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EMPOWERING FUTURE LEADERS

EXCEL QUEST

48, February 2024

Soligas & Yeravas

SMART 2.0 program

Nagara style

Direct-to-mobile (D2M) technology

Chandaka-Dampara Wildlife Sanctuary

Bru Refugees And Their Rehabilitation.

Sohrai Painting

Kateel Yakshagana mela

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Dear Aspirants,

In the midst of escalating conflicts and geopolitical tensions worldwide, there is an urgent call to reform the United Nations Organization (UNO). The year 2023 saw a concerning surge in global conflicts, highlighting the critical need for effective international cooperation and action. However, the UN Security Council, dominated by its permanent members wielding veto power, often finds itself paralyzed by divergent interests and power struggles.

The original vision behind the UN Charter aimed to prevent a recurrence of past tragedies by fostering collective security and cooperation among nations. Yet, the current structure of the Security Council, with its five permanent members holding veto power, has allowed the most powerful nations to obstruct action in favor of their own interests. This undermines the foundational principles of equality, fairness, and multilateralism upon which the UN was built.

The misuse of veto power by permanent members has further exacerbated this situation. Instances like Russia's obstruction in Ukraine and the United States' actions in Gaza underscore how personal geopolitical interests often supersede the rules-based international order envisioned by the UN's founders.

To truly address the challenges of the 21st century, such as conflicts, humanitarian crises, and climate change, significant reforms within the UN system are imperative. One crucial reform is the expansion of the Security Council to better reflect the contemporary geopolitical landscape. In this context, India, as a prominent global power with substantial economic, political, and cultural influence, deserves a permanent seat on the Security Council.

India's inclusion would not only enhance the Council's legitimacy but also inject much-needed diversity and representation into its decision-making processes. India's democratic values, commitment to peacekeeping, and substantial contributions to global development make it a natural and deserving candidate for permanent membership.

Furthermore, India's strategic positioning in South Asia, its burgeoning role in regional and global affairs, and its status as the world's largest democracy underscore its importance as a key stakeholder in addressing global challenges.

However, achieving meaningful reform of the Security Council necessitates collective will and cooperation among UN member states. It is imperative for countries to prioritize the greater good over narrow interests and work toward a more representative, accountable, and effective UN system capable of addressing the complex challenges of the modern era.

In conclusion, the imperative for reform within the United Nations Organization is indisputable given the current global challenges. Including India as a permanent member of the UN Security Council would not only bolster the Council's efficacy but also reaffirm the UN's relevance and legitimacy in the contemporary world. It is time for the international community to unite and undertake decisive measures toward constructing a more equitable and inclusive global governance framework.

Best wishes.

Yours sincerely,

K Rajendra Kumar IPS (Retd)

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1. NATIONAL

1.1 The Citizenship (Amendment) Act (CAA) 2019:

The Act **seeks to amend the definition of illegal immigrant** for Hindu, Sikh, Parsi, Buddhist, Jains and Christian (but not Muslim) immigrants from Pakistan, Afghanistan and Bangladesh, who have lived in India without documentation.

They will be **granted fast track Indian citizenship in 5 years** (11 years earlier).

The Act (which amends the Citizenship Act 1955) also provides for **cancellation of Overseas Citizen of India (OCI) registration** where the OCI card-holder has violated any provision of the Citizenship Act or any other law in force.

- **Who is eligible?**

The CAA 2019 applies to those **who were forced or compelled to seek shelter** in India due to **persecution on the ground of religion.** It aims to protect such people from proceedings of illegal migration.

The cut-off date for citizenship is December 31, 2014, which means the applicant should have entered India on or before that date.

The act **will not apply to** areas covered by the Constitution's **sixth schedule**, which deals with autonomous tribal-dominated regions in Assam, Meghalaya, Tripura, and Mizoram.

Additionally, the act will not apply to states that have an **inner-line permit regime** (Arunachal Pradesh, Nagaland and Mizoram).

- **Implementation of the law**: The rules for implementation of the Act were never notified (and that is why the law can't be implemented) and the government sought repeated extensions for framing the rules.

Reasons for the Delay in the Implementation of the CAA:

- One of the prime reasons is the **vociferous opposition** faced by the CAA in several states including Assam and Tripura.
- The **protests in Assam** were fuelled by fears that the legislation would permanently alter the demographics of the state.
- The CAA is seen in Assam as a violation of the 1985 Assam Accord which allows foreign migrants who came to Assam after January 1, 1966 but before March 25, 1971 to seek citizenship.
- The cut-off date for citizenship to be extended under the CAA is December 31, 2014.
- The **protests didn't remain confined to the North-East**, but spread to other parts of the country.
    - ✓ A clutch of petitions, including by the Indian Union Muslim League, are before the Supreme Court, **challenging the constitutional validity of the CAA**.

- ✓ The petitioners have contended that the law is **anti-Muslim, violating Article 14** (Right to Equality) of the Indian Constitution.
- ✓ It is arbitrary as it **leaves out the persecuted Rohingya** of Myanmar, Tibetan Buddhists from China and Tamils from Sri Lanka.

Counter claims in Response to the Petitions Against CAA:

- The Centre said the basis of the "reasonable classification" made by the 2019 Act was not religion, but **"religious discrimination"** in neighbouring countries which are **"functioning with a State religion".**
- The Parliament, **after taking cognizance of the said issues over the course of the past 7 decades**, has taken into consideration the acknowledged class of minorities and has enacted the present amendment.
- The CAA is a specific amendment which seeks to tackle a specific problem prevalent in the specified countries.
- **The legislation was not meant to be an omnibus solution** to issues across the world.
- The Indian Parliament cannot be expected to take note of possible persecutions that may be taking place across various countries in the world.

Rules for the CAA:

- The rules are now ready and the online portal is also in place.
- Once the rules are issued, the law can be implemented and those eligible can be granted Indian citizenship.
- **The entire process will be online** and applicants can apply even from their mobile phones.
- The applicants will have to declare the year when they entered India without travel documents. No document will be sought from the applicants.
- Requests of the applicants, who had applied after 2014, will be converted as per the new rules.

1.2 Truck drivers protest against new hit-and-run law

The government assured the members of the transport body that the new laws have nor been implemented yet and will only be implemented after consultation with AIMTC(All India Motor Transport Congress)

Transporters and auto-driver associations in India are protesting against a new law related to hit-and-run incidents.

The three-day strike was launched to protest against the stringent jail and fine regulations under the newly implemented Bharatiya Nyay Sanhita (BNS) for hit-and-run cases.

The Bharatiya Nyaya (Second) Sanhita, 2023

Recently, the **Bharatiya Nyaya (Second) Sanhita (BNS**) has received Presidential assent, and it will replace the **163-year-old Indian Penal Code.**

- As per various reports, roll-out schedule of 3 new criminal codes will be notified by January 26.

Key provisions of the Bharatiya Nyaya (Second) Sanhita, 2023

➢ Community Service As Form Of Punishment

Community service has been introduced as a form of punishment under Section 4, although it has not been defined what community service entails.

➢ Offences Against Woman and Child

The new BNS adds Chapter V naming "Of Offences Against Woman and Child Of Sexual Offences".

All the offences relating to woman and child have been placed under one chapter in the beginning of the Code, which was earlier spread under various chapters and parts.

➢ Marital Rape with minor wife is offence.

As per exception of Rape which is Section 63 of BNS, sexual intercourse or sexual acts by a man with his own wife, where the wife is not under eighteen years of age, would not be rape.

However, under IPC, the age of wife to not to constitute rape was "fifteen years".

➢ Sexual Intercourse by employing deceitful means, etc.

BNS introduces sexual intercourse by employing deceitful means, etc as offence

➢ Enhanced punishment in case of gangrape of victim of under 18 Years of age

Such acts have been punished with imprisonment for life, which shall mean imprisonment for the remainder of that person's natural life, and with fine, or with death.

- **Printing or publishing trial court proceeding relating to sexual offences without permission of court is an offence**
- **Section 377 deleted**

The BNS has completely deleted the offence, implying that forcible carnal intercourse against a man and bestiality are no longer offences under BNS.

- **Offence of Adultery omitted**

In view of Apex Court's judgement in Joseph Shine's case the offence of Adultery has been deleted, however, second BNS retains Section 498 of the IPC (Section 84) which penalises a man for enticing the wife of another man so that she may have intercourse with any person.

- **Organised crime**

The new law has added organised crime under Section 111, and if the crime results in the death of any person, maximum prescribed punishment is death penalty.

- **Punishment for being a member of an organised crime syndicate**

Any person who is a member of an organised crime syndicate will be punished with imprisonment for a term which shall not be less than five years but which may extend to imprisonment for life, and can also be liable to fine which will not be less than five lakh rupees.

- **Petty organised crime**

BNS has also added Petty Organised Crime under Section 112.

Punishment prescribed for committing any petty organised crime is imprisonment for a term which shall not be less than one year but which may extend to seven years, and shall also be liable to fine.

- **Terrorist Act**

A major development brought about by the criminal law amendment is the addition of the "Terrorist Act," which did not find a place in the IPC.

BNS II has removed vaguely used words such as “intimidating the public or disturbing public order”.

- **Sedition is no longer an offence**

Under BNS II, Sedition is no longer an offence. Instead, there is a new offence for acts endangering the sovereignty, unity and integrity of India.

- **Mob lynching**

'Mob lynching' has been made a separate offence under the BNS, with a maximum punishment of death penalty.

Now, murder by a group of five or more persons on grounds of certain identity markers such as caste, language or personal belief will called mob lynching.

- Lesser Punishments to doctors for causing death by negligence vis-a-vis other offenders
- Stringent punishment for hit and run cases
- Introduced snatching as a distinct offence
- Attempt to suicide is no longer an offence

The BNS removes section 309 of the Indian Penal Code (IPC). This means that attempted suicide is no longer a criminal offense.

However, the BNS criminalizes attempting suicide to prevent a public servant from carrying out their duty.

- Transgender included in definition of gender.

New law on hit-and-run cases

- The protest is primarily in response to the Bharatiya Nyay Sanhita (BNS), which replaced the Indian Penal Code (IPC).
- Under the BNS, drivers causing serious road accidents through negligent driving and fleeing without informing authorities can now face up to 10 years of imprisonment or a fine of Rs 7 lakh.
- This marks a significant increase from the previous punishment of two years under the IPC.

Why are truck, bus and tanker drivers protesting against it?

- **Unjust punishments**

Private transport operators have claimed that the law discourages drivers and may lead to unjust punishments.

- **Drivers may be subjected to mob violence**

They also claim that the drivers could be subject to mob violence when they attempt to transport the injured to hospitals.

- **Lack of Consultation**

This provision is also criticized due to the lack of consultations with stakeholders before implementing the new law.

As per the protestors, there should be a discussion on this issue. A misleading situation is created now.

People are not completely aware of the new law .

1.3 River Devika Project

North India's first river rejuvenation project, 'Devika', is in the final stages. and it will be soon dedicated to the nation by the Prime Minister.

- River Devika Project is built on the lines of **'Namami Ganga'**, the project was launched in February 2019.
- It is **North India's first river rejuvenation project.**
- The project is implemented along the Devika River in Jammu and Kashmir.
- It has been included in the Government of India's **National River Conservation Project (NRCP).**
- Under the project, **bathing "ghats" (places**) on the banks of the Devika River will be developed, encroachments will be removed, natural water bodies will be restored, and catchment areas will be developed along with cremation ground.
- The project includes the construction of three **sewage treatment plants** with 8 MLD, 4 MLD and 1.6 MLD capacities, a sewerage network of 129.27 km, the development of **two cremation ghats**, protection fencing and landscaping, **small hydropower plants**, and **three solar power plants.**
- Built at a cost of over Rs 190 crore, the sharing of fund allocation is in the ratio of **90:10 by the centre and UT, respectively.**
- On completion of the project, the rivers will see a reduction in pollution and an improvement in water quality.
- It will offer a unique destination both for pilgrim tourists as well as recreation tourists, in addition to being a state-of-the-art cremation centre.

Key Facts about Devika River:

- Devika River is considered the **sister of the sacred river Ganga,** and it has great religious significance.
- Course: It originates from the hilly Suddha Mahadev temple in the **Udhampur district of Jammu and Kashmir.**
- It flows down towards western Punjab (now in Pakistan), where it **merges with the Ravi River.**
- As it appears and disappears in many places, Devika is also known as **Gupt Ganga.**

1.4 SMART 2.0 program

The **Central Council for Research in Ayurvedic Sciences (CCRAS**) along with **National Commission for Indian System of Medicine (NCISM) has launched 'SMART 2.0' program.**

AYUSH

Azadi Ka Amrit Mahotsav G20

'SMART 2.0' launched for Ayurveda Teaching Professionals

Posted On: 03 JAN 2024 3:04PM by PIB Delhi

The Central Council for Research in Ayurvedic Sciences (CCRAS) along with *National Commission for Indian System of Medicine* (NCISM) has launched 'SMART 2.0' (Scope for Mainstreaming Ayurveda Research among Teaching professionals) program to promote robust clinical studies in priority areas of Ayurveda with Ayurveda academic institutions/hospitals across the country through mutual collaboration.

About SMART 2.0 program:

- **Scope for Mainstreaming Ayurveda Research among Teaching professionals (SMART)** program promotes robust clinical studies in priority areas of Ayurveda with Ayurveda academic institutions/hospitals across the country through mutual collaboration.
- The objective of 'SMART 2.0' is to generate a tangible evidence to demonstrate efficacy and safety of Ayurveda interventions using interdisciplinary research methods and translating it into public health care.
- The study aims at **safety, tolerability and adherence** to Ayurveda formulations in the priority research areas of **Bal Kasa, malnutrition**, **insufficient lactation**, **Abnormal Uterine Bleeding**, **Osteoporosis in post-menopausal women** and **Diabetes Mellitus (DM) II.**

What is CCRAS?

It is an **autonomous body** of the **Ministry of AYUSH** (Ayurveda, Yoga & Naturopathy, Unani, Siddha and Homeopathy), Government of India.

It is an **apex body** in India for the formulation, coordination, development and promotion of research on scientific lines in Ayurveda and Sowa-Rigpa system of medicine**.**

Key facts about National Commission for Indian System of Medicine

It is the **statutory body** constituted under **NCISM Act, 2020**. An Act to provide for a medical education system that improves access to quality and affordable medical education, ensures availability of adequate and high quality medical professionals of Indian System of Medicine in all parts of the country**.**

Composition: It consists of **29 members**, appointed by the central government. A Search Committee will recommend names to the central government for the post of Chairperson, part time members, and presidents of the four autonomous boards set up under the NCISM.

Functions

- Framing policies for regulating medical institutions and medical professionals of Indian System of Medicine
- Assessing the requirements of healthcare related human resources and infrastructure.
- Ensuring compliance by the State Medical Councils of Indian System of Medicine of the regulations made under the Bill
- Ensuring coordination among the autonomous boards.

1.5 What is Swadesh Darshan 2.0 Scheme?

SWADESH DARSHAN 2.0
DEVELOPING SUSTAINABLE DESTINATIONS

Why in news?

The Tourism ministry has included **Debrigarh Wildlife Sanctuary** in the **Swadesh Darshan 2.0 scheme**.

About Swadesh Darshan Scheme:

- It was launched in **2015** by the **Ministry of Tourism**, Government of India, **to develop sustainable and responsible tourism destinations in the country**.
- It is **100% centrally funded scheme.**
- Under the scheme, the Ministry of Tourism provides **financial assistance** to State governments, Union Territory Administrations or Central Agencies for development of tourism infrastructure in the country.
- **Operation & Maintenance (O&M)** of the projects sanctioned under Swadesh Darshan Scheme is the responsibility of the respective State Government/UT Administration.

Swadesh Darshan 2.0:

- The Ministry of Tourism has revamped its Swadesh Darshan scheme as Swadesh Darshan 2.0 (SD2.0) for development of **sustainable and responsible tourist destinations** covering **tourism and allied** infrastructure, tourism services, human capital development, destination management and promotion backed by policy and institutional reforms.
- The objective for the Swadesh Darshan 2.0 scheme **envisage increase in private sector investment in tourism & hospitality**.
- It may help in increasing **Public Private Partnerships (PPP)** in the field of tourism and operation and maintenance of the created assets under the scheme.

Key Facts about Debrigarh Wildlife Sanctuary:

- **Location:** It is situated in the **Bargarh district of Odisha** near the Hirakud dam (Mahanadi River).
- It finds a special mention because of noted freedom **fighter Veer Surendra Sai**. During his rebellion against the British, his base at 'Barapathara" was located within the sanctuary.
- It was declared a wildlife sanctuary in 1985.
- **Vegetation:** Dry deciduous mixed forests.
- **Flora:** Major trees found here are Sal, Asana, Bija, Aanla, Dhaura etc.
- **Fauna:** A huge variety of wild animals reside in the dense forest of the sanctuary, such as Tiger, Sloth Bear, Leopard, Hyena, Spotted Deer, Antelopes, Sambar, Gaur, Nilgai, Bison, Langur Monkeys etc

1.6 Kochi-Lakshadweep islands submarine optical fiber connection project

For the first time since independence, Lakshadweep will be connected through Submarine Optic Fibre Cable that will ensure a paradigm shift in its communication infrastructure.

These cables consist of **optical fibers**, which are thin strands of glass or plastic that carry digital information in the form of light pulses.

About KLI project

- Under this project submarine cable connectivity from Mainland **(Kochi) to eleven Lakshadweep Islands** namely, Kavaratti, Agatti, Amini, Kadmat, Chetlet, Kalpeni, Minicoy, Androth, Kiltan, Bangaram and Bitra has been extended.
- **Project is funded by Universal Services Obligation Fund (Digital Bharat Nidhi),** Department of Telecommunication.
- Bharat Sanchar Nigam Limited **(BSNL)** was **Project Executing Agency.**
- PM also dedicated a **Low-Temperature Thermal Desalination** (LTTD) plant for conversion of seawater into potable water at Kadmat island , Lakshadweep.
  - LTTD is a process under which warm surface seawater is flash evaporated at low pressure and the vapor is condensed with cold deep seawater.
  - Earlier 3 LTTD plants developed and demonstrated in Lakshadweep's Kavaratti, Agati, and Minicoy Islands.
  - **National Institute of Ocean Technology (NIOT),** under Ministry of Earth Sciences designs, develops, and commissions LTTD plants in coastal locations.

Significance of the project

- The KLI-SOFC project will lead to an **increase in internet speed** unlocking new possibilities & opportunities.
- For the first time since independence, Lakshadweep will be connected through Submarine Optic Fibre Cable.
- The dedicated submarine OFC will ensure a **paradigm shift in communication infrastructure** in the Lakshadweep islands, enabling faster and more reliable internet services, **telemedicine, e-governance, educational initiatives, digital banking, digital currency usage, digital literacy etc.**

1.7 PRERANA program

Department of School Education & Literacy, **Ministry of Education** has launched **'Prerana: An Experiential Learning program'**

Prerana
Nurturing Merit

PRERANA program:

- It aims **to offer a meaningful, unique, and inspiring experience** to all participants, thereby **empowering them with leadership qualities.**
- It is driven by a strong commitment to **integrate principles of the Indian education system and the philosophy of value-based education** which is a cornerstone of the National Education Policy (NEP) 2020.
- It is a **week-long residential program** for selected students of **class IX to XII.**
- A batch of **20 selected students (10 boys and 10 girls)** will attend the program, every week from various parts of the country.
- It will run from a Vernacular School, established in 1888, in one of the oldest living cities of India, Vadnagar, district Mehsana, Gujarat.
- The curriculum of Prerana School prepared by I**IT Gandhi Nagar** is rooted in **nine value-based themes**: Swabhiman and Vinay, Shaurya and Sahas, Parishram and Samarpan, Karuna and Sewa, Vividhta and Ekta, Satyanishtha and Shuchita, Navachar and Jigyasa, Shraddha aur Vishwas, and Swatantrata and Kartavya.
- The day-wise program schedule will feature yoga, mindfulness, and meditation sessions, followed by experiential learning, thematic sessions, and hands-on interesting learning activities.
- Evening activities will include visits to ancient and heritage sites, inspirational film screenings, **mission life creative activities,** talent shows etc. ensuring a holistic learning approach.
- Apart from this, students will engage in diverse activities, embracing **indigenous knowledge systems**, latest S**tate-of-Art technologies,** and learning from inspirational personalities.

Selection procedure:

- Students can **register through the portal**, wherein applicants can fill the requisite details.
- The registered applicants will go through a selection process, as prescribed on the portal.
- Applicants can also join the selection procedure conducted at the School/block level, on designated ‘Prerana Utsav’ day, through various activities.

1.8 17 Products from different States/UTs bagged the Geographical Indications (GI) tag

- A GI is a sign used on products that have a **specific geographical origin and possess qualities or a reputation that are due to that origin.**
- **International Recognition**:
  - Under the Paris Convention for the Protection of Industrial Property, GI are covered as an **element of Intellectual Property Rights (IPRs).**

- Also covered under the WTO's **Trade Related Aspects of Intellectual Property Rights (TRIPS) Agreement.**
- **Madrid Agreement** and Lisbon Agreement

➢ In India, GI registration is administered by the **Geographical Indications of Goods (Registration and Protection) Act of 1999**.

- It is used to identify agricultural, natural, or manufactured goods.
- GIs are registered by the **Registrar of Geographical Indications (RGI**), which is the Controller-General of Patents, Designs, and Trade Marks.
- Duration: **10 years** and can be renewed.
- Nodal Ministry: **Department for Promotion of Industry and Internal Trade, Ministry of Commerce and Industry**.
- Significance: Confers **legal protection against unauthorized** use, boosts exports, Conveys an assurance of quality and distinctiveness, etc

States/UTs	GI tagged Products
Odisha	Lanjia Saura paintings, Dongaria Kondh shawl, Khajuri Guda, Dhenkanal Magji, Similipal Kai Chutney, Nayagarh Kanteimundi Brinjal, Koraput Kalajeera Rice
Gujarat	Kachchhi Kharek
Arunachal Pradesh	Handmade Carpets, Wancho Wooden Craft, Adi Kekir (Ginger)
West Bengal	Tangail Saree, Garad Saree, Korial Saree, Kalonunia Rice, Sundarban Honey
Jammu and Kashmir	Ramban Anardana

1.9 Project Veer Gatha

The third edition of Project 'Veer Gatha', as part of Republic Day celebrations, has witnessed an overwhelming pan India response.

About Project Veer Gatha:

It is a **joint initiative** of **Ministry of Defence** and **Ministry of Education.**

It was instituted under **Gallantry Awards Portal (GAP)** in 2021.

Aim: 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.

Project Veer Gatha deepened this noble aim by providing a **platform to the school students** to do creative projects/activities based on gallantry award winners.

As part of this, the students framed different projects through various media like art, poems, essays and multimedia on these gallantry award winners and **best projects were awarded** at national level by the Ministry of Defence and the Ministry of Education.

1.10 Swachh Survekshan Awards 2023

Why in news?

Surat in Gujarat and Indore in Madhya Pradesh were jointly declared cleanest cities of the country at the annual clean city awards 2023 of the Union Urban Affairs Ministry.

This was for the seventh year in a row that Indore has been ranked as the cleanest city in India.

