the sports of **lagori and gatka** have been included as **demonstration sports**, adding a unique and cultural dimension to the event.

Veer Gatha Project 3.0

- More than **1.36 crore** school students from all 36 States and UTs participated enthusiastically in the **3rd edition of the Veer Gatha Project**.
- The students sent poems, paintings, essays, videos, etc. to honour the acts of bravery and sacrifice of the officers/personnel of the Armed Forces.
- Project Veer Gatha was instituted under **Gallantry Awards Portal (GAP) in 2021** with the **aim to disseminate the details of acts of bravery of the Gallantry Awardees and the life stories** of these brave hearts among the students so as to raise the spirit of patriotism

and instill amongst them values of civic consciousness.

- Two editions of the Veer Gatha Project (i.e. **Edition-I and Edition-II**) have been conducted in 2021 and 2022 respectively.

Establishment of National Turmeric Board

- The Government of India, on 4 October 2023, notified the **constitution of the National Turmeric Board**.
- The National Turmeric Board will focus on the **development and growth of turmeric and turmeric products in the country**.
- The **National Turmeric Board** will provide leadership on turmeric related matters, **augment the efforts, and facilitate greater coordination with Spices Board** and other **Government agencies** in development and growth of the **turmeric sector**.
- It will **especially focus on capacity building and skill development of turmeric growers** for harnessing greater benefits out of value addition.
- The Board **will also promote quality and food safety standards** and adherence to such standards.
- **The Board shall have** a Chairperson to be appointed by the Central Government, members from the Ministry of AYUSH, Departments of Pharmaceuticals, Agriculture & Farmers Welfare, Commerce & Industry of the Union Government, senior State Government representatives from three states (on rotation basis), select national/state institutions involved in research, representatives of turmeric farmers and exporters, and a Secretary to be appointed by the Department of Commerce.
- **India is the largest producer, consumer and exporter of turmeric in the world.**
- **More than 30 varieties of turmeric are grown in India** and it is grown in **over 20 states** in the country.

- The **largest producing states of turmeric** are Maharashtra, Telangana, Karnataka and Tamil Nadu.

Exercise SAMPRITI

- India and Bangladesh conducted the **11th edition of annual joint military exercise, SAMPRITI in Umroi, Meghalaya**.
- This exercise, **alternatively organised** by both countries, signifies strong bilateral defence cooperation initiatives.
- With its **inception in Jorhat, Assam in 2009**, the exercise has witnessed ten successful editions till 2022.
- SAMPRITI-XI engaged approximately 350 personnel from both sides.
- The exercise underscores the importance of enhancing **interoperability** between the two armies, **sharing tactical drills, and promoting best practices**.

Jammu & Kashmir achieves 100% ODF Plus Model Status

- The Union Territory of Jammu & Kashmir has declared **all its 6650 villages across 285 blocks in 20 Districts as ODF Plus Model**.
- The achievement of ODF Plus Model for all villages in the UT is a significant milestone as it goes beyond constructing and use of toilets towards cleanliness by managing Grey water and Solid Waste in each village.
- For a village to achieve the status of ODF plus Model, it is required to pass through three stages of ODF Plus namely **Aspiring, Rising and Model**.
- When a village achieves a condition where it is visually clean with minimal litter and stagnant water, apart from solid and liquid waste management (SLWM) and adequate cleanliness awareness generation activities, it is declared as **ODF plus Model**.

Uttar Pradesh achieves 100% ODF Plus coverage under Swachh Bharat Mission Grameen

- Uttar Pradesh has achieved yet another major milestone under the **Swachh Bharat Mission (Grameen) Phase II** with all 95, 767 villages in the State i.e., **100% villages achieving ODF Plus status under Phase II of the Mission.**
- An **ODF Plus village** is one which has sustained its Open Defecation Free (ODF) status along with implementing either solid or liquid waste management systems.
- As on date, 4.4 lakh (75%) villages across the nation have declared themselves ODF Plus, which is a significant step towards achieving the **SBM-G phase II goals by 2024-25.**
- This achievement of 100% is marked during ongoing **Swachhata Hi Seva (SHS) – 2023 campaign.**
- SHS is celebrated annually from **15th September to 2nd October** under Swachh Bharat Mission (Grameen), Drinking Water & Sanitation Department, Ministry of Jal Shakti.
- An **ODF Plus Model village** is one which is sustaining its ODF status and has arrangements for both Solid Waste Management and Liquid Waste Management; and observes visual cleanliness, i.e., minimal litter, minimal stagnant wastewater, no plastic waste dump in public places; and displays ODF Plus Information, Education & Communication (IEC) messages.

Indian Navy flags off 'Khamree Mo Sikkim' Car Rally

- In continuation with the vision of national leadership towards developing remote areas, the **Indian Navy** embarked on a **multifaceted outreach program** to strengthen connect with the North Eastern states of India.
- A **Motor Car Expedition, Khamree Mo Sikkim! (Hello Sikkim)** from INS Shivaji at Lonavala, **Maharashtra to Sikkim** traversing through several states covering a distance of **6500 km** was conducted from **24 September – 15 October 2023.**
- The team comprised of Naval personnel including women officers and NWWA members showcasing 'Nari Shakti'.
- The aim of the event was to promote participation of youth from Sikkim in defence services, enhance **maritime consciousness in the region** and strengthen **nation-building.**
- The rally was conducted in **three legs.**
- The **first leg** included halts at Mhow, Jhansi, Lucknow, Varanasi and Bagdogra.
- The **second leg** included travel inside Sikkim starting from Gangtok.
- The **third leg** touched Kolkata, Bhubaneswar, Visakhapatnam, Hyderabad and Pune.

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