Swachh Survekshan:

- It is an annual survey of cleanliness, hygiene and sanitation in cities and towns across India, launched as part of the **Swachh Bharat Abhiyan** (specifically under SBA-Urban).
- It was launched by the **Ministry of Housing and Urban Affairs (MoHUA)** with **Quality Council of India (QCI)** as its implementation partner.
    - The SBA was launched (on 2nd October 2014) **to make India clean and free of open defecation** by 2nd October 2019.
    - The SBA was split into two - rural (**SBA-Gramin**, monitored by the Department of Drinking Water and Sanitation under the **Ministry of Jal Shakti**) and urban (**SBA-Urban**, overseen by the **MoHUA**).
    - SBM-U 2.0 was recently launched on 1st October, 2021, focused on ensuring complete access to sanitation facilities for all.
    - The vision of a **Garbage Free India** is an initiative under SBM-U 2.0.
- The **first survey was undertaken in 2016** (covering 73 cities), which had grown to cover 4242 (by the 2020 survey).

- The methodology for measuring cleanliness rests on two main criteria – **citizen feedback and field assessment**.

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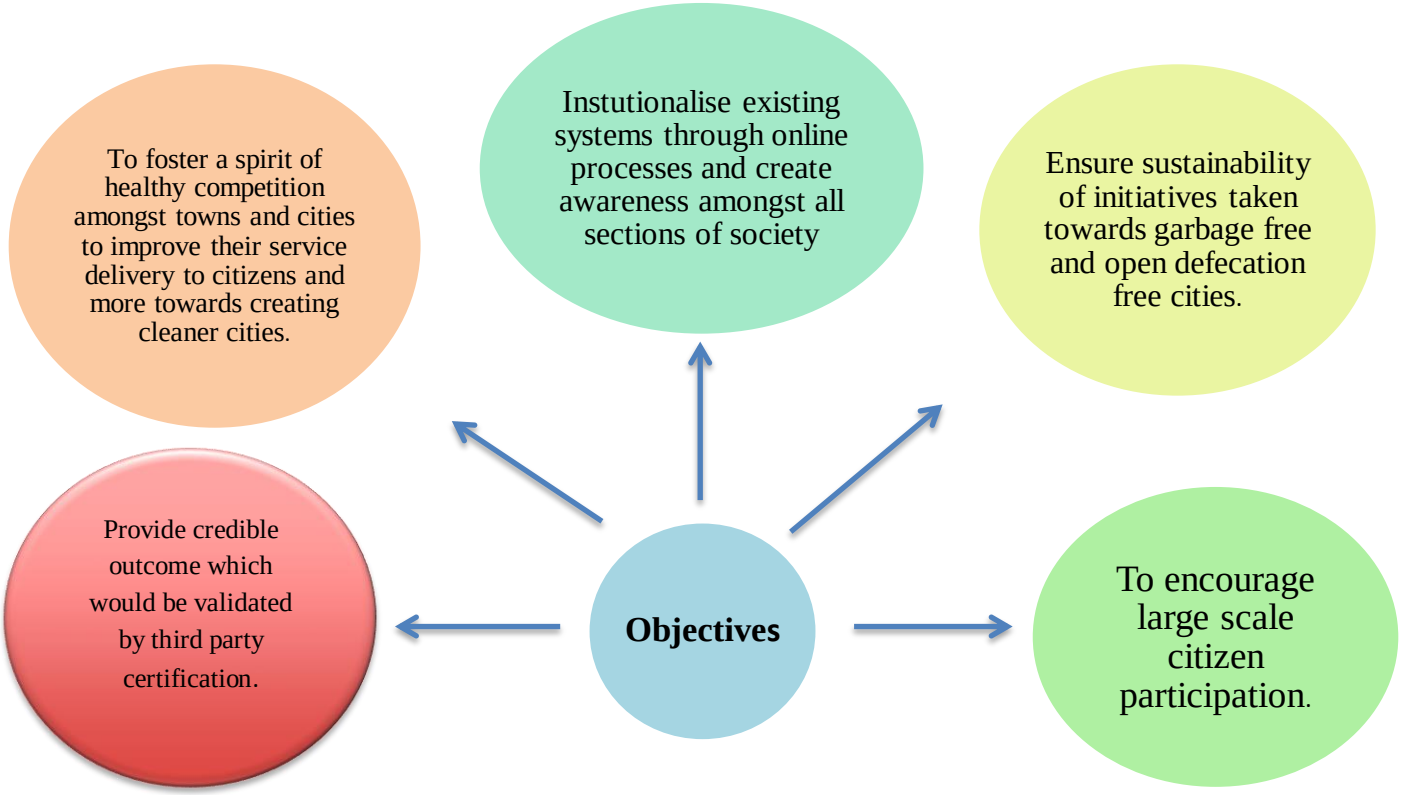


Swachh Survekshan 2023:

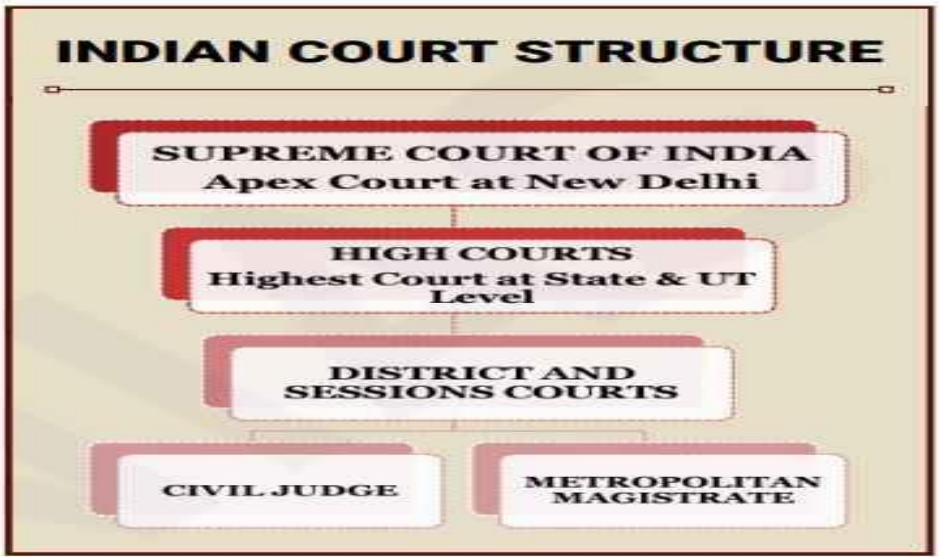
- The President Droupadi Murmu conferred Swachh Survekshan awards 2023 at Bharat Mandapam, New Delhi hosted by Ministry of Housing and Urban Affairs (MoHUA).
- The **theme** for the year 2023 was **-"Waste to Wealth"**.
  - For 2024, the theme is "Reduce, Reuse and Recycle".

Performance of cities in Swachh Surveskshan 2023

- The **Mhow Cantonment Board** in Madhya Pradesh was adjudged the **cleanest cantonment board.**
- **Varanasi and Prayagraj**, both in Uttar Pradesh, won the top two awards amongst **the cleanest Ganga towns.**
- **Chandigarh** walked away with the award for the Best **Safaimitra Surakshit Sheher** (safest city for sanitation workers).
- Twenty zonal awards were bestowed upon medium and small cities.

1.11 Judicial Officers' Service conditions must be uniform across Country: Supreme Court (SC)

- To ensure uniformity in service conditions of Judicial officers the SC has instructed all High Courts across to establish a Committee for Service Conditions of the District Judiciary (CSCDJ).
  - This two-judge committee will oversee the implementation of orders related to pay and other benefits as per the Second National Judicial Pay Commission (SNJPC).
- Based on 'Separation of powers' doctrine the SC rejected the argument that the pay and allowances of judicial officers and other government officers should be equivalent.
  - This doctrine requires that the principal institutions of the state (executive, legislature and judiciary) should be divided to safeguard citizens' liberties and guard against tyranny.



About India's judicial system

- Indian Constitution has provided for a single integrated system of courts.
- Lower courts are the third tier of this Indian Judicial system (refer image).
  - Each State is divided into judicial districts presided over by a District and Sessions Judge which is the principal civil court of original jurisdiction.
  - They can try all offences including those punishable with death.

- High Courts have administrative control over District Courts in their jurisdiction.

1.12 NITI Aayog's discussion paper - Multidimensional poverty in India since 2005-06

The **National Multidimensional Poverty Index (MPI)** by **Niti Aayog measure** the multidimensional poverty in India.

As per the NITI Aayog's Discussion Paper 'Multidimensional Poverty in India since 2005-06', **24.82 crore people escaped multidimensional poverty in last nine years.**

Multidimensional Poverty

- A person who is poor can suffer multiple disadvantages at the same time – for example they may have poor health or malnutrition, a lack of clean water or electricity, poor quality of work or little schooling.
- Focusing on one factor alone, such as income, is not enough to capture the true reality of poverty.
- Multidimensional Poverty is a **measure of poverty that captures deprivations in education and access to basic infrastructure in addition to income or consumption at the $2.15 international poverty line** (as per World Bank).
    - World Bank defines the international poverty line at USD 2.15 (in 2017 purchasing power parity terms) daily to measure monetary value.

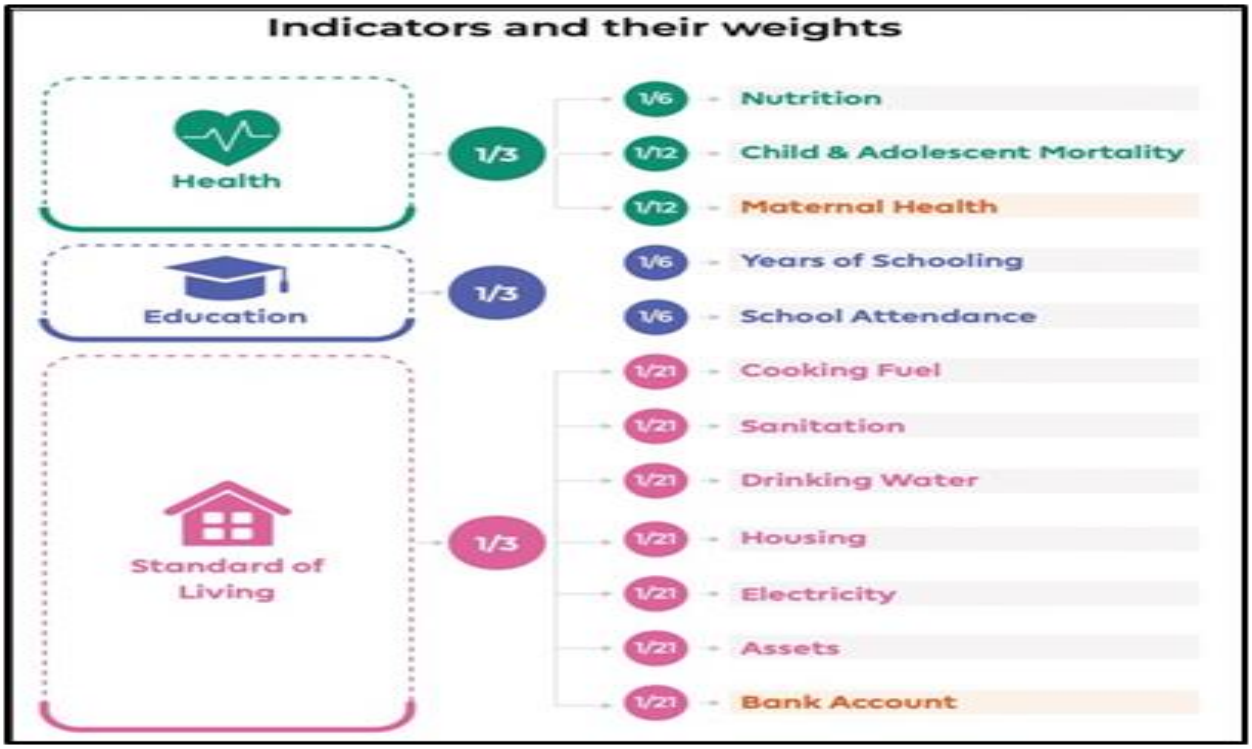
National Multidimensional Poverty Index (MPI):

- MPI has been used by the United Nations Development Programme (UNDP) in its flagship Human Development Report since 2010.
- In this context, NITI Aayog had published the first edition of national Multidimensional Poverty Index for India in 2021.
- **Purpose** –
    - A national MPI statistic for a country is tailored to the national priorities and therefore, countries choose their own set of dimensions, indicators, weights, and cut-offs, according to their plans and contexts.
- The report presents an in-depth analysis of the headcount ratio and intensity of multidimensional poverty at the national, State/UT, and district levels.
- The first report was based on the reference period of 2015-16 of the **National Family Health Survey (NFHS)- 4**.

MPI Parameters & Methodology:

- The Index is based on the **Alkire-Foster (AF) methodology** and has three equally weighted dimensions –

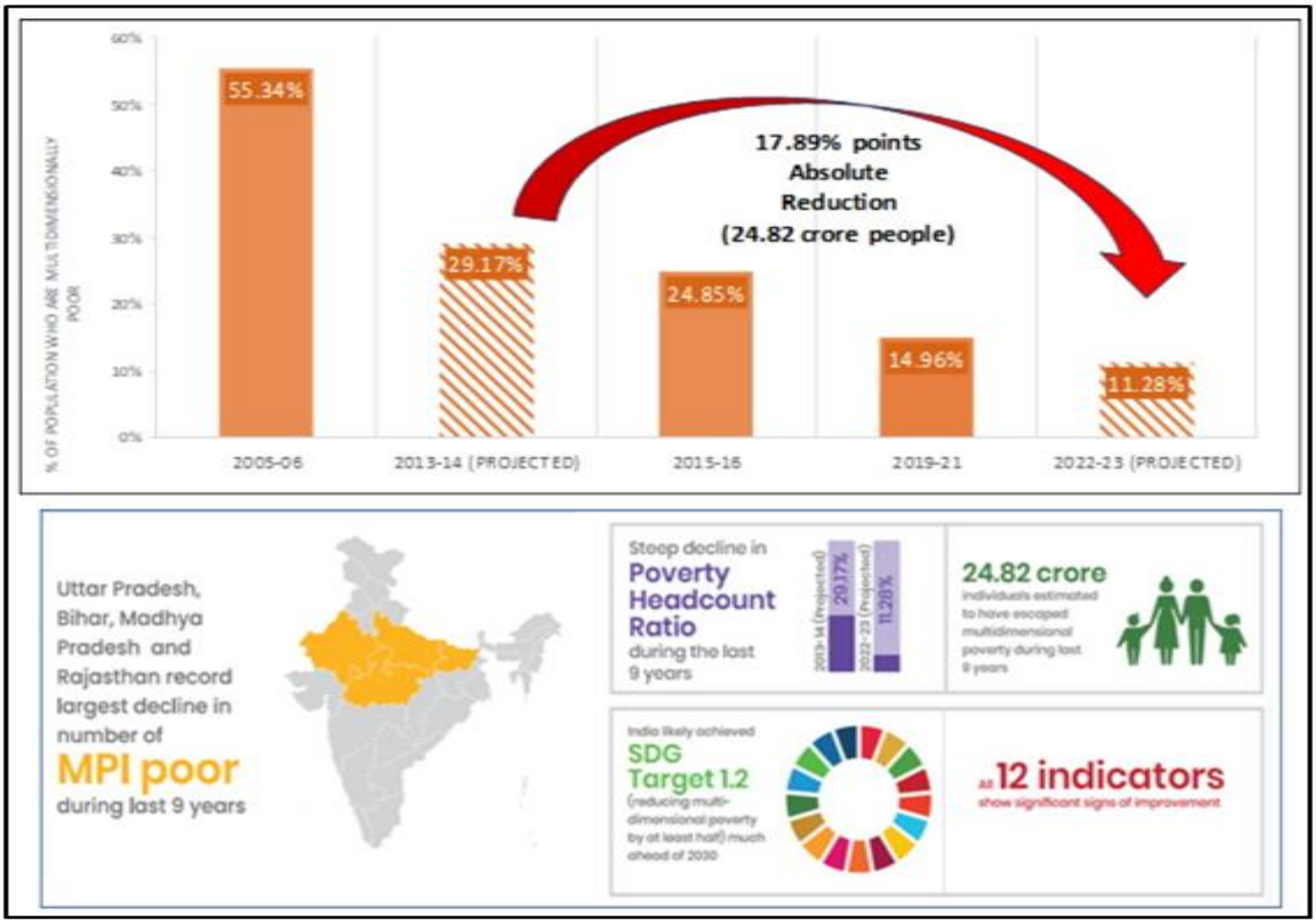
- These **three dimensions** are represented by **12 indicators.**



- The index is calculated by first setting the deprivation cut-offs for each indicator, i.e., the level of achievement considered normatively sufficient for an individual to be considered not deprived in an indicator.
    - For example, the individual has completed at least six years of schooling. Such a cut off would be applied to determine whether the individual is deprived in each indicator.
- Weights are attached to each indicator and a composite metric is then used to calculate the index.

Key highlights of the report

- **Significant decline in multidimensional poverty in India**
    - From 29.17% in 2013-14 to 11.28% in 2022-23 i.e. a reduction of 17.89 percentage points.
- **States with largest decline**
    - Uttar Pradesh topped the list with 5.94 crore people escaping poverty followed by Bihar at 3.77 crore and Madhya Pradesh at 2.30 crore.
- **India likely to achieve SDG Target 1.2 (reducing multidimensional poverty by at least half) well before 2030**.
- **Government's goal**
    - Government has a goal to bring down multidimensional poverty to below 1% and all efforts are being made in that direction.
    - The report said India is all set to reach single-digit poverty levels during 2024.



- **Report highlighted noteworthy initiatives**
  - Initiatives like **Poshan Abhiyan** and **Anemia Mukt Bharat** have significantly enhanced access to healthcare facilities, leading to a substantial decrease in deprivation.
  - Operating one of the world's largest food security programs, the targeted public distribution system (PDS) under the National Food Security Act covers 81.35 crore beneficiaries, providing food grains to rural and urban populations.

1.13 Ministry of Power notified Electricity (Amendment) Rules, 2024 to amend Electricity Rules, 2005.

- In exercise of powers conferred by **Section 176 of Electricity Act 2003**, government has prescribed new rules for
  - **promoting ease of doing business** by industries like Green Hydrogen manufacturers, **facilitate energy transition** and energy security.

- **Key highlights of rules**

Parameters	Rules	Significance
Transmission Lines	• Consumers having more than specified load and Energy Storage Systems are allowed to **establish, operate** and **maintain dedicated transmission lines themselves without the requirement of licence.**	• New bulk consumers will benefit with **affordable electricity and improved grid reliability**. • Faster **industrial growth and more job creation.**
Open Access (OA)	• Provide **methodologies for determining various OA charges like** wheeling charges, state transmission charges and additional surcharge. • **Additional surcharge on OA shall be linearly reduced** and get eliminated within four years.	• Rationalisation of OA charges will lead to **faster adoption of renewable energy by industry,** thus reducing emissions. • **Facilitate** industries in getting **electricity through** OA at **competitive rates.**
Power Tariff	• Tariff shall be **cost reflective** and there shall **not be any revenue gap b**etween approved Annual Revenue Requirement and estimated annual revenue from approved tariff except under natural calamity conditions.	• Ensure **financial sustainability** of power sector.

1.14 Pradhan Mantri Rashtriya Bal Puraskar 2024

The President of India to confer Pradhan Mantri Rashtriya Bal Puraskar 2024 to 19 children for their exceptional achievement in **seven categories**.

- The awards are given to children in the age **group 5 – 18 years** for their excellence in seven categories for **Bravery**, **Art & Culture, Environment, Innovation, Science & Technology, Social Service and Sports**.
- Objective: Encourage children who had shown exceptional achievement in any field including academics, arts, culture and sports etc.

The two categories covered under these Awards are as follows:

- **Bal Shakti Puraskar** (earlier called **National Child Award**) –
    - These awards are to be given as **recognition to children with exceptional abilities and outstanding achievement** in the fields of innovation, scholastic achievements, sports, arts & culture, social service and bravery which deserves recognition.
    - Each awardee will be given a medal, a cash prize of **Rs. 1,00,000**/-, book vouchers worth Rs. 10,000/-, a certificate and citation.
- **Bal Kalyan Puraskar** (earlier called National Child Welfare Award)
    - Individual - These Awards are given **as recognition to individuals who have made an outstanding contribution towards service for children** in the field of Child Development, Child Protection and Child Welfare for not less than 7 years and have a positive impact on the lives of children.
    - The **number of awards would be three**. The award consists of a cash prize of **Rs. 1, 00,000**/ - (one lakh), a citation and a certificate to each awardee.
    - Institution - These awards are given to institutions who have done exceptional work for the **cause of children in any field of child welfare**. The **number of awards would be three**.
    - The award for institution consists of a prize of **Rs. 5,00,000**/ - each and a citation and a certificate**.**

2. INTERNATIONAL RELATIONS

2.1 Genocide Convention 1948

South Africa moved the International Court of Justice (ICJ), for an urgent order declaring that Israel was in breach of its obligations under the 1948 Genocide Convention.

Genocide Convention 1948:

- The term 'genocide' is often loosely used when speaking of attacks against various communities across the world.
- It has been defined using set criteria in the UN's Convention on the Prevention and Punishment of the Crime of Genocide, moved in the General Assembly in 1948.
- It says, "In the present Convention, genocide means any of the following acts committed with intent to destroy, in whole or in part, a national, ethnical, racial or religious group, as such:
  - ✓ Killing members of the group;
  - ✓ Causing serious bodily or mental harm to members of the group;
  - ✓ Deliberately inflicting on the group conditions of life calculated to bring about its physical destruction in whole or in part;
  - ✓ Imposing measures intended to prevent births within the group;
  - ✓ Forcibly transferring children of the group to another group.
- As per this convention the genocide is a crime whether committed **during wartime or peacetime**.
- India ratified the **convention in 1959**; there is no legislation on the subject.

Key facts about the International Court of Justice

- It is the principal judicial organ of the UN established in June 1945 by the Charter of the United Nations.
- French and English are the official languages of the Court.
- Powers and Functions:

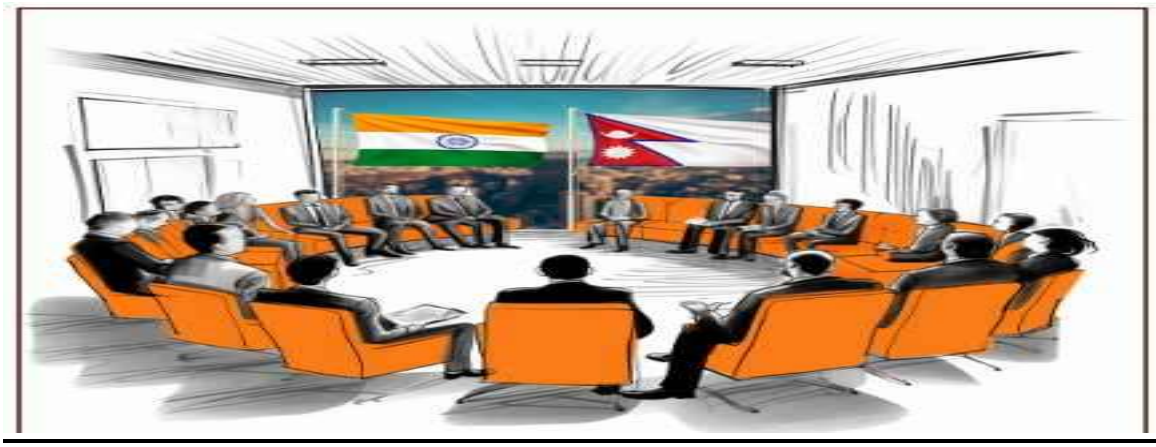
- ✓ The Court may entertain two types of cases: **legal disputes** between States submitted to it by them (contentious cases) and **requests for advisory opinions** on legal questions referred to it by United Nations organs and specialized agencies (advisory proceedings).
- ✓ Advisory proceedings before the Court are only open to five organs of the United Nations and 16 specialized agencies of the United Nations family or affiliated organizations.
- ✓ The court's judgments in contentious cases are final and binding on the parties to a case and without appeal.
- ✓ Unlike the Court's judgments, advisory opinions are not binding.

- Composition:
  - ✓ It is composed of **15 judges**, all from different countries, who are elected for terms of office of nine years by the United Nations General Assembly (UNGA) and the Security Council (UNSC).
  - ✓ A candidate must receive an absolute majority of the votes in both UNGA and UNSC.
  - ✓ **One-third** of the composition of the Court is **renewed every three years.**
  - ✓ Once elected, a member of the Court is a delegate neither of the government of his own country nor of any other State.

2.2 India, Nepal ink agreements during 7th India-Nepal Joint Commission meeting held in Kathmandu

Key Agreements signed between India-Nepal includes

- ➢ Cooperation in Renewable Energy Development.
- ➢ Export 10,000 MW of electricity over next decade.
- ➢ ISRO to launch Nepal's Munal satellite on Polar Satellite
- ➢ Launch Vehicle (PSLV).



India-Nepal relations

- India-Nepal **Treaty of Peace and Friendship of 1950** forms the basis of relations between two countries.

- Nepal is a priority partner of India under its '**Neighbourhood First' policy.**
- **Economic cooperation**: India is **largest trading partner** of Nepal crossing **US$ 7 billion** in FY 2019-20.
- **Defence Cooperation:** Recruitment of Nepalese soldiers in Gorkha regiments of Indian Army and conducting Joint military exercise **Surya Kiran.**
- **Energy Cooperation**: Both sides have **Power Exchange Agreement since 1971** for meeting power requirements in border areas**.**
    - ♦ **Hydropower cooperation**: Mahakali Treaty (6,480 MW), Upper Karnali Project (900 MW), etc.
    - ♦ **South Asia's first cross-border petroleum products pipeline** connecting Motihari in India to Amlekhgunj in Nepal, constructed and funded by Indian Oil Corporation Ltd.
- **Multilateral Cooperation**: Such as **BBIN** (Bangladesh, Bhutan, India, and Nepal), **BIMSTEC** (Bay of Bengal Initiative for MultiSectoral Technical and Economic Cooperation), etc**.**

2.3 Exercise Sea Dragon-24

Indian Navy's P8I aircraft landed at Guam, a US island territory in Western Pacific, to participate in Exercise Sea Dragon – 24.

- It is an elite **multinational maritime exercise** that encourages professional exchanges and teamwork among participating navies.
- Participating countries: India, Japan, South Korea, Australia, and the US.
- The exercise seeks to improve skills in a variety of maritime combat domains through a number of aerial and ground-based tasks, including:

- **Anti-submarine warfare (ASW):** Locating and neutralising enemy submarines hiding beneath the seas.
- **Surface warfare**: Coordinated attacks on hostile surface vessels using superior weaponry and tactics.
- **Air defence**: Putting up an impenetrable air barrier to keep friendly forces safe from aerial threats.
- **Search and rescue (SAR):** Tracking down and saving maritime personnel in need.
- **Communication and coordination**: Synchronising activities across several platforms and exchanging information in a seamless manner.

Key facts about the P8I aircraft

- It is a versatile aircraft with potent force multiplier in maritime operations. Some of its primary capabilities are:
    - **Long-range surveillance**: The P8I can scan wide sections of ocean, identifying hostile movements and activities from long distances.
    - **Multi-sensor fusion:** Its electronic intelligence systems, sonars, and onboard radars provide a thorough image of the maritime environment.
    - **Anti-submarine warfare**: With its depth charges and torpedoes, the P8I poses a serious threat to enemy submarines.
    - **Communication relay**: The aircraft can serve as an essential means of communication between various participating fleets' forces.

2.4 Maldives asks India to withdraw troops by March 15

- Maldivian President Mohamed Muizzu has asked India to withdraw its troops from the island nation by March 15.
- This announcement was made even as the India-Maldives High Level Core Group held its first meeting, in Malé.
    - The High-Level Core Group was set up when the Maldivian President and PM Modi met on the sidelines of the UN climate summit in Dubai.

India – Maldives bilateral relation

- India and Maldives share ethnic, linguistic, cultural, religious and commercial links and enjoy close, cordial and multi-dimensional relations.
- **India was among the first to recognise Maldives after its independence in 1965** and to establish diplomatic relations with the country.

India as a first responder and net security provider

- India's prompt assistance during the 1988 coup attempt, led to development of trust and long-term and friendly bilateral relations with the Maldives.
    - Under **Operation Cactus** the Indian Armed Forces helped the Government of Maldives in the neutralization of the coup attempt.
- India was the first to assist Maldives during the 2004 Tsunami as well as the water crisis in Malé in Dec 2014.
- India had swift dispatch of 30,000 doses of measles vaccine in Jan 2020 to prevent an outbreak in the Maldives.
- India's rapid and comprehensive assistance to the Maldives during COVID-19 pandemic further reinforced India's credentials of being the first responder.

Security & Defence Cooperation

- A comprehensive Action Plan for Defence was also signed in April 2016 to consolidate defence partnership.
- India provides the largest number of training opportunities for Maldivian National Defence Force (MNDF), meeting around 70% of their defence training requirements. India has trained over 1500 MNDF trainees over the past 10 years.
- Annual Defence Cooperation Dialogue at level of Defence Secretary was initiated in July 2016.

Development Cooperation

- The major completed and on going development assistance projects executed by India are
  - Indira Gandhi Memorial Hospital
  - Maldives Institute of Technical Education (now called the Maldives Polytechnic)
  - India-Maldives Faculty of Hospitality & Tourism Studies
  - Technology Adoption Programme in Education Sector in Maldives
  - National College for Police and Law Enforcement (NCPLE)
- **Infrastructure & Connectivity Projects under Exim Bank Line of Credit of US$ 800 million**
  - The following projects are being implemented under these LoCs:
  - Water and Sanitation in 34 Islands
  - Addu Development Project (Roads and Land Reclamation)
  - Cancer Hospital
  - Gulhifalhu Port project
  - Hulhumalé Cricket Stadium: During PM visit in June 2019, it was committed that the Stadium will be built under Indian assistance.
- **Greater Male Connectivity Project**
  - The project aims to connect Male to Villingili, Gulhifalhu and Thilafushi islands through a series of bridges, causeways and roads.
  - It is funded through a separate $ 400 million LoC and $ 100 million grant from India.

Bilateral Economic and Trade Relations

- India emerged as Maldives' **2nd largest trade partner** in 2022. The total bilateral trade between the two countries stood at $501.82 million in 2022 (Jan – Dec).
  - During this period, India's export to Maldives stood at $ 495.40 million and import from Maldives was $ 6.42 million.
- In November 2022, India, amid the economic challenges faced by the Maldives, handed over a financial assistance of US$ 100 million.
- In December 2022, the RBI signed a Currency Swap Agreement with the Maldives Monetary Authority (MMA).
  - This agreement enabled MMA to make drawals in multiple tranches up to a maximum of USD 200 million from the RBI.

Tourism

- In 2023 alone, among the tourists who travelled to the Maldives, Indians formed the largest group of tourists with over 200,000 travellers.

Indian Community:

- Indians are the second largest expatriate community in Maldives with an approximate strength of around 22,000.
- About 25% of Doctors and Teachers in Maldives are Indian nationals.

2.5 Denmark announces Green Fuel Alliance India (GFI) Initiative.

- It is part of **Green Strategic Partnership (GSP) signed in 2020 between India and Denmark.**
  - Its primary objective is to **promote sustainable energy growth** in India by encouraging collaboration among businesses, government entities, research institutions, etc. from both countries.
  - It is inspired by initiatives like India-Denmark Energy Partnership, and joint R&D efforts on Green Fuels, etc.
- Goals and significance
  - Strengthen **collaboration in sustainable energy solutions**.
  - Advance **joint goals towards carbon neutrality.**
  - Enables renewable energy production in India towards ambition to be global **leader in green energy value chain**.
  - Help in **accelerating net zero emissions by 2070**.
  - **Foster innovation,** collaboration, and partnerships among firms, businesses, and government.
- **Other similar partnership initiatives by India**
  - U.S.-India Strategic Clean Energy Partnership
  - Green / Clean Hydrogen India and Saudi Arabia
  - India-Australia Green Hydrogen Taskforce
  - Global Biofuels Alliance forged by Brazil, India, and
  - United States
  - Quad's Climate Working Group for clean energy
- Green fuels, also called green hydrocarbons, biofuels, are **fuel produced from biomass sources** through variety of biological and thermochemical processes.

3. ECONOMY

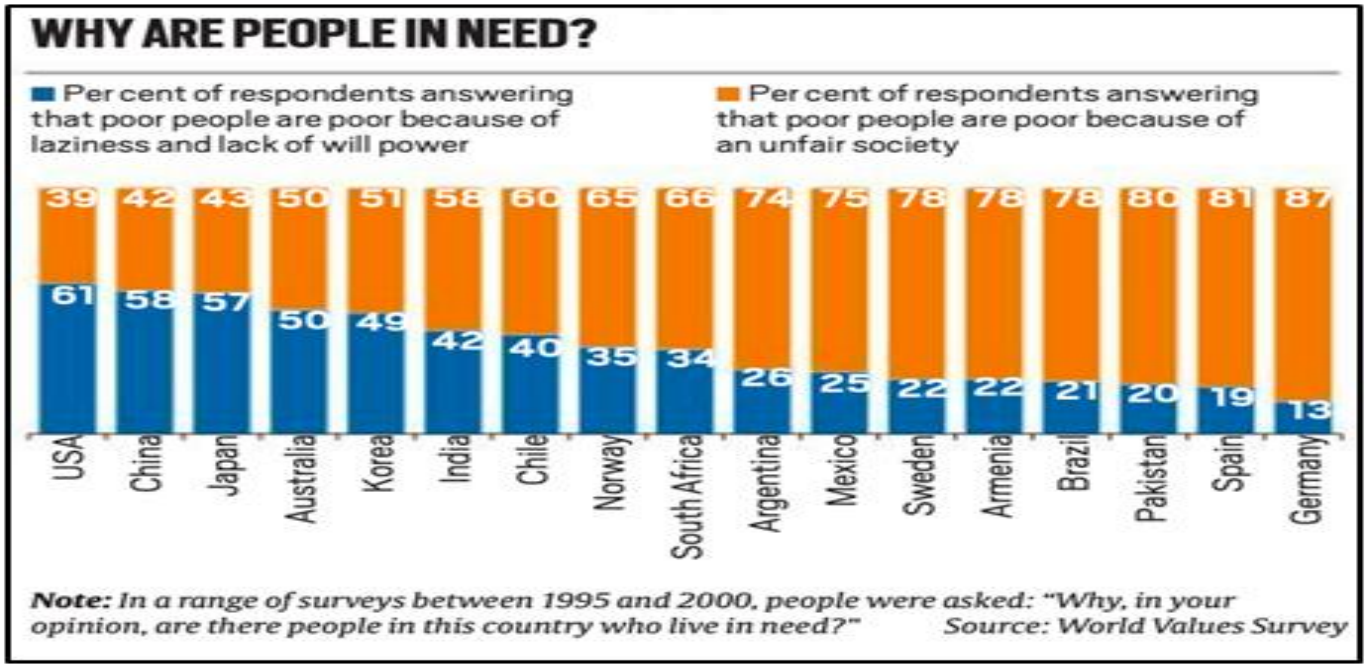
3.1 Universal Basic Income Programme

- President of a prominent political party told an election rally that if voted to power, his party would implement the NYAY scheme under which women would receive at least Rs 60,000-70,000" annually.
- Earlier, in 2018, the then government had rolled out the Pradhan Mantri Kisan Samman Nidhi (PM-KISAN) to provide income support of 6,000 per year in the three equal installments to all land holding farmer families.
  - PM-KISAN was billed as the world's largest Direct Benefit Transfer (DBT) scheme for farmers.

Are Schemes like NYAY and PM-KISAN the same as Universal Basic Income (UBI)?

- Under UBI, a government provides a basic income to every member of a population, from richest to the poorest, regardless of whether they are employed or not.
- However, the **government withdraws all subsidies** – from food to fertilizes to train tickets to medical bills.
- The idea is to give everyone a minimum income, cut the bureaucratic costs of running a large number of welfare programmes, and to tax everyone in a way that the UBI is funded.
- On the other hand, PM-KISAN and NYAY programmes are different.
  - One, they are not accompanied by the removal of existing subsidies or benefits of other social welfare schemes for their beneficiaries.
  - Two, the amount is much smaller than what can be considered a minimum or basic income needed to live a decent life.
  - Three, these schemes are targeted at specific groups of Indians; they are not universal.

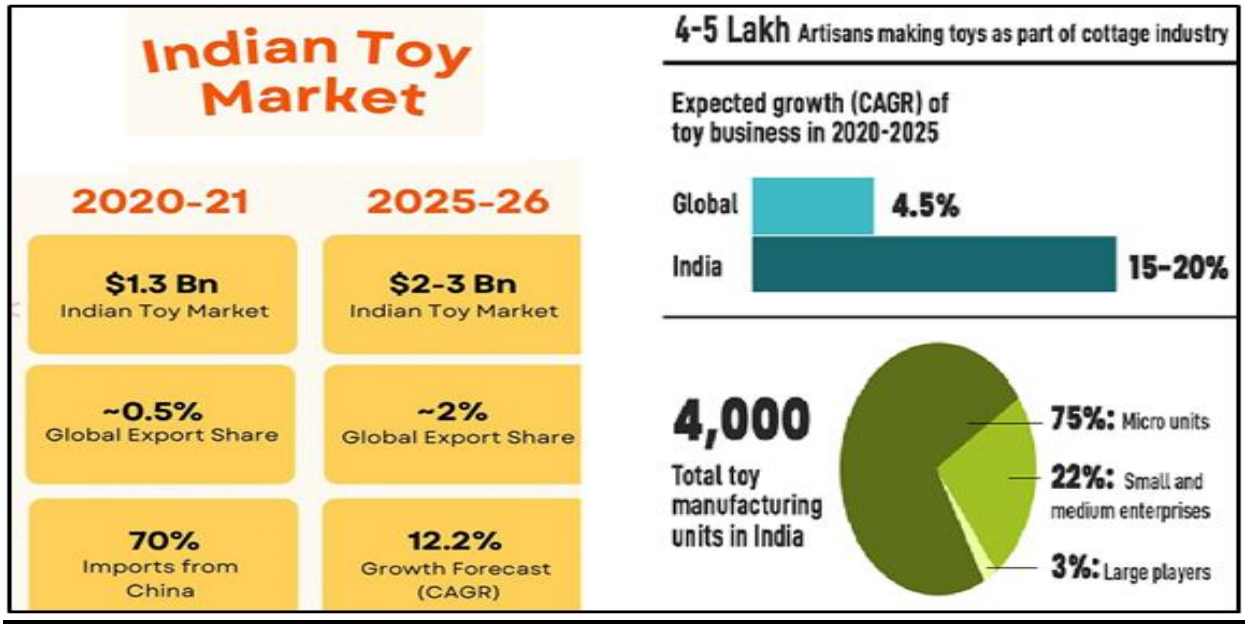
Why has UBI not been implemented in India, and is not popular elsewhere?



- In rich countries like Switzerland, which considered and dropped the idea, the UBI amount be quite a lot, even though the beneficiary population may be small.
- And in poorer countries, the amount would be smaller, but the population perhaps too large.
- Also, cutting existing subsidies and raising taxes to fund the UBI would be politically unpopular ideas almost everywhere.
- **Arguments in favour of UBI**:
  - UBI reduces poverty and income inequality, and improves physical and mental health.
  - UBI leads to positive job growth and lower school dropout rates.
  - UBI guarantees income for non-working parents and caregivers, thus empowering important traditionally unpaid roles, especially for women.
- **Arguments against UBI**:
  - UBI takes money from the poor and gives it to everyone, increasing poverty and depriving the poor of much needed targeted support.
  - UBI is too expensive.
  - UBI removes the incentive to work, adversely affecting the economy and leading to a labor and skills shortage.

3.2 Toy Industry in India: Registers 239% Increase in Toy Exports in 2022-2023

According to a case study on "Success Story of Made in India Toys" released by the DPIIT, the Indian Toy industry witnessed a rise of 239% in exports (and decline in imports by 52%) in 2022-23 as compared to 2014-15.



Evolution:

- Asia's successful industrialising nations [**Japan** (a century ago), **China** (since 1980s) and currently **Vietnam**] promoted toy exports for job creation.
- However, **toy manufacturing remained stagnant, archaic and fragmented** in India, which followed an inward-oriented industrial policy (import tariffs and reservation policy) in the Planning-era, affecting domestic production.
- With the introduction of **LPG reforms** in India in the 1990s, new enterprises entered the organised toy manufacturing sector, and productivity growth increased.
- Despite early encouraging signs, industry de-reservation was unable to sustain output, investment and productivity development beyond 2007-08.

Data related to growth:

- In 2015-16, the industry had about 15,000 enterprises in both organised and unorganised sectors, producing toys **worth ₹1,688 crore and employing 35,000 workers.**
- Between 2000 and 2016, industry output was halved in real terms with job losses and the industry witnessed **negative productivity** growth between 2014-19.
    - As a result, imports rose by nearly 3 times as much as exports and accounted for up to 80% of domestic sales.
    - India hardly figures in the global toy trade, with its **exports at a mere half-a-percentage** point.
- The Indian PM (during his Mann ki Baat address in August 2020) expressed his desire to establish India as a global Toy manufacturing hub.
- Between 2018-19 and 2021-22, toy exports increased from ₹812 crore to ₹1,237 crore and imports declined from ₹2,593 crore to ₹819 crore.

Challenges: The industry's ability to sustain net exports is limited, as it has made minimal investments to increase output and exports.

Steps Taken by the Government of India to Promote Toy Sector:

- Make in India initiative (2014).
- **National Action Plan for Toys (NAPT)** to promote the designing of toys, using toys as a learning resource, monitoring the quality of toys and promoting indigenous toy clusters.
- Basic custom duty on toys (tripled from 20% to 60% in 2020).

- The Directorate General of Foreign Trade (DGFT) has mandated sample testing of each import consignment to curb the import of sub-standards toys.
- Numerous non-tariff barriers [a **Quality Control Order (QCO)** for Toys was issued in 2020] were imposed.
- The Ministry of MSME is supporting 19 Toy clusters under the Scheme of Funds for the Regeneration of Traditional Industries **(SFURTI).**
- The Ministry of Textiles is providing designing and tooling support to 13 Toy clusters.
- Several promotional initiatives have also been undertaken to promote indigenous toys and encourage innovation, including the **Indian Toy Fair 2021**, **Toycathon**, etc.

Highlights of the Case Study on "Success Story of Made in India Toys":

- The case study has been conducted by the I**ndian Institute of Management (IIM) Lucknow** at the behest of **Department for Promotion of Industry and Internal Trade (DPIIT).**
- The Central Government has enabled a more conducive manufacturing ecosystem for the Indian Toy industry.
- In a span of 6 years (2014 to 2020), these dedicated efforts have led to the doubling of the number of manufacturing units.
- **It helped in the reduction in dependence on imported inputs** from 33 to 12% and increase in gross sales value by a CAGR of 10%, and overall rise in labour productivity.
- India is also emerging as a top exporting nation due to the **country's integration into the global toy value chain**, along with **zero-duty market access for domestically manufactured toys** in countries including **UAE and Australia**.
- **Way Ahead to Promote Indian Toy Sector:**
- In order to position India as a **viable alternative to current toy hubs of the world,** i.e., China and Vietnam, consistent collaborative efforts of the Toy industry and the Government are essential for
  - ✓ Advancements in technology,
  - ✓ Embracing e-commerce,
  - ✓ Encouraging partnerships and exports,
  - ✓ Investing in brand-building,
  - ✓ Engaging with educators and parents to communicate with children,
  - ✓ Valuing cultural diversity and collaborating with regional artisans, etc.

3.3 RBI Norms for Politically-Exposed Persons (PEPs)

The **Reserve Bank of India (RBI)** recently updated **Know Your Customer (KYC)** norms for politically exposed persons (PEPs) who transact with regulated entities (REs), seeking to comply with the recommendations of the **Financial Action Task Force (FATF).**

New RBI Norms for Politically-Exposed Persons (PEPs):

- **Who are PEPs?** In the amended KYC master direction, the central bank defines PEPs as **"individuals who are or have been entrusted with prominent public functions by a foreign country**, including the heads of states/governments, senior politicians, senior government or judicial or military officers, senior executives of state-owned corporations, and important political party officials".
- **REs have the option of establishing a relationship with PEPs** (whether as customers or beneficial owners).
- REs have to perform regular customer due diligence and a**lso follow additional conditions** prescribed by the RBI **to transact with PEPs**.
- Some **additional conditions include establishing an appropriate risk management system** to determine whether the customer or the beneficial owner is a PEP.
- REs have to take reasonable **measures to establish the source of funds**/ wealth.
- They also **need to get approval from senior management** to open an account for a PEP.

Key Facts about Financial Action Task Force (FATF):

- FATF is an **inter-governmental** policy-making and standard-setting body dedicated to **combating money laundering and terrorist financing.**
- It was **established in 1989 during the G7 Summit** in Paris to develop policies against money laundering.
- In 2001 its mandate expanded to include terrorism financing.
- **Headquarters:** Paris, France.
- FATF members include **39 countries**, including the United States, India, China, Saudi Arabia, Britain, Germany, France, and the EU as such.
- **India became a member** of FATF in **2010.**

What are FATF 'grey list' and 'blacklist'?

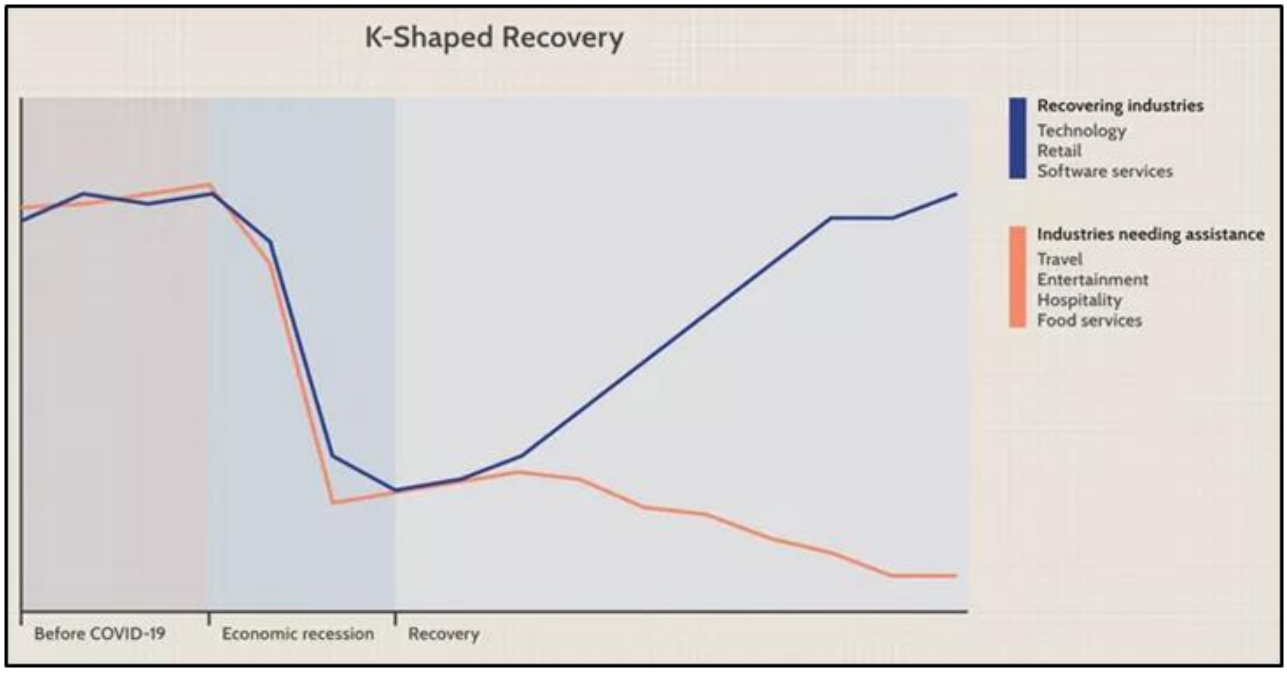
- FATF has 2 types of lists:
- Black List: Countries known as **Non-Cooperative Countries or Territories (NCCTs)** are put on the blacklist. These countries **support terror funding and money laundering**
- **Grey List**: Countries that are **considered a safe haven for supporting terror funding and money laundering** are put on the FATF grey list. This inclusion **serves as a warning** to the country that it may enter the blacklist.
- Three countries North Korea, Iran, and Myanmar are currently on FATF's blacklist.
- Consequences of being on the FATF blacklist:
- **No financial aid** is given to them by the International Monetary Fund (IMF), the World Bank, the Asian Development Bank (ADB), and the European Union (EU).
- They also face a number of **international economic** and **financial restrictions** and sanctions**.**

3.4 Income inequality in India: SBI Research Counters K-Shaped Economic Recovery Claims

According to the Economic Research Department of the State Bank of India (SBI), **income inequality has declined in India** with a **higher tax base** and a shift in taxpayers from lower income to higher income tax bracket.

Terming the claims of **K-shaped recovery** as "prejudiced" and "ill-concocted", the report also cited the transition of small firms into larger firms and consumption trends being indicative of "vanishing inequality

What is K-Shaped Recovery?



- K-shaped recovery occurs when, following a recession, **different parts of the economy recover at different rates, times, or magnitudes**.
- Because the path of different parts of the economy when charted together may diverge, **resembling the two arms of the Roman letter "K",** this type of recovery is called K-shaped.
- A K-shaped recovery leads to changes in the structure of the economy or the broader society as economic outcomes and relations are fundamentally changed before and after the recession.

Causes of a K-shaped recovery:

- A K-shaped recovery can **reflect creative destruction** in an economy, which occurs when new technologies and industries replace older ones over the course of a recession.
- It can **reflect the public policy response to a recession** in terms of monetary and fiscal policy, which can benefit some segments of the economy more than others - **leading to income inequality**.
- It can simply **reflect the differential impact that the initial recession had on different parts of the economy**

Income inequality in India: Highlights of the UNDP Report:

- According to the report ("Making our Future: New Directions for Human Development in Asia and the Pacific"), amidst rapid growth but persistent disparity, **the income distribution has become more skewed in India.**
- The top 10% of the population get 57% of national income and the top 1% get 22% - **one of the most unequal income distributions.**
- **There are similar gaps in wealth**: the top 10% of the population controls 65% of the nation's total wealth.
- There is growing evidence of a strong rise in wealth inequality, mainly in the post-2000 period.

Highlights of the SBI Report:

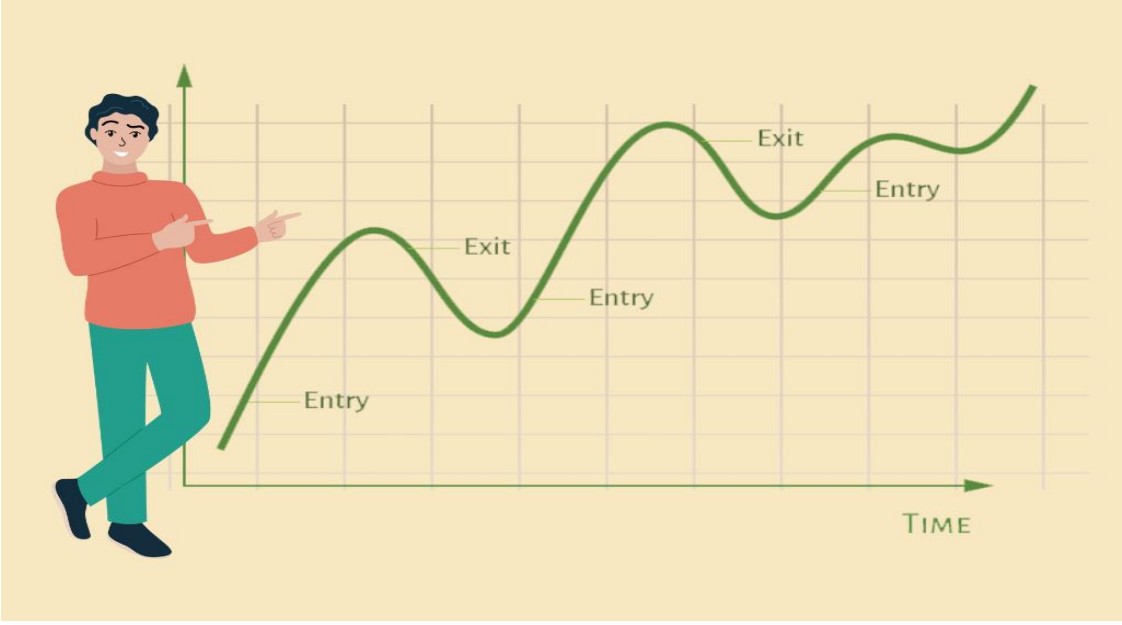
- **Between the assessment years 2013–14 and 2021–22**, about 36.3% of taxpayers have moved from lower income to higher income tax bracket resulting in 21.3% additional income.
- **The income-tax returns (ITRs)** filed by individual taxpayers earning between Rs 5 - 10 lakh, climbed by 295%, showing a positive trend of migration to a higher range of gross total income.
    - The number of ITRs filed by people earning between Rs 10 - 25 lakh increased by 291% while the total number of persons filing income tax increased to 7.4 crore in AY23 from 7 crore in AY22.
    - **Female tax filers** are around 15%of the individual tax filers with certain states such as Kerala, Tamil Nadu, Punjab and West Bengal having higher share of female tax filers.
- **On the share of top taxpayers in income**, the report said that in FY14, the combined income of 23 individuals with income of more than Rs 100 crore was 1.64% of the total income of FY14.
- Even though the number of such individuals increased to 136 in FY21, the share of their combined income fell to 0.77%.
- **Also, 19.5% of small firms have transitioned into larger firms** through MSME value chain integration and **consumption of the bottom 90% of the population has increased** by Rs 8.2 lakh crore post pandemic.
    - It also cited consumption numbers from food ordering platforms such as Zomato, calling it as the perfect example of case study to refute the claim that people are facing distress.
- The report also talks about the decline in sales of two-wheelers, and **people are substituting two-wheelers with four-wheelers.**

Conclusion drawn by the SBI Report:

- Growth is seen in all income classes but its **skewness has been decreasing** with convergence of income towards the middle from both top as well as bottom.
- **The report said the claim of K-shaped recovery** seems flawed, prejudiced, ill-concocted and fanning interests of select quarters to whom India's remarkable ascendance is quite unpalatable.
- **Income inequality captured through the Gini coefficient** (one of the most widely used measures of income inequality) of taxable income has declined significantly from 0.472 to 0.402 during FY14-FY22.

3.5 Momentum investing

Many academic studies have shown that momentum investing can generate high returns that comfortably beat the benchmark indices.



- Momentum investing refers to a style of investing wherein **investors purchase assets** such as stocks or bonds that are consistently rising in price while selling assets whose prices are falling.
- Momentum investors buy assets with rising prices in the hope that the upward price momentum of these assets would continue, thus allowing them to sell these assets at higher prices in the future to make profits.
- It is based on the philosophy that there can be discernible trends in asset prices and that these trends tend to persist over time.

- The persistence of such trends gives investors an opportunity to recognise and participate in them early enough to make significant profits from their investments.
- Similarly, they sell assets that are falling in price expecting the fall in prices to continue for some time.
- Momentum investors generally **do not conduct a deep analysis** of the fundamental or intrinsic value of the assets in which they invest their money.
- They invest purely based on whether the price of an asset is showing a strong trend, either upward or downward, that they can ride on.
- The "**buy high, sell higher**" philosophy of momentum investing **is in stark contrast** to the traditional "**buy low, sell high"** advice given to investors**.**

3.6 Group Insolvency Mechanism under the IBC Process

The Reserve Bank of India (RBI) governor envisaged a Group Insolvency Mechanism for better recovery of dues of creditors under the Insolvency and Bankruptcy Code (IBC) process.

What is the Insolvency and Bankruptcy Code (IBC)?

- **Insolvency vs Bankruptcy**: While insolvency results from an inability to pay debts due to a lack of assets, bankruptcy occurs when an application is presented to an authority declaring insolvency and requesting to be declared bankrupt, which will last until discharge.

About the IBC 2016:

- It is the bankruptcy law of India which seeks to **consolidate the existing framework** by creating a single law for insolvency and bankruptcy.
- It is a **one stop solution** for resolving insolvencies which previously was a long process that did not offer an economically viable arrangement.
- It aims to **protect the interests of small investors** and make the process of doing business less cumbersome**.**

What is the process followed under the IBC?

- When a corporate debtor (CD) or a company which has taken loans to run its business, defaults on its loan repayment, either the creditor or the debtor can apply for the initiation of a CIRP.

  - CIRP stands for **Corporate Insolvency Resolution Process (CIRP),** which comes under Section 6 of the IBC.
- Earlier, the minimum amount of default after which the creditor or debtor could apply for insolvency was ₹1 lakh.
  - But, considering the stress on companies amid the pandemic, the government increased **the minimum amount to ₹1 crore.**
- **To apply for insolvency**, one has to approach a stipulated adjudicating authority (AA) under the IBC - the various benches of the National Company Law Tribunal (NCLT) across India are the designated AAs.
- **The Tribunal has 14 days to admit or reject the application** or has to provide a reason if the admission is delayed.
  - The CIRP or resolution process begins once an application is admitted by the AA.
  - The amended mandatory deadline for the completion of the resolution process is 330 days**.**

What is Group Insolvency?

- Group Insolvency is a framework where if multiple entities of a single corporate group go insolvent, their **resolutions can be consolidated in one court** so that -
  - Firstly, the group can be restructured as a whole and
  - Secondly, its combined assets can be utilised in the best interest of both the group corporate and the debtor
- **Globally, there are two diverse facets of Group Insolvency.** Some jurisdictions have adopted either procedural coordination or substantive consolidation.
  - **Substantive consolidation** pertains to the consolidation of assets, liabilities, and operations of multiple entities within a group, disregarding their separate legal entity status.
  - On the other hand, under **procedural coordination**, the approach is limited to aligning procedural aspects like filing requirements, timelines, coordination and not mingling the entities per se.
- **In the Indian context**, in the absence of a specified framework, the **group insolvency mechanism had been evolving under the guidance of the Courts.**

<u>Need for the Group Insolvency Mechanism under the IBC Process in India:</u>

- The **criticisms of the IBC** are on two fronts - the time taken for resolution and the extent of haircuts vis-à-vis the admitted claims.
- As of Sept 2023, 67% of the ongoing CIRP cases had already crossed the total timeline of 270 days including possible extension period of 90 days.
- **The average time taken for admission** of a case during FY 2020-21 and FY 2021-22 stood at 468 days and 650 days respectively.
    - Such a long degree of delays will substantially erode the value of the assets.
- There are a multitude of factors playing out here, namely,
    - The evolving jurisprudence related to the Code;
    - Litigatory tactics adopted by some corporate debtors;
    - Lack of effective coordination among creditors;
    - Bottlenecks in the judicial infrastructure.
- On several occasions, the AA have raised concerns **regarding the conduct of the Committee of creditors (CoC -** decides whether the defaulting company is viable enough to be restructured and given a fresh start/ liquidated) in the insolvency proceedings. This includes -
    - Lack of participation in the CoC meetings,
    - Lack of engagement or effective coordination among creditors,
    - Disproportionate prioritising of creditors' individual interests above their collective interests when drafting resolution plans, which can be damaging to the plan itself.

3.7 States' startup ranking 2022 released by Department for Promotion of Industry and Internal Trade (DPIIT).

- Launched in 2018, States' Start up Ranking Framework is an annual exercise that evaluates States and Union Territories (UTs) on their efforts to build an ecosystem conducive to start up growth under 7 reforms areas.

Key findings

- **Total 33 States and UTs** were ranked under **five categories** –

    ♦ **Best performers** (Gujarat, Karnataka, Kerala).

    ♦ **Top performers** (Telangana, Arunachal Pradesh).

    ♦ **Leaders** (Andhra Pradesh, Assam).

♦ **Aspiring leaders** (Bihar, Haryana).

♦ **Emerging startup ecosystems** (Chhattisgarh, Delhi)

- India has **3rd largest start up** ecosystem in world.
  - As of December 2023, **more than 1.14 lakh start ups have been recognized by Government.**
- **Regulation of Start-ups**.
  - **DPIIT, Ministry of Commerce & Industry** recognize business as a start up.
  - **Securities and Exchange Board of India (SEBI)** notifies rules for listing start-ups.
- **Benefits of start-ups**: Create employment, Stimulate domestic investments, Reduces import of foreign product or service and promotes self-reliance etc.

- **Challenges**: Complex process of incorporating company, lack of funding and supportive infrastructure, protecting their Intellectual Property Rights is time-consuming etc.
- **Steps taken to promote Start-up ecosystem**: Start up India Action Plan; Credit Guarantee Scheme for Start ups; Income Tax Exemption for 3 years, Start up India Seed Fund Scheme etc.

4. ENVIRONMENT AND ECOLOGY

4.1 Chandaka-Dampara Wildlife Sanctuary

As a first, the Forest Department in Odisha has planned a 'nocturnal trail' for people, especially students and researchers, in the Chandaka-Dampara Wildlife Sanctuary.

- **Location**: It lies partly within Khurda and partly in Cuttack Districts of **Odissa State**, and is in close proximity to the state capital, Bhubaneswar.
- It is nestled in the **Khordha uplands of the 'North-Eastern Ghats' biotic region**.
- Spread over 193.39 sq.km of rolling table land and small sprawling hillocks, it is a wildlife sanctuary since August 1982.
- It is **known for the successful conservation of elephants**, which is the principal species here.
- **Vegetation**: The floral diversity of the sanctuary is distributed in **six types**, which include **secondary moist** miscellaneous **semi-evergreen forests**, moist **Kangada (Xyliaxylocarpa)** forests, **Coastal Sal forests**, **thorny bamboo brakes**, **planted Teak**, and **Eupatorium scrub.**
- There are two water reservoirs, Deras Dam and Jhumka Dam, situated within the sanctuary.
- **Flora**: The main tree species are Kochila, Kalicha, Belo, Kangada, Giringa, Sunari, Sal, Kumbhi, Jamu, Karanja, Teak, and Sidha.
- **Fauna**:

- Apart from elephants, other mammals include Leopard, Chital, Barking deer, Mouse deer, Wild pig, Common langur, Rhesus monkey, small Indian civet, etc.
- Prominent birds of the sanctuary are Peafowl, Red jungle fowl, Crested serpent eagle, Great horned owl, Black headed oriole, etc.

4.2 Green Honeycreeper

Ornithologists in Colombia recently photographed a wild green honeycreeper with distinct half-green, or female, and half-blue, male, plumage.

Why in the News?

This distinct honeycreeper discovered had male plumage on one half of its body and female coloring on the other.

This **differs from the typical males** of this species, which are bright blue with a black head, and the females, which are grass-green all over.

The rare phenomenon is scientifically known as **bilateral gynandromorphic. It arises from an error during female cell division to produce an egg, followed by double-fertilization by two sperm.**

About Green Honeycreeper:

- It is a **small bird** in the tanager family.
- **Scientific Name:** Chlorophanes spiza
- **Distribution**: The **New World Tropics (Rainforests in Central and South America),** from Mexico to Brazil.
- **Features:**

✓ It is 13–14 cm long and weighs 14 to 23 grams.

✓ The male is mainly blue-tinged green with a black head and a mostly bright yellow bill. The female is grass-green, paler on the throat, and lacks the male's iridescence and black head.

✓ They are called Green Honeycreepers because the females and young birds are bright green with red eyes.

✓ Although males have, on average, slightly longer wings and tails than females, there is considerable variation within each sex and much overlap.

✓ It feeds largely on nectar, fruit, and insects and often frequents feeders supplying fruit.

- **Conservation Status**: **IUCN Red List: Least Concern**

4.3 Sikki Grass

Sikki artisans suffer livelihood losses amid climate change and failed promise of government in providing financial help in setting up of Sikki stalls in countrywide trade fairs held round the year.

About Sikki Grass:

- Sikki grass belongs to the zizanoides grass family.
- It is a rich yellowish variety of reed grass, locally known as '**Kaincha'** is called Golden Grass due to its golden luster on drying.
- Scientifically called Chrysopogon zizanioides, it f**inds mention in ancient Sanskrit texts** such as the Ramayana, where it is referred to as viran, sugandhimool, ushir and nalad.
- This grass grows indigenously in the **Tarai regions of Uttar Pradesh and Biha**r and has an average **height of 3-4 feet.**
- While the **stem is used to make artefacts**, the **roots are used for extracting oil t**hat is used both for perfumery and medicinal purposes.
- In the hilly terrains, it is also now grown to arrest soil erosion.
- Sikki got the **geographical identification tag in 2018.**

Uses:

- It is most known for its **handicraft**. It has been a **source of livelihood** for many since antiquity.
- It is used to **make traditional items** such as multipurpose baskets, ornaments, show pieces and many more utility items that are still considered valuable in rural India**.**

Challenges:

- One of the serious challenges that Sikki craftsmen are facing currently is the **brunt of climate change** that has impacted the quality of the grass.
- The deteriorating quality of grass due to continual spike in temperature that impacts the softness of Sikki.
- Brittle grass needs extra processing time and is not suitable for making baskets or other artefacts**.**

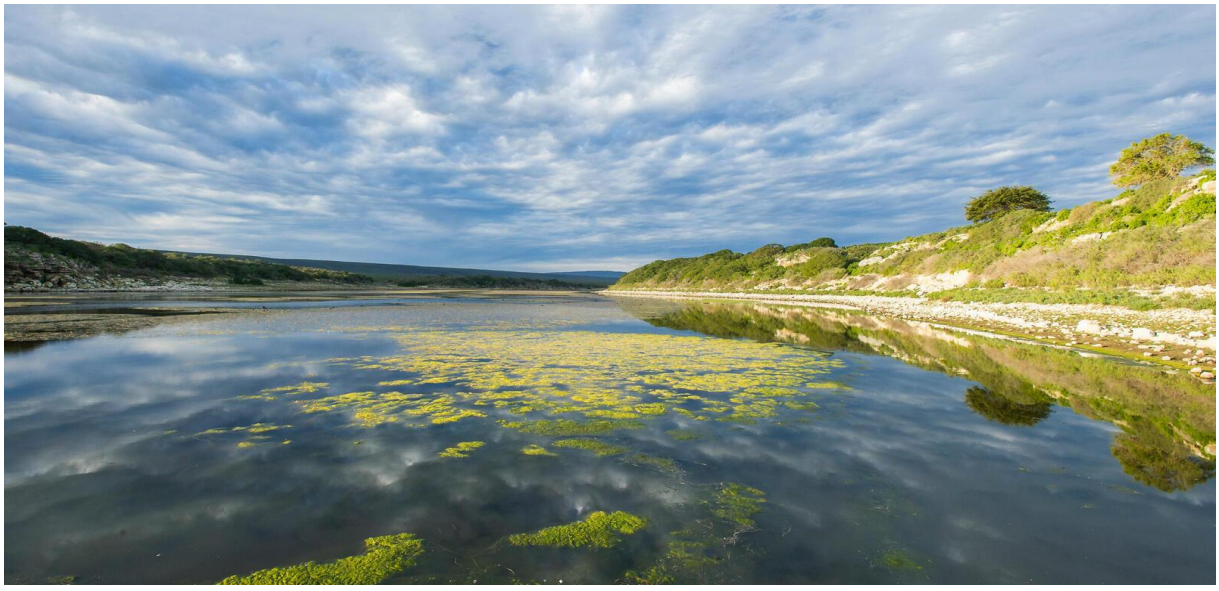
4.4 Translocated Cheetah from Namibia gave birth to three Cubs in Kuno National Park (KNP)

- This is the **second litter of cheetah cubs** to be born in the country since the start of Project Cheetah.
- Till now, there were **15 cheetahs at KNP** and the tally n**ow stands at 18.**
- **Under Project Cheetah**, 20 Cheetahs were translocated from **Namibia (8)** and **South Africa (12)** to KNP, Madhya Pradesh.
    - The cheetah was **declared extinct in India by 1952,** the only large carnivore species that went extinct in Independent India.
    - **Objective**: To establish viable cheetah metapopulation in India that allows cheetah to perform its functional role as top predator.
    - Implementing Agency: **National Tiger Conservation Authority (NTCA).**
    - Funding: From Project Tiger as well as **Compensatory Afforestation Fund Management & Planning Authority (CAMPA).**
- **Progress so far:** Out of 6 criteria for assessing short-term success, the project has already met four criteria namely:
- 50% survival of introduced cheetahs, Establishment of home ranges, Birth of cubs in Kuno, and Revenue to local communities.
- Challenges: fatalities, lack of space and prey at KNP, etc.
- Cheetah, world's fastest mammal, is a keystone species of dry forests, scrub forests, and Savannahs
- **Protected** under Appendix 1 of CITES.
- IUCN status: **African cheetah (Vulnerable), Asiatic cheetah (Critically endangered**

4.5 Wetland City Accreditation

Why in news ?

Ministry of Environment, Forest and Climate Change has submitted three nominations from India for Wetland City Accreditation (WCA) of **Indore (Madhya Pradesh), Bhopal (Madhya Pradesh)** & **Udaipur (Rajasthan)** under the Ramsar Convention on Wetlands.



About Wetland City Accreditation:

- The Ramsar Convention during COP12 held in the year **2015** approved a **voluntary Wetland City Accreditation system.**
- It recognizes **cities which have taken exceptional steps** to safeguard their urban wetlands.
- It also recognizes the importance of wetlands in urban and peri-urban environments and to take appropriate measures to conserve and protect these wetlands.
- This voluntary scheme provides an **opportunity for cities** that value their natural or human-made wetlands to **gain international recognition** and positive publicity for their efforts.
- This scheme aims to further promote the conservation and wise use of urban and peri-urban wetlands, as well as **sustainable socio-economic benefits for local populations.**
- To be formally accredited, a candidate for WCA should satisfy the standards used to implement each of the six international criteria mentioned in Operational Guidance for WCA of the Ramsar Convention on Wetlands.
- Since Ramsar COP13, **43 cities from 17 countries** have been officially recognized as "Wetland Cities".

The three nominated cities include:

- **Indore:** Founded by Holkars. **Sirpur Lake**, a Ramsar Site in the city has been recognised as an important site for water bird congregation and is being developed as a Bird Sanctuary. A strong network of wetland mitras is engaged in bird conservation and sensitising the local community to **protect Sarus Crane.**
- **Bhopal**: Bhoj Wetland, Ramsar Site is the city's lifeline, equipped with the world-class wetlands interpretation centre, **Jal Tarang.** Additionally, the Bhopal Municipal Corporation has a dedicated **Lake Conservation Cell.**
- **Udaipur:** Located in Rajasthan, the city is surrounded by f**ive major wetlands**, namely, **Pichola, Fateh Sagar**, **Rang Sagar, Swaroop Sagar**, and **Doodh Talai**. These wetlands are an integral part of the city's culture and identity, help maintain the city's microclimate, and provide a buffer from extreme events**.**

Significance of Wetlands

- Provides ecosystem services like water supply, food and biodiversity
- Mitigates floods in urban areas and helps in recharging their Groundwater table
- Provides recreational facilities and acts as tourist attraction
- Function as natural sponges that trap and slowly release surface water, rain, snowmelt, groundwater and flood waters

4.6 Similipal kai chutney

- The Similipal kai chutney made with red weaver ants by the tribal people of Odisha's Mayurbhanj district (Odisha) received the geographical identity tag.
- The savoury chutney is popular in **Mayurbhanj region** for its healing properties and also deemed important for **nutritional security of the tribal people.**
- Many indigenous people from Mayurbhanj district venture into nearby forest to collect **Kai pimpudi (red weaver ant**).
- Around 500 tribal families have been eking out a living by collecting and selling these insects and a chutney made with them**.**

Health benefits:

- The scientists analysed the red weaver ants and found it contains valuable proteins, **calcium, zinc, vitamin B-12, iron, magnesium, potassium, sodium, copper, amino acids**, among others. Consuming the species can help **boost the immune system and prevent diseases**.
- The tribal healers also prepare a **medicinal oil i**n which they dip the ants along with pure mustard oil.
- After a month, this concoction is used as body oil for babies and to **cure rheumatism, gout, ringworm and other diseases** by the tribes.
- The local people also consume this to stay fit and strong.

Key facts about Red Weaver Ants:

- These are **indigenous to Mayurbhanj** and are found in abundance in the jungles of every block area of the district, including in the Similipal Tiger Reserve, throughout the year.
- They form colonies with multiple nests in trees. Each nest is made of leaves stitched together with the silk produced by their larvae.
- They mostly lodge in trees like mango, sal, jambu and jackfruit. The nests are strong enough against wind and impermeable to water.
- Kai's nests are usually elliptical in shape and range in size from single small leaf folded and bound onto itself to large nest consisting of many leaves.
- The Kai families consist of three categories of members — workers, major workers and queens. Workers and major workers are mostly orange coloured.

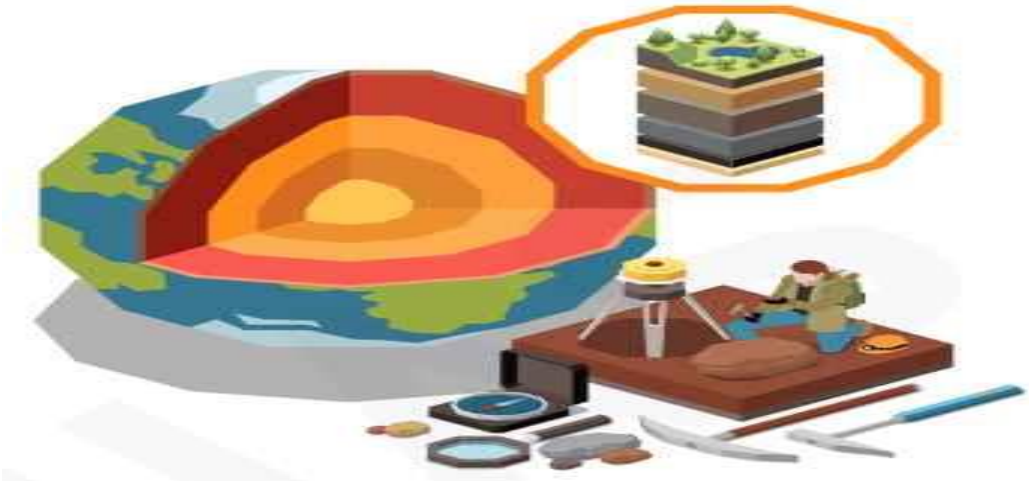
4.7 Union Cabinet approved overarching scheme "PRITHvi Vigyan (PRITHVI)" under the Ministry of Earth Sciences

- It is an initiative of the **Ministry of Earth Sciences (MoES)** to enhance the understanding of the Earth and its vital signs.
- This overarching initiative, with an allocation of Rs 4,797 crore for the period 2021-26, aims to significantly enhance research, modelling, and service delivery across crucial areas like **weather, climate, oceans**, and the **polar regions**.
- These programs collectively aim to enhance our understanding of the Earth's vital signs and translate scientific knowledge into practical services that benefit society, environment and economy.

Key highlights of the scheme

- Tenure: 2021-26
- Purpose: Holistically address all the aspects related to the Earth System Science.

  ♦ Earth System Sciences deal with all the five components of the earth system (atmosphere, hydrosphere, geosphere, cryosphere, and biosphere) and their complex interactions.



Components: Encompasses five on going sub-schemes:

♦ **Atmosphere & Climate Research-Modelling Observing Systems & Services (ACROSS):** For Research and Development (R&D) of dynamical models and providing the forecast services**.**

♦ **Ocean Services, Modelling Application, Resources and Technology (O-SMART):** For technology development for oceanic applications, services (forecast and advisories) and R&D activities in the marine and coastal environment.

♦ **Polar Science and Cryosphere Research (PACER**): Comprising the Antarctic program, Indian Arctic program, Southern Ocean program and Cryosphere and Climate program.

♦ **Seismology and Geosciences (SAGE):** Encompasses 6 activities including Seismological monitoring and microzonation, and Setting up a facility for geochronology.

♦ **Research, Education, Training and Outreach (REACHOUT):** Incorporating **R&D in Earth System Science (RDESS**), developing Skilled manpower in Earth System Sciences, etc

Objectives:

- One of the primary objectives of Prithvi is to **augment and sustain long-term observations** across the atmosphere, ocean, geosphere, cryosphere, and solid earth.
- This will enable recording and **monitoring of the Earth System's vital signs** and changes.
- Additionally, the scheme focuses on **developing predictive models for weather, ocean, and climate hazards**, as well as advancing the understanding of climate change science.
- **Exploration of the polar regions and high seas** is another key aspect, aiming at discovering new phenomena and resources.

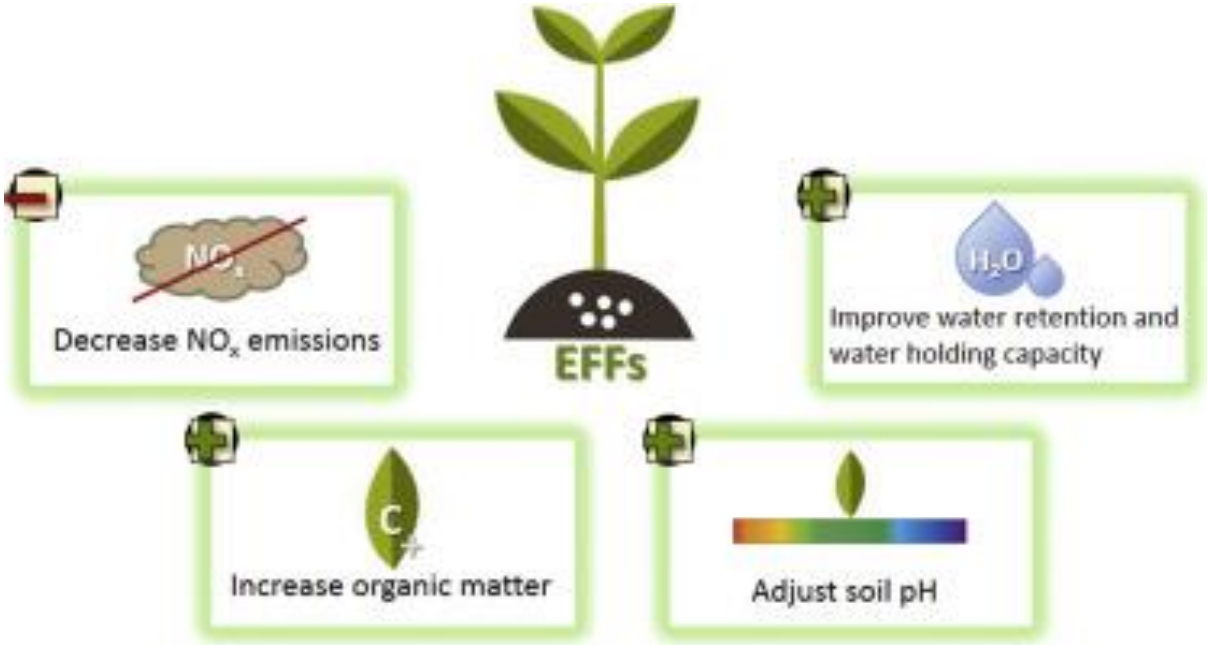
- The scheme also emphasises the **development of technology for the exploration** and sustainable **harnessing of oceanic resources** for societal applications.
- **Various components** of the PRITHVI scheme **are interdependent** and are carried out in **an integrated manner** through the combined efforts of the concerned institutes under the MoES.

4.8 Cabinet Committee on Economic Affairs (CCEA) approves launch of Urea Gold

Urea gold will support the other initiative of government in the sphere of **Environmentally Friendly Fertilizers (EFFs).**

Urea gold is a Sulphur-Coated Urea (SCU).

- It is **a non-organic slow-release fertilizer** and is generally prepared by coating preheated urea granules with molten sulphur.
- **Sulphur coating** ensures a more **gradual release of nitrogen.**
    - It prolongs the urea action, thus helping plants to stay greener for longer time.
    - It will increase efficiency and reduce frequent application of fertilizer, thus enhancing soil health.
- As per **Indian Council of Agricultural Research (ICAR**) study, use of SCU leads to **reduction in urea consumption by 25%**.
    - EFFs are fertilizers that can reduce environmental pollution from nutrient loss by retarding, or even controlling, the release of nutrients into soil.
- EFFs also include organic fertilizers such as Biocompost, Vermicompost, etc.

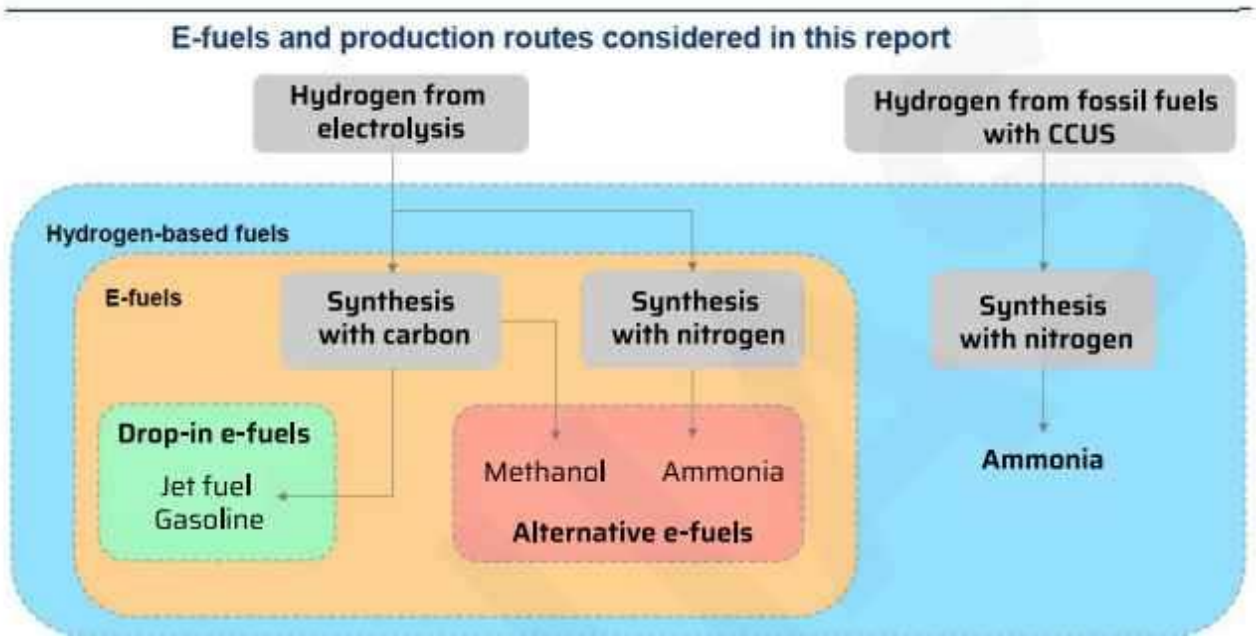


Initiatives for EFFs in India:

- PM PRANAM (Programme for Restoration, Awareness, Nourishment, and Amelioration of Mother Earth) Scheme
- Development of **Nano Urea and Neem Coated Urea**
  - **Pradhan Mantri Kisan Samruddhi Kendras (PMKSK)** will facilitate these fertilizers.
- **GOBARdhan (**Galvanizing Organic Bio-Agro Resources Dhan), helps in preparing organic manure.

4.9 "The Role of E-fuels in Decarbonising Transport", report released by IEA

- Report analyses **emerging e-fuel technologies** in terms of needed cost reductions, resources and infrastructure investments **to achieve a 10% share of e-fuels in aviation and shipping by 2030.**
- E-fuels, like **e-methane, e-kerosene and e-methanol**, are all fuels in gas or liquid form that are produced from **renewable or decarbonised electricity.**
  - E-fuels are **low-emission fuels** since their hydrogen is produced using low-emission electricity and carbon inputs are obtained in way that leads to **low life-cycle greenhouse gas emissions**
  - Possible Benefits:
    - Reduced emissions
    - Diversification of
    - decarbonization options.
    - Decreased demand for critical minerals needed for battery manufacturing.



Policy recommendations of the report:

- **Strengthen transport GHG reduction targets** to stimulate market for e-fuels,
- **Provide support to stimulate E-fuel demand** by Integrating e-fuels into blending mandates.
- **Address challenges and foster investment**

Steps taken by India to promote E-fuels:

- **National Green Hydrogen Mission**:
  - Development of green hydrogen production capacity of at least 5 MMT (Million Metric Tonne) per annum.
  - Abatement of nearly 50 MMT of annual greenhouse gas emissions
- Permitting **Foreign Direct Investment (FDI) up to 100 percent** under the automatic route for renewable energy projects

4.10 Background of Project Tiger:

In **1972**, India enacted the **Wildlife (Protection) Act (WLPA**) and introduced new spatial fixtures within notified forests, called **'**National Parks'.

- In the **National Parks**, the rights of forest-dwellers were removed and vested with the State government.
- The WLPA also created **'Wildlife Sanctuaries'**, where only some permitted rights could be exercised.

The government created the **'Critical Tiger Habitat'** (under the WLPA) in areas of National Parks and Sanctuaries which are required to be kept as inviolate for the purposes of wildlife conservation.

What is Project Tiger?

It is a tiger conservation programme (**a Centrally Sponsored Scheme of the MoEF&CC)** launched in 1973 by the Government of India and administered by the **National Tiger Conservation Authority (NTCA).**

It aims at

- **Ensuring a viable population of the Bengal tiger** ('endangered')in its natural habitats,
- Protecting it from extinction,

- **Preserving areas of biological importance** as a natural heritage that represent the diversity of ecosystems across the tiger's range in the country.

Developments After the Launch of the Project Tiger:

- In 2005, the then PM appointed a 5-member '**Tiger Task Force'** after a public outcry that India's tigers existed only on paper and not in the forests of Sariska in Rajasthan.
  - In Sariska, the government had spent Rs 2 crore per tiger in 2002-2003 for their upkeep and safety, versus Rs 24 lakh per tiger elsewhere.
- The Task Force found that the increasing conflict between the forest/wildlife bureaucracy and those who coexist with the tigers was a recipe for disaster.
- So, the Parliament amended WLPA in 2006 to create the National Tiger Conservation Authority (NTCA) and a tiger conservation plan.
  - From an administrative category arbitrarily constituted and administered by the forest bureaucracy, **Tiger Reserves became a statutory category in 2006.**
- Later, the government also enacted the **Forest Rights Act (FRA) 2006**, which recognised all customary and traditional forest rights - individual as well as community - on all forest land, including in Tiger Reserves.
  - Under the Act, the habitation-level **Gram Sabha** was to democratically determine and demarcate the forest rights that FRA recognised and vested in them.
  - As a result, FRA secured the livelihoods of at least 20 crore Indians – about half of them tribals – in 1.79 lakh villages.
  - Importantly, FRA introduced a **'Critical Wildlife Habitat' (CWH),** akin to the CTH, with one difference: once a CWH had been notified, it couldn't be diverted for non-forestry purposes.

Success Story of the Project Tiger:

- Today, Tiger Reserves are hailed worldwide as **India's miraculous success story** in environment and forest conservation, especially in this age of climate change.
- From only 9 Reserves in 1973 encompassing 9,115 sq. km, there are **today 54 in 18 States,** occupying 78,135.9 sq. km/ 2.38% of India's total land area.
- CTHs covers 42,913.37 sq. km/ 26% of the area under National Parks and Wildlife Sanctuaries.
- According to the Tiger Census 2022, there were 3,167-3,925 tigers in the country and their **population is growing at 6.1% a year**, prompting the government to claim India is now home to 3/4th of the world's tigers.

- The monitoring system **M-STrIPES**(Monitoring System for Tigers - Intensive Protection and Ecological Status) - is a software-based monitoring system developed(by NTCA in 2010) **to assist patrol and protect tiger habitats.**

Concerns Regarding India's Tiger Protection and Conservation Plans:

- **Exclusionary approach:**
  - The Buffer Area outside the CTH is to promote human-animal coexistence while recognising the livelihood, developmental, social, and cultural rights of the local people.
  - However, **the overall 'fortress conservation' approach to protecting tigers displaced people** who had coexisted with tigers for generations.
- **Except for Similipal (Odisha), the CTHs had no Buffer Area**:
  - India bears the long-term brunt of this error: tigers have been forced to inhabit and inherit a landscape leading to **increase in man-wild conflict incidences.**
  - With further increase in tigers and Tiger Reserves, and tiger corridors to link them up, **India's tiger terrain is set to become a hotspot not for biodiversity but anxiety and conflict.**
- **Issue with relocation and rehabilitation**:
  - WLPA prohibits all relocation except "**voluntary relocation** on mutually agreed terms and conditions" satisfying requirements in the law.
  - According to the FRA and the Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement (LARR) Act 2013, **no relocation can happen without the consent of the affected communities.**
  - LARR also requires the rehabilitation package to provide **financial compensation** as well as secure livelihoods to those relocated.
  - However, these provisions are not followed in letter and spirit.

4.11 Carbon Border Adjustment Mechanism (CBAM)

India recently flagged concerns relating to sensitive and confidential trade data of its exporters getting compromised while complying with the European Union's Carbon Border Adjustment Mechanism (CBAM).

What is it?

- It is a proposed **European Union (EU) tariff on carbon-intensive products.**
- Purpose: To put a **fair price on the carbon emitted during the production of** carbon intensive **goods that are entering the EU** and to encourage cleaner industrial production in non-EU countries.
- It was adopted on May 17, 2023, and the CBAM **transitional period started October 1, 2023.**
- It is designed to counter the risk of carbon leakage and operates by **imposing a charge on the embedded carbon content of certain imports** that is equal to the carbon price of domestic production**.**

How does it Work?

- If implemented as planned, EU **importers will have to buy carbon certificates** corresponding to the carbon price that would have been paid in the EU if the goods had been produced locally.
- The **price of the certificates** would be **calculated according to the auction prices in the EU carbon credit market.**
- The **amount of certificates** required would be **defined yearly by the quantity of goods and the embedded emissions** in those goods imported into the EU.
- Companies in **countries with a domestic carbon pricing regime equivalent to the EU's** will be **able to export to the EU without buying CBAM certificates.**
- The CBAM will **initially affect goods** imported from non-EU countries **that are particularly carbon-intensive**, namely specified goods within the cement, electricity, fertilisers, aluminium, iron, steel, and hydrogen sectors, as well as some upstream and downstream products (mainly iron, steel, and aluminium).

Transition Period:

- In the transitional phase of the implementation of the CBAM, **from October 1, 2023, to December 31, 2025, affected companies are subject to a reporting obligation without financial obligations.**
- During this period, **importers must determine and document direct and indirect emissions** that occur in the course of the production process of the imported goods.
- In addition, affected EU importers are **obliged to prepare a quarterly CBAM report** that provides information on the imported quantity of CBAM goods, the direct and indirect

embedded emissions contained therein (reporting on indirect embedded emissions is initially only for cement, electric power, and fertiliser), as well as any carbon taxes effectively paid in the country of production.

- **With the start of certificate trading from January 1, 2026**, importers are **obliged to purchase sufficient emission allowances** for imported embedded emissions during the year.

4.12 NGT urges coastal States and UTs to swiftly Develop Coastal Zone Management Plans (CZMPs) or Island Coastal Regulation Zone Plan (ICRZP)

- National Green Tribunal directed **Ministry of Environment, Forest and Climate Change (MoEF&CC)** to ensure prompt preparation of **CZMP** or **ICRZP** by states and UTs in line with **Coastal Regulation Zone notification 2019.**
    - **Only Odisha, Karnataka, and Maharashtra** have developed the CZMP/ICRZP as per the notification.
    - Additionally, **Great Nicobar and Little Andaman Islands** are the only ones that have approved the **ICRZP**.

About CZMP

- CZMP/ICRZP is strategic frameworks designed to manage and regulate human activities in coastal areas.
- Key components of CZMPs
    - ♦ **Zoning**: CZMPs divide coastal areas into different zones, such as **No Development Zones (NDZ), and Coastal Regulation Zones**
    - ♦ **Public Participation**: Discussions with public to consider the opinions and worries of local communities etc.

- **Coastal Regulation Zone (CRZ) Notifications**
    - **MoEF&CC** under **Environment Protection Act, 1986**, issued **CRZ notification (1991)** for regulation of activities in coastal area.
    - Subsequently **CRZ Notification, 2011** (reviewed by **Shailesh Nayak Committee)** declared certain coastal stretches as CRZ and entrusted preparation of CZMPs to coastal states and UTs.

- **CRZ Notification, 2019** (which superseded 2011 notification) advocated for revision or updation of CZMPs.
- **Island Coastal Regulation Zone (ICRZ) Notification, 2019** superseded Island Protection Zone (IPZ) Notification 2011.

CRZ-IA	**Ecologically Sensitive Areas** like Mangroves, Salt Marches etc
CRZ-1B	**Intertidal zone** i.e. area between Low Tide Line and High Tide Line.
CRZ-II	**Developed Land Areas** (Municipal Limits / Urban Areas).
CRZ-III	**Land areas that are relatively undisturbed** (viz. rural areas, etc.) and those which do not fall under CRZ-II.
CRZ-IVA	Area between **Low Tide Line up to 12 nautical miles** on the seaward side.
CRZ-IVB	Applicable on **Tidal influenced water bodies.**

4.13 Vulture restaurant set up in Jharkhand to conserve Critically Endangered species.

- A **'Vulture Restaurant'** has been established in Koderma district, **Jharkhand** to **address adverse impact of livestock drugs, particularly diclofenac, on vultures.**
  - Vulture restaurant is an undisturbed area where **non-toxic, poison-free meat and carcasses are provided** for vultures and other scavengers.
    - ♦ There are other such restaurants in **Raigad, Gadhchiroli** and **Nashik** district in **Maharashtra** and **Kangra district in Himachal** Pradesh.
  - Diclofenac is Non-steroidal Anti Inflammatory drugs, used in veterinary practice that has been proven toxic to vultures and other birds of prey.
- Vultures are **large carrion-eating birds** found mainly in **tropics** and **subtropics.**
  - 9 species of vultures are found in India. Out of them, 3 species are migratory (Cinereous vulture, Griffon vulture and Himalayan vulture).
  - They **maintain clean environment** by acting as nature's garbage collectors and **control spread of wildlife** diseases from rotting corpse.
- **Conservation status**: Protected under **Schedule (1)** of Wildlife Protection Act 1972.
- **Threats**: **Loss of natural habitats** due to human activities, **Food scarcity**, Population decline due to **exposure to drug diclofenac**, **Electrocution** by power lines etc

Vulture Conservation Initiatives

- Ban on Veterinary use of Diclofenac (2006), Ketoprofen and Aceclofenac (2023).
- Action Plan for Vulture Conservation in India 2020-25.
- Vulture Conservation Breeding Centre in Pinjore, Haryana.

4.14 Decoding India's Changing Monsoon Patterns: A Tehsil Level Assessment" report released by CEEW.

- The report by **Council on Energy, Environment and Water (CEEW)** analyses meteorological data from **1982 to 2022**, recorded by India Meteorological Department.

Key findings:

- Climate change projections indicate a **10-14% surge in southwest monsoon rainfall** in India by the **end of the 21st century**.
- Trends over past decade (2012-22):

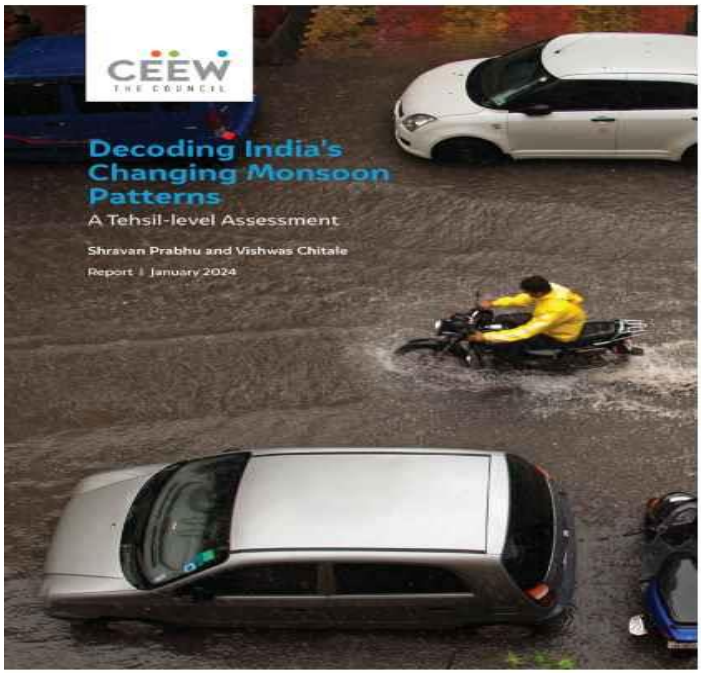
♦ **Southwest Monsoon**

» **More than half tehsil** experienced a **rise in frequency of heavy** rainfall, particularly in high GDP states like Maharashtra, Tamil Nadu, Gujarat, and Karnataka.

» **Indo-Gangetic plains and northeast** reported an **increase in dry days.**

♦ **Northeast Monsoon**: There were **no significant changes in the frequency and intensity** of very heavy rainfall events, dry days, or moderate rainfall days.

- **Recommendation:** To enhance **resilience against shifting monsoon patterns** prioritize **localised decision-making** through:
  - **Mapping monsoon performance** at more localised level.
    ♦ Currently, IMD provides information **at country, zonal, state, meteorological sub-division, and district scales.**
  - Development of **district-level climate action** plans incorporating tehsil level climate risk assessments.
  - Invest in **automatic weather stations and community-based recordings.**

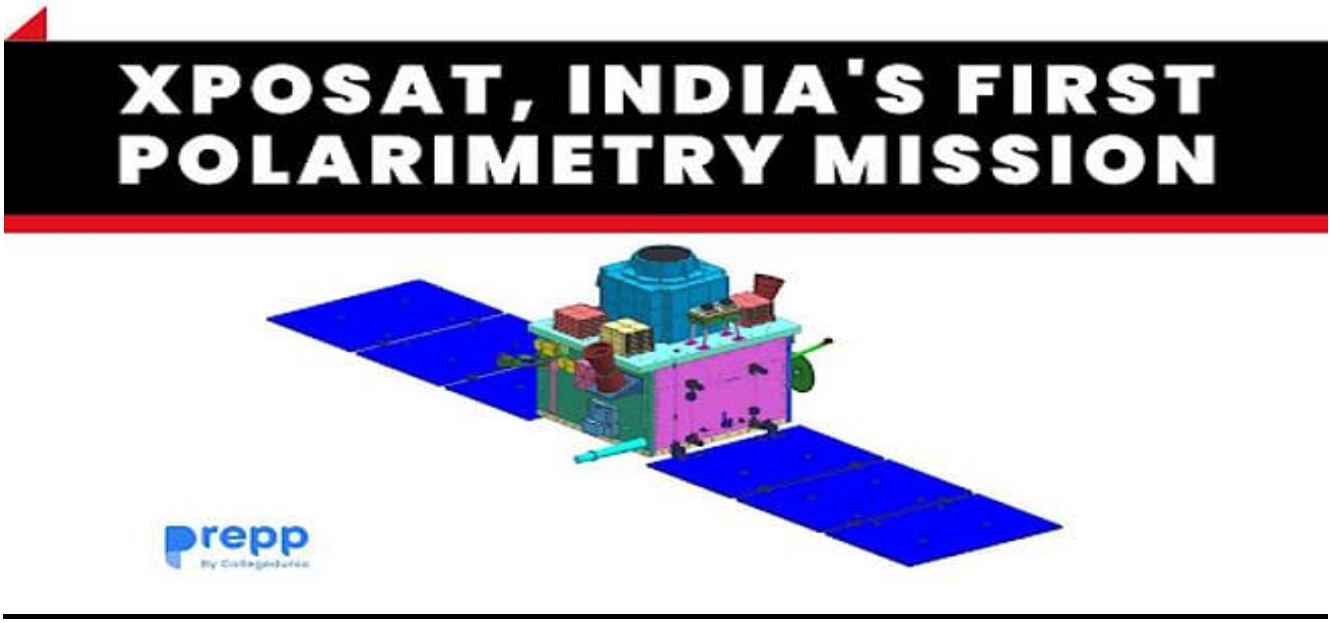


Monsoon in India

- **Southwest monsoon (June to September):** Arises because of the formation of an **intense low-pressure system over the Tibetan plateau** and contributes **around 75% of India's rainfall.**
- **Northeast monsoon (October to December)**: Arises due to high-pressure cells that are formed over the **Siberian and Tibetan plateaus** and contributes **about 11% of India's annual rainfall**.

5. SCIENCE AND TECHNOLOGY

5.1 XPoSat Mission



- Indian Space Research Organisation (ISRO) put its first polarimetry mission X-ray Polarimeter Satellite (XPoSat) on January 1.
- ISRO's PSLV-C58 has launched XPOSAT Satellite.
- XPoSat is the world's second satellite-based mission dedicated to making X-ray polarimetry measurements.

Polarisation of X-rays

About

- X-rays comprise electric and magnetic waves that are constantly in motion. Being sinusoidal waves, they do not follow a patterned direction of motion.
- Whereas, a polarised X-ray is both organised and has two waves vibrating in the same direction.

Sources that emit polarised X-rays

- When magnetars or black holes emit X-rays, they encounter a wide variety of materials in the Universe.
- As X-rays pass through the thick cloud of materials, the electric component of the X-ray emits a photon in a changed direction, as it has now undergone scattering.
- In the process, the new photon has got polarised in a direction perpendicular to the plane formed between the original and scattered photon.

Polarisation measurements

- The polarisation measurements – angular and degree of polarisation – are believed to provide clues about:
  - ✓ the bright X-ray emitting sources the nature of these radiations and
  - ✓ the complex process they undergo.

X-ray Polarimeter Satellite (XPoSat).

About

- It is the first dedicated satellite from ISRO to carry out research in space-based polarisation measurements of X-ray emission from celestial sources.
- It is designated for observation from low earth orbit (~ 650 km, low inclination of ~ 6 degree).
- It has an estimated mission life of about five years during which XPoSat will observe sources that emit polarised X-rays.
- The observations will be done when the magnetars or neutron stars (they are highly magnetic and display a wide array of X-ray activity) are in transit through the Earth's shadow, for instance, during the eclipse period.

Scientific payloads onboard XPoSat

- XPoSat comprises two payloads, including Indian **X-ray Polarimeter (POLIX) and X-ray Spectroscopy and Timing (XSPECT).**
- They have been built by Raman Research Institute and UR Rao Satellite Centre, both located in Bengaluru.
- POLIX:
  - ✓ It is the world's first instrument designed to operate in the medium X-ray of 8 to 30 kilo electron Volt (keV) energy band.
  - ✓ It comprises a collimator, which is the key component to filter light originating from bright sources in the field of view.
  - ✓ Moreover, there is a scatterer consisting of four X-ray proportional counter detectors (that prevent the trapped light from escaping).
  - ✓ It will observe a few tens of astronomical sources. It was conceived, designed, and built at RRI.

XSPECT:

- It is designed to conduct fast timing and high spectroscopic resolution in a soft X-ray energy band (0.8-15 keV).
- It will observe a variety of sources like X-ray pulsars, black hole binaries, low-magnetic field neutron stars, active galactic nuclei or AGNs and magnetars.

- AGNs are a compact region at the centre of a galaxy that emits a significant amount of energy across the electromagnetic spectrum.

Significance of XPoSat Mission

- **X-ray polarisation measurements in medium energy bands for the first time**
  - ✓ So far, polarisation of celestial sources was done either in the optical or radio bands.
  - ✓ XPoSat, however, will facilitate X-ray polarisation measurements possible from bright sources, that too, in the medium energy band (8-30 keV) energy range.
  - ✓ This has never been attempted ever before.
  - **Analyse two kinds of sources**
  - ✓ XPoSat will observe two kinds of sources — persistent sources (targeted and known sources) and transient sources (pulsars, active galactic nuclei, magnetars).
- **Nature of the radiations and the multitudes of processes involved can be analysed**
  - ✓ Out in space, X-rays get polarised due to multiple causes.
  - ✓ For example, X-rays when subject to strong magnetic fields or due to the interactions with material present around black holes.
  - ✓ With the help of XPoSat, scientists can now probe the nature of the radiations and the multitudes of processes involved in the generation of these radiations.
- **Will aid the researchers by analysing the additional parameters**
  - ✓ POLIX will undertake important measurements like the degree and angle of polarisation of X-ray photons from various potential sources.
  - ✓ These two additional parameters, along with the spectrographic, timing and imaging data, will aid researchers to overall improve the present understanding of the celestial bodies.

How does XPoSat compare with X-ray experiments or missions globally?

- Indian astronomers, using AstroSat performed timing and broadband spectroscopy of X-ray sources but no polarisation studies were performed.
- AstroSat is India's first astronomy-based space missions that was launched in September 2015.
- The lack of development of highly sensitive and precise instruments makes missions for polarisation measurements of X-rays extremely challenging.
- In 2021, NASA launched Imaging X-ray Polarimetry Explorer (IXPE).
- It has been designed to operate and perform X-ray polarisation measurements within the soft X-ray band (2 to 8 keV energy band).
- Besides complementing IXPE, XPoSat's payload POLIX will offer an expanded observational energy band, as it is designated to perform X-ray polarisation in the medium X-ray band (8 to 30keV).

5.2 Direct-to-mobile (D2M) technology

Indian telecom operators have asked the government to auction the spectrum that will be used for direct-to-mobile (D2M) technology services.

About Direct-to-mobile (D2M) technology:

- The science behind D2M is similar to that of an FM radio, where a receiver within the device can tap into different radio frequencies.
- This new-age technology is a **combination of broadband and broadcast** that uses mobile phones to capture territorial digital TV signals.
- Using D2M, multimedia content, including live TV matches, can be streamed to phones directly without using the internet.
- D2M can ensure-
- Emergency alerts are delivered directly, **reliably and without dependence** on internet/cellular networks.
- **Disaster Management audio content** is delivered directly and authentically in a targeted manner.
- With D2M, governments can broadcast citizen-centric information.
- This approach benefits consumers by reducing their reliance on internet data consumption for staying informed and entertained.

Challenges involved

- It is still in the development stage.
- The biggest challenge in front of the government is to bring different stakeholders, including telecommunications, on board in launching D2M tech on a wide scale**.**

5.3 What is Bubble Baby Syndrome?

- 'Bubble baby syndrome,' known medically as **Severe Combined Immunodeficiency (SCID)** is very **rare genetic disorder** that causes **life-threatening problems with the immune system.**
- It is a type of primary immune deficiency.
- The disease is known as "**living in the bubble**" syndrome because **living in a normal environment can be fatal to a child** who has it.

What happens in SCID?

✓ In a developing baby, the **immune system starts in the bone marrow**. Stem cells can become any of three different types of blood cells.

- red blood cells
- white blood cells
- platelets

✓ **White blood cells (WBCs) protect the body from infections** and foreign invaders. There are different kinds of WBCs, including lymphocytes.

✓ **Lymphocytes come in two main types**: B-cells and T-cells. These cells are key to fighting infections.

✓ **T cells** identify, attack, and **kill "invaders."**

✓ **B cells make antibodies** that "remember" an infection and are ready in case the body is exposed to it again.

✓ SCID is a "combined" immunodeficiency because it **affects both of these infection-fighting** white blood cells.

✓ In SCID, the child's body has too few lymphocytes or lymphocytes that don't work properly.

✓ Because the **immune system doesn't work as it should**, it can be difficult or **impossible for it to battle the germs**—viruses, bacteria, and fungi—that cause infections.

Causes:

- **Inherited mutations** in more than a **different genes** cause SCID.
- This means **one or both birth parents pass down the disease** to their child.
- **Symptoms**: Babies with SCID may appear healthy at birth, but problems can start soon after, such as:

- failure to thrive
- chronic diarrhoea
- frequent, often serious respiratory infections

- oral thrush (a type of yeast infection in the mouth)
- other bacterial, viral, or fungal infections that can be serious and hard to treat.

Treatment:

- SCID is a pediatric emergency. **Without treatment**, babies are **not likely to survive** past their first birthday.
- The most common treatment is a stem cell transplant (also called a bone marrow transplant). This means the child receives stem cells from a donor. The hope is that these new cells will rebuild the child's immune system

5.4 Aditya L1 set to be placed in final orbit

Why in news?

- Aditya L1, India's first mission to study the Sun, is inching closer to its destination, and would be injected into its final orbit on January 6 evening.
- The spacecraft was launched on September 2 and it would get into what is known as a 'halo orbit' around the Lagrange Point 1 (L1)
  - L1 is one of the five spots in the moving Sun-Earth system, where the gravitational effects of the two bodies roughly balance each other.

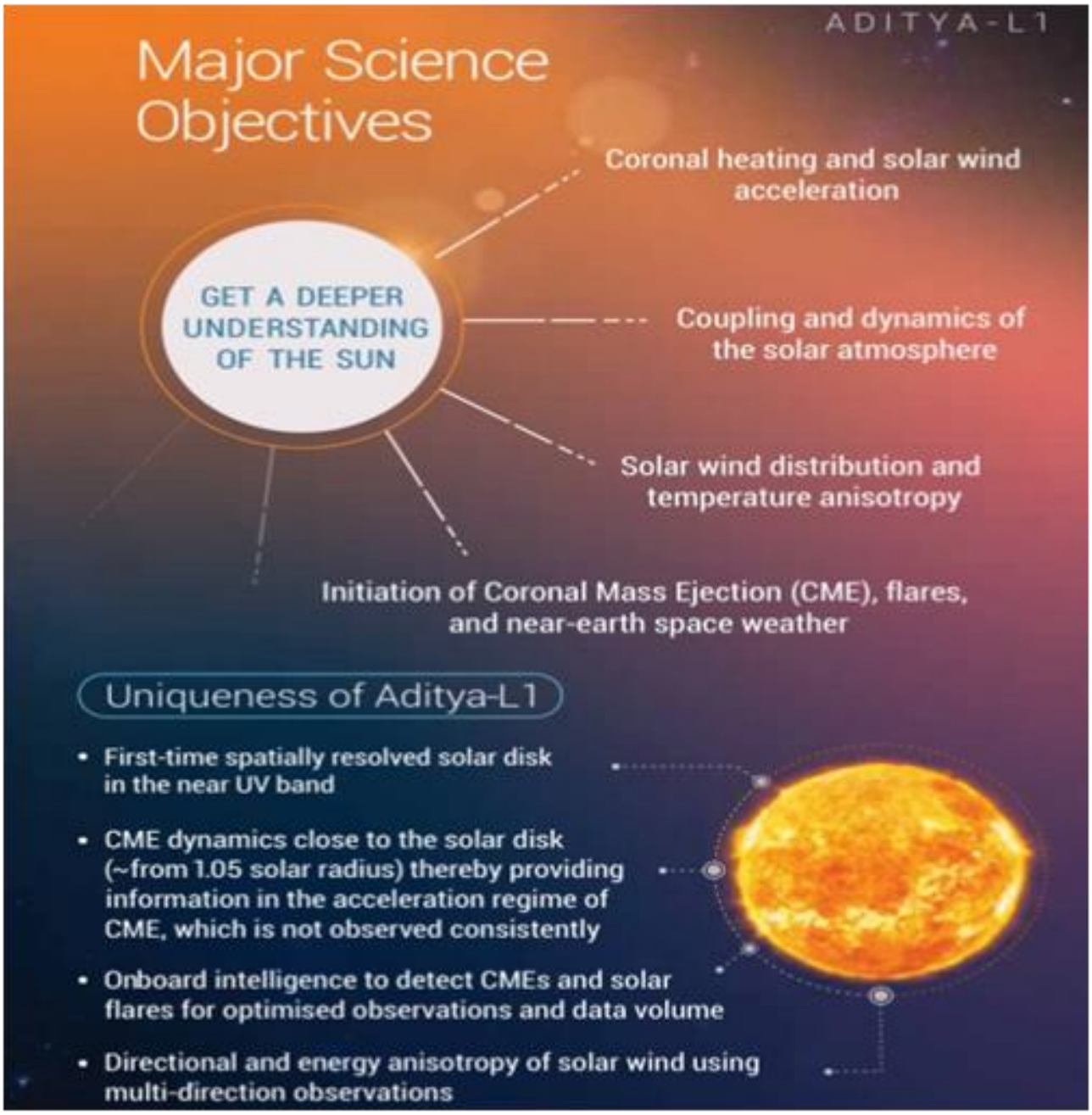
Aditya-L1 Mission

About

- Aditya (in Sanskrit means Sun) is a planned coronagraphy spacecraft to study solar atmosphere (solar corona - outermost part).
- It has been designed and developed by ISRO and various other Indian research institutes.
- It is the first dedicated Indian mission to observe the Sun. It was launched aboard a PSLV-XL launch vehicle on September 2, 2023.

Objective

- The suits of Aditya L1's payloads are expected to provide crucial information for understanding the phenomenon of: coronal heating, coronal mass ejection, pre-flare and flare activities and their characteristics, the dynamics of space weather, propagation of particles and fields etc.



Study conducted by Aditya L1

- The spacecraft carries seven payloads to observe:
  - ✓ **the photosphere** [the deepest layer of the sun we can directly observe],
  - ✓ **chromosphere** [the layer about 400 km and 2,100 km above the photosphere], and
  - ✓ the **outermost layers of the Sun** (the corona), using electromagnetic and particle and magnetic field detectors.
- Of the seven playloads, four will directly study the Sun, and the remaining three will in situ study particles and fields at the Lagrange point L1.

- **Remote sensing payloads which will study the sun**
  - **Visible Emission Line Coronagraph (VELC)** for corona/imaging and spectroscopy;
  - **Solar Ultraviolet Imaging Telescope (SUIT)** for photosphere and chromosphere imaging;
  - **Solar Low Energy X-ray Spectrometer (SoLEXS),** which is a soft X-ray spectrometer for Sun-as-a-star observation; and
  - **High Energy L1 Orbiting X-ray Spectrometer (HEL1OS),** which is a Hard X-ray spectrometer for Sun-as-a-star observation
- **The payloads to study the L1 in situ**
  - **Aditya Solar wind Particle Experiment (ASPEX),** for solar wind/particle analyzer protons and heavier ions with directions;
  - **Plasma Analyser Package For Aditya (PAPA)**, for solar wind/particle analyzer electrons and heavier ions with directions; and
  - **Advanced Tri-axial High Resolution Digital Magnetometers** for in situ

Significance of Aditya L1 Mission

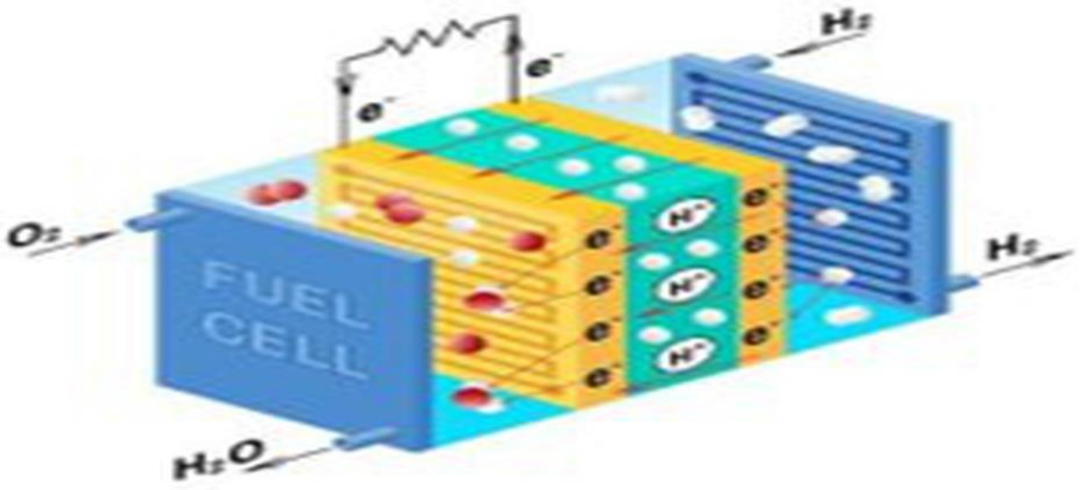
- **India in the big league**
  - It is the first space-based Indian mission to study the Sun.
  - So far, only two other space agencies have had their spacecraft reach L1 or the Lagrange point: USA's National Aeronautics and Space Administration (NASA) and the European Space Agency (ESA).
- **Need to study sun from space**
  - Studying the Sun from space is essential because the Sun emits various forms of radiation, energetic particles, and magnetic fields in all wavelengths.
  - Earth's atmosphere and magnetic field act as protective shields against harmful solar radiation, making space-based observations crucial for comprehensive understanding.
- **Understanding space weather**
  - Every planet, including Earth and the exoplanets beyond the Solar System, evolves — and this evolution is governed by its parent star.
  - The solar weather and environment affect the weather of the entire system.
  - Variations in this weather can change the orbits of satellites or shorten their lives, interfere with or damage onboard electronics, and cause power blackouts and other disturbances on Earth.
  - Knowledge of solar events is key to understanding space weather.

Lagrange points

- A Lagrange point is a position in space where the gravitational pull of two large masses precisely equals the centripetal force required for a small object to move with them.
    - e., at that point, the gravitational attraction and repulsion between two heavenly bodies is such that an object placed between them will effectively stay in the same relative position while moving with them.
- These points in space can be used by spacecraft to reduce fuel consumption needed to remain in position.
- The Lagrange points are named in honour of Italian-French mathematician Josephy-Louis Lagrange, and there are five of them: L1, L2, L3, L4, and L5.
    - The L1 point of the Earth-Sun system affords an uninterrupted view of the Sun.
    - It is currently home to the Solar and Heliospheric Observatory Satellite SOHO.
    - NASA's James Webb Space Telescope is at L2.

5.5 What is a Fuel Cell?

ISRO recently said it has successfully tested a futuristic fuel cell-based power system.



Fuel Cell:

- A fuel cell is a device that **generates electricity by a chemical reaction.**

- Fuel cells can be used in a **wide range of applications**, providing **power for applications** across multiple sectors, including transportation, industrial/commercial/residential buildings, and **long-term energy storage for the grid** in reversible systems.

Working:

- A fuel cell **consists of two electrodes**—a negative electrode (or **anode)** and a positive electrode (or **cathode**).
- Both electrodes must be immersed in and **separated by an electrolyte**, which may be a liquid or a solid but must, in either case, conduct ions between the electrodes in order to complete the chemistry of the system.
- **A fuel, such as hydrogen, is supplied to the anod**e, where it is oxidised, producing **hydrogen ions and electrons**.
- **An oxidizer**, such as oxygen, is **supplied to the cathode**, where the **hydrogen ions from the anode** absorb electrons from the latter and **react with the oxygen to produce water.**
- The difference between the respective **energy levels at the electrodes (electromotive force)** is the voltage per unit cell.
- The **amount of electric current** available to the external circuit **depends on the chemical activity** and amount of the substances supplied as fuel.
- A single fuel cell generates a tiny amount of **direct-current (DC)** electricity. In practice, many **fuel cells are usually assembled into a stack.**

Advantages of Fuel Cells:

- Fuel cells have **lower or zero emissions** compared to combustion engines. Hydrogen fuel cells **emit only water**, addressing critical climate challenges as there are no carbon dioxide emissions.
- There are also **no air pollutants** that create smog and cause health problems during the operation of a fuel cell.
- They are **quiet during operation** as they have few moving parts.
- They can **operate at higher efficiencies** than combustion engines.
- A fuel cell resembles a battery in many respects, but it can **supply electrical energy over a much longer period of time.**

- This is because a fuel cell is continuously supplied with fuel and air (or oxygen) from an external source, whereas a battery contains only a limited amount of fuel material and oxidant that are depleted with use.

5.6 WHO's International Classification of Diseases 11 (ICD-11) now introduces Module 2 (ICD 11 TM 2)

- **Module 2** of the supplementary chapter on traditional medicine conditions under ICD 11 is **dedicated to Ayurveda, Siddha, and Unani (ASU)** data and terminology.
  - It encompasses more than 500 codes. Infectious diseases like **Malaria** and lifestyle diseases like chronic insomnia are also included.
- ICD is the **international standard** for systematic **recording, reporting, analysis, interpretation, and comparison of mortality and morbidity data**.
  - It also includes a **dedicated chapter on traditional medicine**.
  - Previously, **ICD-11 included Module-1** which covers **traditional medicine conditions originating in ancient China,** which is now commonly used in Japan, Korea etc.
  - ICD-11 came into effect in **January 2022.**
- **Significance of ICD-11**
  - Provides a list of diagnostics categories to collect and report on traditional medicine conditions in an **internationally comparable manner.**
  - **Link traditional medicine practices with global conventional medicine's norms** and standard development.
  - **Enable integration of traditional medicine into insurance coverage and reimbursement systems,** in line with WHO objectives relating to universal health coverage**.**

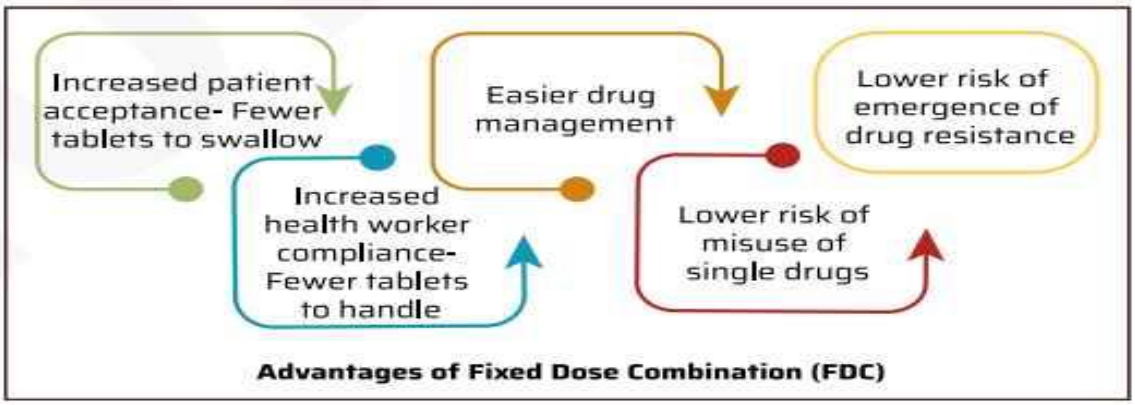
5.7. Central Drugs Standard Control Organization (CDSCO) gives conditional nod for sale of Five Fixed Dose Combinations (FDCs)

- **CDSCO is responsible for approval of Drugs, Conduct of Clinical Trials, laying down the standards for Drugs, etc., under Drugs and Cosmetics Act, 1940**
- CDSCO asked drug-makers to produce **post marketing safety and efficacy data on three FDCs** and to **change dosage and information label in other two FDCs.**

- These five FDCs are part of 344 drug combinations that government had first banned in 2016.

- FDC drugs are those which contain a **combination of two or more Active Pharmaceutical Ingredients in a fixed ratio.**
  - It may be administered as **single entity products given concurrently** or as a **finished pharmaceutical product**.
- **Regulation of FDCs in India**
  - **Rule 122E of Drugs & Cosmetics Rule, 1945** considers FDCs of two or more drugs as new drugs even if they have been approved individually for certain claims.
  - In 2022, CDSCO released **'Draft Policy for Approval of Fixed Dose Combinations (FDCs)'.**

- **Issues with FDCs**
  - **Existence of unlimited brands** of FDCs with different permutations and combinations leads to confusion rather than guiding the prescribing doctor.
  - **Increased chances of adverse drug effects and drug interactions** compared with drugs given individually.
  - **Difficulty in identifying** active ingredient responsible for drug reaction in patients.
  - Concerns with **development of drug resistance** due to the combination used.



6. Social Issues

6.1 Caste based discrimination in Indian Prison.

Why in News?

The **Supreme Court (SC) of India** recently issued notice to the Centre and 11 states on a **public interest litigation (PIL)** that alleged **caste-based discrimination** and segregation of prisoners in jails and sought a direction to repeal provisions that mandate such practices under the state prison manuals.

The Instances of Caste Based Discrimination Highlighted by the PIL

- **Instances of Discrimination:**
  - The PIL exposes instances from Madhya Pradesh, Delhi, and Tamil Nadu jails where **cooking is allocated to dominant castes**, while "**specific lower castes" are assigned menial jobs** such as sweeping and cleaning toilets.
    - The Prison system in India is alleged to perpetuate discriminatory practices, including the division of labour based on **caste hierarchy and the caste-based segregation of barracks.**
  - Caste-based labour distribution is deemed a relic of colonial India and is considered humiliating and unhealthy, violating the prisoners' right to life with dignity.
- **State Prison Manual Sanctions:**
  - The petition claims that prison manuals in various states sanction caste-based discrimination and forced labour within the prison system.
    - **Rajasthan Prison Rules 1951**:
      - ✓ Assignment of **Mehtars to latrines** and **Brahmins to kitchens** based on caste.
    - **Palayamkottai Central Jail in Tamil Nadu:**
      - ✓ The petition highlights the caste-based segregation of inmates in Palayamkottai Central Jail in Tamil Nadu, pointing to the separation of **Thevars, Nadars, and Pallars** into different sections.
    - **West Bengal Jail Code**:
      - ✓ Directs menial tasks like sweeping to prisoners from the **Mether or Hari caste, Chandal, and other castes.**

2003 Model Prison Manual Guidelines:

- The petition refers to the **2003 Model Prison Manual**, emphasizing guidelines for **classification based on security, discipline, and institutionalized programs**.
- It argues against any **classification based on socio-economic status, caste, or class.**

Fundamental Rights:

- The petition argues that a **person does not lose fundamental rights or the equality code** merely for being a prisoner, citing the Supreme Court's judgment in the **Sunil Batra v. Delhi Administration (1978) case on the fundamental rights of prisoners**.

Call for Repeal of Discriminatory Provisions:

- The petition emphasises the need to **repeal discriminatory provisions in state prison manuals**, advocating for the protection of prisoners' fundamental rights and equality within the prison system.

What are the Supreme Court's Observations on Caste Discrimination in Prisons?

- Three-judge Bench, headed by the Chief Justice of India, finds that prison manuals in over 10 states support caste-based discrimination and forced labour.
- States include Uttar Pradesh, Odisha, Jharkhand, Kerala, West Bengal, Madhya Pradesh, Andhra Pradesh, Maharashtra, Telangana, Punjab, and Tamil Nadu.
- Caste-based discrimination, segregation, and treatment of **denotified tribes as "habitual offenders"** within prisons are deemed a "very important issue" by the SC.
- SC emphasized the need for prompt and comprehensive addressing of alleged discriminatory practices.
- The SC sent a notice and asked for a response from the States and the Union within four weeks on the petition.

How do the Laws Allow Caste Discrimination Inside Indian Jails?

➢ **Legacy of Colonial Policies**:

- India's criminal justice system, rooted in **colonial legacy**, primarily focuses on **punishment rather than reformation or rehabilitation**.
- The 'Prisons Act of 1894,' dating back almost 130 years, underscores the outdated nature of the legal framework.
- The Act lacks provisions for the reform and rehabilitation of prisoners.
- Recognizing the deficiencies in existing laws, the Ministry of Home Affairs (MHA) reviewed **'The Prisons Act, 1894,' 'The Prisoners Act, 1900,' and 'The Transfer of Prisoners Act, 1950.**'

- This review led to the assimilation of relevant provisions into the forward-looking 'Model Prisons Act, 2023.'
- The effective implementation of the Model Prisons Act, 2023 which was finalized by the MHA in May 2023, is **expected to improve the prison conditions and administration** and protect the human rights and dignity of the prisoners.

Prison Manuals:

- State-level prison manuals, largely unchanged since the establishment of the modern prison system, reflect both colonial and caste mentalities.
- Existing prison manuals **enforce the central premise of the caste system,** emphasizing notions of purity and impurity.
- State prison manuals mandate that duties like cleaning and sweeping must be performed by members of specific castes, perpetuating caste-based discrimination.
- Prison manuals, such as the one in West Bengal under Section 741, safeguard the monopoly of "savarna Hindus" on cooking and carrying food for all prisoners.
- Despite constitutional and legal provisions against untouchability, caste-based rules persist in prison administration.

The Prohibition of Employment as Manual Scavengers and their Rehabilitation Act, 2013 (MS Act, 2013):

- Despite the outlawing of manual scavenging by the 2013 Act, it does not explicitly cover prison administration, and hence, the prison manuals that **allow caste discrimination and manual scavenging** in jails are not in violation of the Act.
- Manual scavenging refers to the practice of manually cleaning, handling and disposing of human excreta and other waste materials from dry latrines, open drains, and sewers.

6.2 Structured Negotiation as a Boost for Disability Rights

Structured negotiation has emerged as a collaborative and solution-driven alternative to litigation in dispute resolution.

This technique has been increasingly adopted across various sectors and been **useful in addressing disability rights cases in the United States.**

Therefore, **in the context of India's legal landscape** too, **it could be useful to explore the potential, the effectiveness, and successful applications of structured negotiation.**

The Concept of Structured Negotiation

- **Stands Out for Its Collaborative Nature**
  - In this mechanism, instead of adversaries locked in legal combat, the parties involved, including complainants and defaulting service providers, come together with the **common goal of finding a mutually beneficial resolution.**
  - This collaborative aspect fosters an environment conducive to understanding and addressing the concerns of all parties involved.
- **Emphasis on Compliance**
  - **A central feature of structured negotiation is the emphasis on compliance with social welfare legislations**.
  - It seeks to persuade defaulting service providers to align with legal requirements and fulfil their obligations under disability rights or other relevant statutes.
  - The **focus is on achieving compliance in a way that benefits both** the service provider and the complainants seeking access to their offerings.
- **Offers a Win-Win Situation**
  - One of the key strengths of structured negotiation lies in its ability to create a win-win situation.
  - **Defaulting service providers,** motivated by a desire to avoid the high costs and negative publicity associated with litigation, are incentivised to engage in collaborative problem-solving.
  - Simultaneously, **complainants benefit by gaining access to services and products** without the prolonged and often adversarial process of going to court.
- **Applicability Across Sectors**
  - The utility of structured negotiation transcends various sectors, demonstrating its adaptability and effectiveness in resolving a diverse range of disputes.

- However, its **notable success has been particularly evident in disability rights cases in the United States**, where it has played a **significant role in ensuring compliance and fostering inclusivity.**

Role of Legal precedents and their contribution to the foundation of structured negotiation

- Role of Courts in setting precedents
  - Central to the success of structured negotiation is the proactive role played by courts in setting legal precedents.
  - Courts act as key architects in defining what accessibility means within a given sector and what legal compliance entails.
  - Through judgments and decisions, courts establish a framework that serves as a reference point for subsequent structured negotiations, creating clarity and consistency in expectations.
- Legal precedents provide blueprint for accessibility
  - By articulating the standards and requirements for compliance with social welfare legislations or disability rights laws, legal precedents lay the groundwork for subsequent negotiations.
  - These precedents become guiding documents that help both complainants and defaulting service providers understand the expectations and obligations, facilitating smoother and more effective discussions.
- Create a Dialogue Platform:

- Legal precedents serve as a starting point for dialogue between complainants and service providers.
- These precedents articulate the legal standards, and structured negotiation takes these standards as a reference to address specific grievances.
- The dialogue facilitated by structured negotiation, informed by established legal norms, becomes a dynamic and adaptable process where parties can collaboratively work towards achieving compliance in a manner aligned with legal expectations.

Successful Applications of Structured Negotiation

- Structured negotiation has proven successful in addressing various issues, including inaccessible automated teller machines, point of sale devices, pedestrian signals, and service provider websites.
- Major corporations like Walmart, CVS, and Caremark have embraced accessible prescription bottles for blind or low-vision customers.
- It has also driven institutional reform by facilitating accessible voting machines and websites.

Challenges in India's Legal Landscape

- **Pendency and paperwork in Civil Courts**
  - One of the primary challenges lies in the mounting pendency and bureaucratic intricacies within Indian civil courts.

- The tiring legal processes and paperwork discourage parties from opting for traditional dispute resolution methods, making it imperative to explore alternative approaches like structured negotiation.
- Moreover, the sluggish pace of the legal system can be a deterrent, emphasising the need for more efficient and expeditious resolution mechanisms.

➢ **Limitations of the Rights of Persons with Disabilities Act, 2016**

- India's flagship legislation, the Rights of Persons with Disabilities Act, 2016, establishes a framework for addressing non-compliance with provisions related to accessibility.
- The Act empowers the Chief Commissioner for Persons with Disabilities (CCPD) to intervene by issuing notices and directing defaulting service providers to make their services accessible.
- However, the actual impact of this mechanism in repairing accessibility barriers remains uncertain.

➢ **Questionable Efficacy of Designated Bodies**

- The creation of designated bodies, such as the CCPD, is a positive step towards addressing disability rights issues.
- Nevertheless, their effectiveness in ensuring accessibility and compliance raises questions.
- For instance, the recent directive to Paytm to make its digital payment applications accessible resulted in unintended consequences and it became even more inaccessible.
- It highlights the challenges of achieving real-time accessibility without vigilant oversight and user input.

Steps to Be Considered for the Success of structured negotiation in India

➢ **Prioritising Accessibility**

- The success of structured negotiation in India depends on the level of priority that service providers afford to the struggles of persons with disabilities.
- Businesses must recognise the benefits of catering to this demographic (Persons with Disabilities), not just from a legal compliance standpoint but also in acknowledging their significant buying capacity.

➢ **Establishment of a strong body to set excellent legal precedents**

- While structured negotiation operates outside the courtroom, its success is intricately tied to the establishment of a strong body of disabled-friendly legal precedents.
- Courts play a crucial role in setting the groundwork by defining what accessibility and compliance with the law entail within specific sectors.
- These legal precedents serve as a foundation for structured negotiation, providing a clear framework for discussions and resolutions.

➢ **Real-time solutions and constant vigilance**

- The Paytm incident underscores the dynamic nature of making digital services accessible for persons with disabilities in real time.
- It necessitates constant vigilance and user inputs to validate the efficacy of solutions.

- Traditional legal mechanisms may struggle to keep pace with the rapidly evolving landscape of digital services, emphasising the need for more adaptive and responsive approaches like structured negotiation.

Conclusion

- India's legal landscape poses challenges such as court pendency, bureaucratic hurdles, and uncertainties regarding the efficacy of designated bodies in enforcing accessibility.
- While structured negotiation can be a potential solution, its successful implementation depends on overcoming these challenges and fostering a culture that prioritises the immediate needs of persons with disabilities while maintaining a commitment to legal compliance.

6.3 New Solar Power Scheme for Particularly Vulnerable Tribal Groups (PVTGs) Habitations/ Villages

- President has sanctioned implementation of the scheme under **Pradhan Mantri Janjati Adivasi Nyaya Maha Abhiyan (PM JANMAN).**
- Key features of scheme
  - Two components:
    - **Electrification of 1 Lakh PVTG households (HHs) through Off-grid solar power**
    - **Solar Home Lighting System (SHLS**) for scattered unelectrified HHs in PVTG areas.
    - **Solar Mini-grids** for cluster of HHs in a PVTG habitation/ hamlet.
  - Solarization of multi-purpose centers (MPCs) by installation of Off-grid Solar power pack with battery bank.
  - **Implementing agency**: Respective DISCOMs in PVTG area.
  - **Timeline**: 2023-24 to 2025-26.
  - Monitoring: By **Ministry of New and Renewable Energy (MNRE) and Ministry of Tribal Affairs (MoTA).**
  - **Grievance Redress mechanism**: Vendors shall operationalize helpline number in local language/ language of PVTG area

- **PM JANMAN**
  - Aim: To **saturate PVTG HHs and habitations with basic facilities** such as safe housing, clean drinking water and sanitation, improved access to education, etc.
  - Comprises **11 critical interventions through 9 ministries,** including MoTA, over 3 years.
  - Implemented as combination of:
    - **Centrally Sponsored Schemes** in partnership with State Governments/ UT Administrations, and
    - **Central Sector Schemes** through line Ministries/ Departments.

Particularly Vulnerable Tribal Groups (PVTGs)

- **Centrally recognized special categories from among the Scheduled Tribes (STs)**.
- First recognized in **1975 as Primitive Tribal Groups (PTGs) on recommendations of U N Dhebar Commission.**
- In 2006, PTGs were **renamed as PVTGs.**
- **Criteria for identifying PVTGs**: Pre-agricultural level of technology, Low level of literacy, Economic backwardness, Declining or stagnant population.
- Currently, there are **75 PVTGs**.

6.4 Bru Refugees And Their Rehabilitation.

Why in news?

The Tripura government has allocated land for the rehabilitation of the last batch of Mizoram Bru refugees.

These refugees were granted permanent settlement in Tripura through a Home Ministry-initiated quadripartite agreement signed in January 2020.

Bru refugees

- Brus, also referred to as Reangs, are a tribal community indigenous to northeast India.
- They have historically resided in parts of Mizoram, Tripura, and Assam.

- In the state of **Tripura**, the Brus are a designated **Particularly Vulnerable Tribal Group (PVTG).**
- While many Brus of Assam and Tripura are Hindu, the Brus of Mizoram converted to Christianity over the years.

Bru-Reang Refugee Crisis

- Most Brus residing in Tripura today have suffered more than two decades of internal displacement.
    - They were forced to leave their homes due to ethnic persecution, mainly from Mizoram.
- It all started in 1995, when different groups in Mizoram demanded that Brus be eliminated from Mizoram's electoral rolls as they were not indigenous inhabitants.
    - Being ethnically distinct from the majority Mizos, the Brus are often referred to as "Vai" in the state, meaning outsiders or non-Mizos.
- Tensions escalated after the Brus retaliated against the Mizos' attempts to disenfranchise them.
    - They organized themselves into an armed group, the Bru National Liberation Front, and a political entity, the Bru National Union.
    - They also **demanded the creation of a separate Bru Autonomous District Council (ADC) in western Mizoram** as per the provisions of the **sixth schedule of the Indian Constitution.**
- Hence, the resultant ethnic clashes forced many Brus to migrate to neighbouring Tripura in 1997.
    - Today, roughly 35,000 Reangs continue to reside in north Tripura's Kanchanpur camp as refugees, as per Home Ministry estimates.

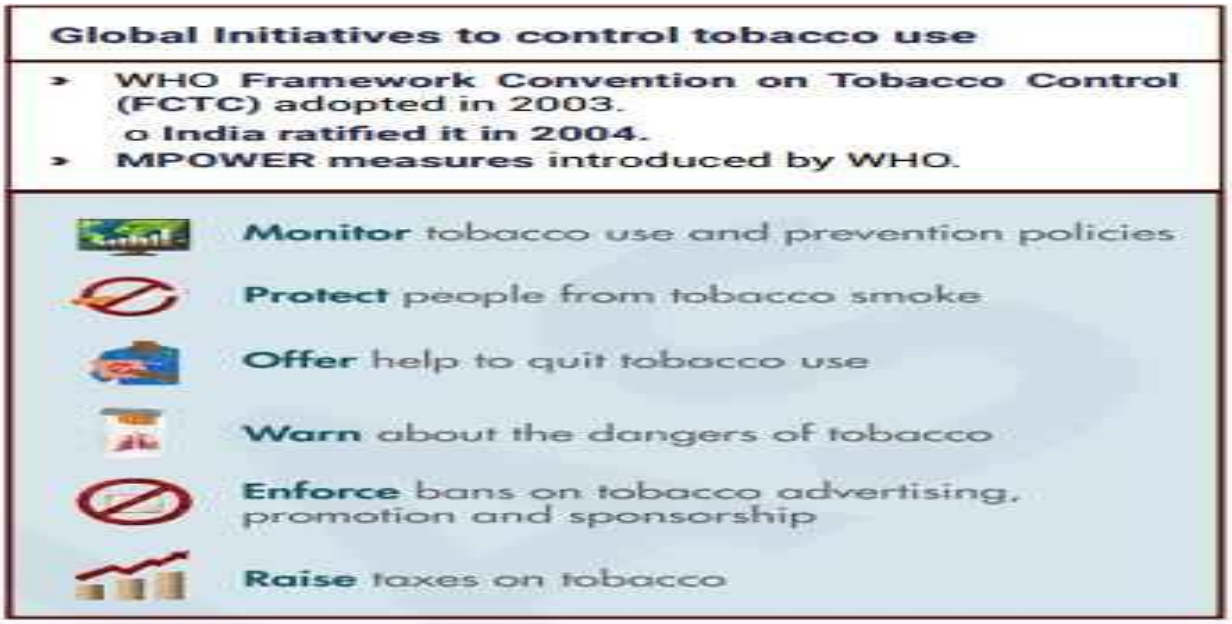
Attempts to resettle the Brus

- Early attempts
    - The state governments, along with the union government have made multiple attempts to send Brus back to their homeland in Mizoram.
    - But until 2014, only an estimated 5,000 individuals, or 1622 Bru-Reang families returned to Mizoram in various batches.
- Quadripartite pact of 2018
    - In July 2018, the governments of Tripura, Mizoram, and the central government concluded a quadripartite pact with Bru community representatives to resettle refugees in Mizoram.
    - This was however opposed by not only native Mizo groups, but also by the Reangs who feared threats to life and further ethnic repression in their home state.
- 2020 agreement
    - The four groups once again came together in January 2020 to sign another quadripartite pact to resettle the Brus, this time in the state of Tripura.

- The central government earmarked a Rs 661 crore package to aid the rehabilitation efforts.
- The Bru families were promised:
  - ✓ a residential plot,
  - ✓ a fixed deposit of Rs 4 lakh,
  - ✓ Rs 1.5 lakh grant to construct their houses,
  - ✓ free ration and monthly stipend of Rs 5,000 for a period of two years.
- Additionally, the renewed 2020 pact also promised to include the displaced Reangs in the electoral rolls in Tripura.

6.5 World Health Organization (WHO) Global report on Trends in prevalence of Tobacco use 2000-2030 released

- India is world's **second biggest tobacco producer** after China.
  - Globally, there are 1**.25 billion adult tobacco users**.
  - Nearly 267 million adults (15 years and above) in India are users of tobacco.
  - **Major tobacco producing states**: Gujarat, Andhra Pradesh, Uttar Pradesh, Karnataka, West Bengal, Telangana, and Bihar.
  - Tobacco is a **drought-tolerant, hardy and short-duration crop** which can be grown on soils where other crops cannot be cultivated profitably.
- **Key findings of report:**
  - **Decline in tobacco use** with about 1 in 5 adults worldwide consuming tobacco in 2022 compared to 1 in 3 in 2000.
  - At least **37 million adolescents aged 13–15 years** are current users of some form of tobacco – 25 million boys and 12 million girls.
- **Impact of Tobacco use:**
  - **Kills more than 8 million people each year** due to risk of heart disease, lung disorders, cancer etc., including an **estimated 1.3 million non-smokers who are exposed to second-hand smoke.**
  - As per WHO, **smoking costs** world's economies **more than US$ 1 trillion annually** in healthcare expenditure and lost productivity. Deforestation due to its cultivation.
- **India's initiatives to control Tobacco use:** National Tobacco Control Programme, Prohibition of Electronic Cigarettes Act, 2019, Cigarette and Other Tobacco Products Act 2003, National Tobacco Quit Line Services etc.



6.6 Pradhan Mantri Janjati Adivasi Nyaya Maha Abhiyan (PM-JANMAN)

Why in News?

In continuation of its tribal outreach ahead of Lok Sabha elections, the government will release the first instalment for Pucca houses amounting to Rs.540 Crore to one lakh beneficiaries under the PM-JANMAN.

On this occasion, the PM will virtually interact with the beneficiaries of PM-JANMAN - the flagship central scheme launched in (Nov) 2023 for socio-economic welfare of particularly vulnerable tribal groups (PVTGs).

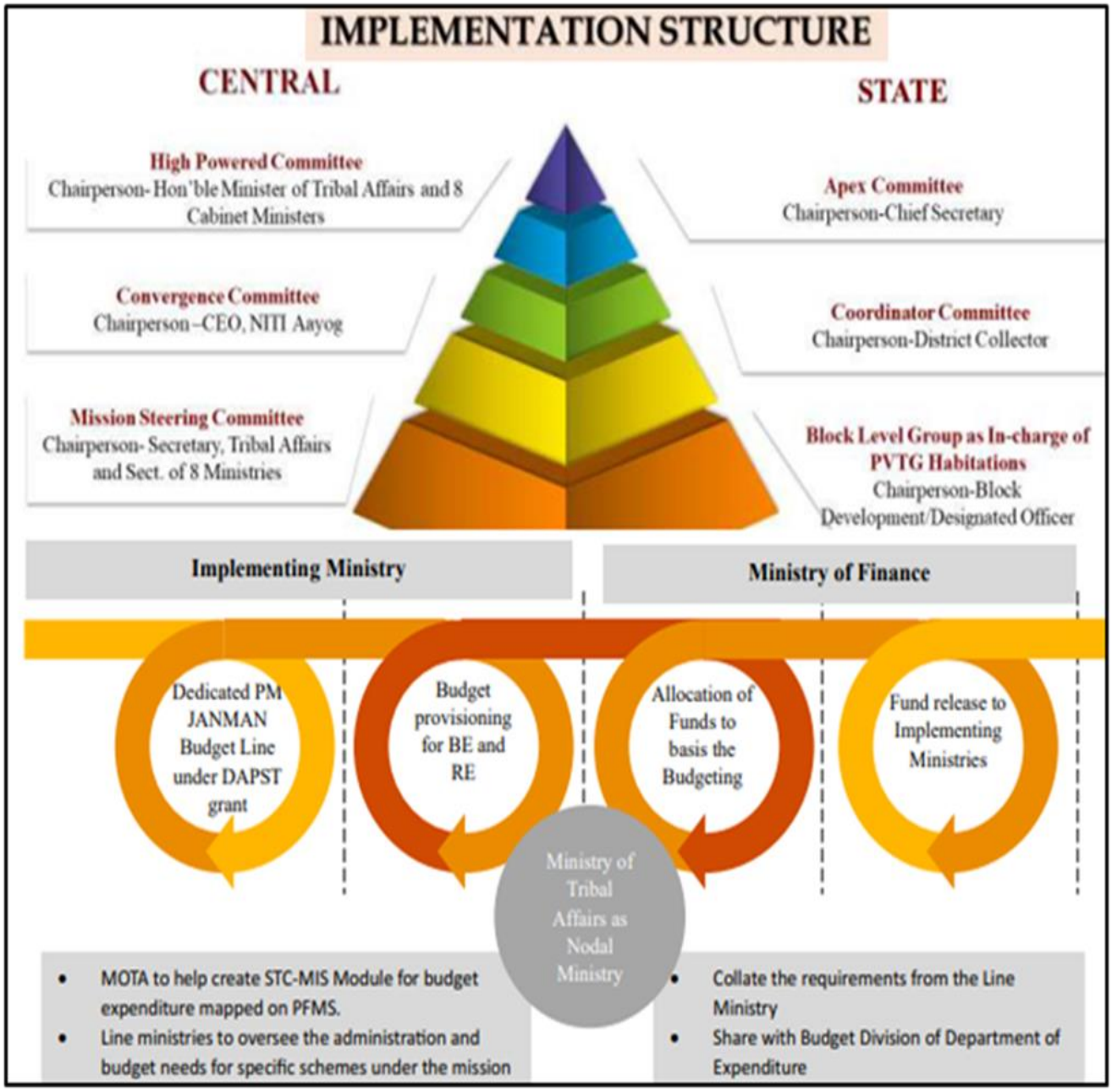
Background in which the PM-JANMAN was Launched:

- India has a ST population of 10.45 crore as per 2011 census, out of which 75 communities located in 18 States and the UT of Andaman and Nicobar Islands have been categorised as PVTGs.
    - It was in 1960-61 that the Dhebar Commission identified disparities among Scheduled Tribes, leading to the creation of the Primitive Tribal Groups (PTG) category.
    - In 2006, this category was renamed PVTGs - characterised by pre-agricultural lifestyles, low literacy, small or stagnant populations, and subsistence economies.
    - These PVTGs continue to face vulnerability in social, economic and educational fields.
- As announced in the Budget Speech 2023-24, to improve socio-economic conditions of the PVTGs, the PM PVTG of Development Mission will be launched.
- This will saturate PVTG households and habitations with basic facilities such as safe housing, clean drinking water and sanitation, improved access to education, health and nutrition, etc.

- An amount of Rs.15,000 crore will be made available to implement the Mission in the next three years under the Development Action Plan for the Scheduled Tribes (DAPST).

What is the Pradhan Mantri Janjati Adivasi Nyaya Maha Abhiyan (PM JANMAN)?

- The Union Cabinet during November 2023 approved PM JANMAN with total outlay of Rs.24,104 crore (Central Share: Rs.15,336 crore and State Share: Rs.8,768 crore) to be implemented during FY 2023-24 to 2025-26.
- The PM-JANMAN (comprising Central Sector and Centrally Sponsored Schemes) to focus on 11 critical interventions through 9 Ministries including Ministry of Tribal Affairs.



6.7 Soligas and Yeravas

The recently launched **Forgotten Trails: Foraging Wild Edibles**, authored by **Malemleima Ningombi** and **Harisha RP**, chronicled the foods that Soligas and Yeravas tribes forage from the forests.

- Indigenous groups Soligas and Yeravas have been living in the **Cauvery Basin** and the surrounding hills of peninsular India for thousands of years.
- Soligas, one of the **oldest indigenous communities** in the country, are the original inhabitants of Karnataka and live mostly in the **Chamarajanagar and Mandya districts**.
- Honey is an important part of the diet for the Soliga people, who still forage large parts of their food from the biodiversity-rich Ghats.
- They reside in the peripheral forest areas near Biligiri Rangana Hills and Male Mahadeshwara.
- They are the **first tribal community living inside the core area of a tiger reserve** in India to get their forest rights officially recognised by a court of law.
- Soligas use Silver cockscomb as a nutritious leafy green vegetable, as it is high in nutrients such as beta-carotene and folic acids, and have vitamin E, calcium and iron.
- Also, the scientific community has named a new genus (Soliga ecarinata) of wasp after this community.

Who are Yeravas?

- The Yeravas, on the other hand, came to the state from **Wayanad district in Kerala** and settled in Kodagu district of Karnataka.
- Yeravas use more tubers than Soligas.
- **Language:** They speak their own language of Ravula.
- Mushrooms become part of the Yerava diet during monsoon.
- **Issues**: The food that Soligas and Yeravas depend on for survival is now affected by changes in land use and shifting policies. Worse, traditional knowledge is steadily being lost as young people are migrating out.

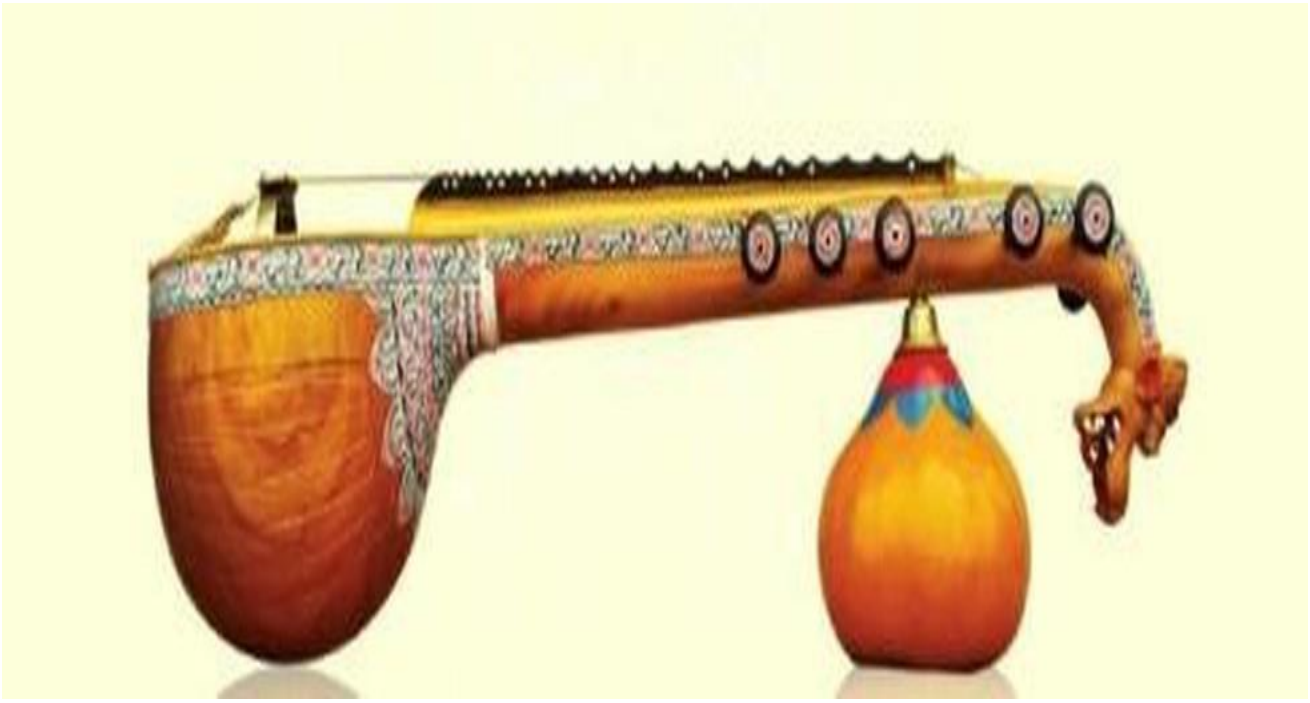
7. Art & Culture

7.1 Sohrai Painting

- It is an **indigenous mural art form**.
- It is also interesting to note that the word 'Sohrai' comes from soro – translating to '**to drive with a stick'.**
- This art form dates back to the **Meso-chalcolithic period (9000-5000 BC).**
- The **Isko rock shelter** excavated in Barkagaon, Hazaribagh area also has rock paintings that are exactly similar to the traditional Sohrai paintings.
- Theme: It is usually based on natural elements of the universe, this includes forests, rivers, animals amongst others.
- These ancient paintings are made by tribal (Adivasi) women with the use of natural substances like charcoal, clay, or soil.
- The very primitive form of the Sohrai art was in the form of cave paintings.
- It is practiced by indigenous communities, particularly in the States of Jharkhand, Bihar, Odisha, and West Bengal.
- The region of Hazaribagh in Jharkhand that has received the GI tag for this art form.
- It is the art of the women of the Kurmi, Santhal, Munda, Oraon, Agaria, Ghatwal tribes.
- Sohrai paintings are distinctive for their **vibrant colours, intricate patterns, and symbolic motifs;**
- There is a **Sohrai festival** held every year, marking the harvesting season and the arrival of winter.

7.2 Bobbilli Veena

The longstanding fame of the Bobbili veena, the livelihoods of craftsmen face challenges due to a lack of demand from the public and required patronage from the government.



- It is a traditional '**Saraswati Veena'** from Bobbili and is famed for its fine tune and distinctive notes.
- It is a large plucked string instrument used **in Carnatic music**.
- The making of the veena began in the 17th century during the reign of Pedda Rayudu, the king of **Bobbili Samsthanam** who was a great patron of music.

Features

- These veenas are painstakingly **crafted from Jack-wood tree logs** in Gollapalli, a town in Bobbili (Andhra Pradesh).
- It takes almost a full month for a log of mute wood to be crafted into a fine musical instrument.
- Jack-wood is preferred as it is light and the unique grain of the wood renders the quality of swara or tone.
- A single piece of wood is used to create the instrument giving it the name **'Ekandi Veena'**.
- These Veenas are also remarkable for the exquisite designs etched on the body, making each piece exclusive.
- With their origin dating back to the Seventeenth Century, these veenas are played in a distinctive style, which also led to the coinage of the '**Bobbili Veena Sampradayam'**.
- It earned a **Geographical Indication (GI) tag in 2012** for its unique design and high-quality craftsmanship.

7.3 What is Prasadam?

Union Minister for Health & Family Welfare recently inaugurated the **country's first healthy & hygienic food street**, 'Prasadam', at Neelkanth Van, Mahakal Lok, in Ujjain, **Madhya Pradesh**

- It is the country's first "**Healthy and Hygienic Food Street".**
- It has been opened at **Neelkanth Van, Mahakal Lok, in Ujjain, Madhya Pradesh**.
- It will **connect people** in every corner of the country with **pure and safe local and traditional food**.
- Spread over **939 square metres with 19 shops,** Prasadam offers convenient and **culturally rich dining options for the 1-1.5 lakh devotees who visit the Mahakaleshwar Temple daily.**
- The food street is designed to provide **various facilities, including a kids' play area, drinking water facility, CCTV surveillance,** parking, public conveniences, and seating spaces.

Key Facts about Mahakaleshwar Temple:

- It is a Hindu temple dedicated to Shiva.
- Location:
  - It is located in the ancient city of Ujjain, in the state of Madhya Pradesh.
  - The temple is situated beside the Rudra Sagar Lake.
- It is **one of the twelve Jyotirlingas** of Lord Shiva.
- Mahakaleshwar idol is **Dakshina Mukhi, facing south**, unlike all the other Jyotirlingas.
- The temple, which is spread over five levels, sees a huge throng of devotees during the **Maha Shivaratri festival.**
- Architecture:
  - The temple complex comes with a **spacious courtyard** that is adorned with the finest sculptures that are believed to be influenced by the **Chalukya, Maratha, and Bhumija styles** of structural design.
  - The foundation and platform are built of stones. Most of the upper structure rests on the strong and well-designed pillars and plasters.
  - It is complete with impressive **lingam sculptures of Mahakaleshwar**.
  - The images of Ganesh, Parvati, and Kartikeya are installed in the west, north, and east of the sanctum sanctorum.

- The temple also **houses a tank constructed in the sarvatobhadra style**.

7.4 Kateel Yakshagana mela

- Kateel Yakshagana mela is a famous **Yakshagana troupe** started in the mid-19th century.
- The Yakshagana troupe, Kateel Sri Durgaparameshwari Yakshagaana Dashavatara Mandali, popularly known as Kateel Mela is an important '**Harake Seva'** (**hosting the Yakshagana show for God fulfilling a wish**) troupe.
- It performs on request by devotees **who have taken a vow** (Harake) to arrange a show of Yakshagana for fulfilment of a desire or as a service.

Key facts about Yakshagana

- It is a **traditional folk-dance** form popular in **Coastal Karnataka.**
- It is a rare combination of **dance, music, song, scholarly dialogues and colourful costumes**.
- Traditionally, men portray all roles, including the female ones, though women are now part of Yakshagana troupes.
- A typical troupe consists of **15 to 20 actors and a Bhagawatha**,who is the master of ceremonies and the main storyteller.

Elements of Yakshagana

- **The Act**: Each performance typically focuses on a small sub-story (known as 'Prasanga') from ancient Hindu epics of **Ramayana or Mahabharata.**
- The show consists of both stage performances by talented **artists and commentary** (performed by the lead singer or Bhagawatha) accompanied by traditional music.
- **The Music**: Musical instruments used in Yakshagana include **Chande (drums), Harmonium**, **Maddale, Taala(**mini metal clappers) and flute among others.
- **The Dress:** Costumes used in Yakshagana are very unique and elaborate. Large size headgear, coloured faces, elaborate costumes all over the body and **musical beads** on the legs **(Gejje).**

7.5 India's Oldest Living City found in Gujarat

An archaeological excavation at **Gujarat's Vadnagar** has discovered evidence of human settlement dating back to 1,400 BCE.

About the Excavation:

- The excavation was done by a team of scientists from **IIT Kharagpur, Archaeological Survey of India, Physical Research Laboratory**, **Jawaharlal Nehru University** and **Deccan College.**
- The study was **funded by Infosys Foundation** and **Gujarat government's Directorate of Archaeology & Museums** that is entrusted with building India's first experiential digital museum at Vadnagar.
- The excavation at Vadnagar was carried out from 2016 till early 2023.

Findings of the Excavation:

- The find is significant as it plugs a gap in Indian archaeological history between 1,500 BCE and 500 BCE and **points to a continuity in human settlement in India over 5,500 years.**
- There was no record of an advanced city-like settlement before 500 BCE.
- The team said that the settlement could be as old as 1,400 BCE and contemporary to the very late phase of **post-urban Harappan period**.
    - If true, it **indicates a cultural continuity in India for the past 5,500 year and that the so-called Dark Age may be a myth**.
    - The period between the collapse of Indus Valley Civilisation around 4,000 years ago (early 2nd millennium BCE) and the emergence of Iron Age and cities of Mahajanapadas like **Gandhar, Koshal, Avanti** (6th-5th century BCE) is depicted as the 'Dark Age' by a section of archaeologists.
    - The records are rare for this period - one of the earliest is the rock inscription of emperor Ashoka during Mauryan period (320-185 BCE) at **Sudarsana Lake, Girnar hill, Gujarat.**
- The excavation at Vadnagar has revealed characteristic archaeological artefacts, potteries, copper, gold, silver and iron objects and intricately designed bangles.
- The study also indicates that the **rise and fall of different kingdoms over 3,000 years and recurrent invasions of India by central Asian warriors were driven by severe change in climate like rainfall or droughts.**

- The radiocarbon dates show that successively Vadnagar was ruled by:
  - Indo-Greeks (till 100 CE),
  - Indo-Scythian or Shakas known as Kshatrapa kings (till 400 CE),
  - Maitrakas (Gupta kingdom), Rashtrakuta-Pratihara-Chawada kings (till 930 CE),
  - Solanki kings (Chalukya rule till 1,300 CE),
  - Sultanate-Mughals (1680 CE), and
  - Gaekwad/British.
- The excavation team said that the inference from the findings at Vadnagar was that cold arid/hyper-arid conditions could have triggered migration from the uninhabitable central Asia.

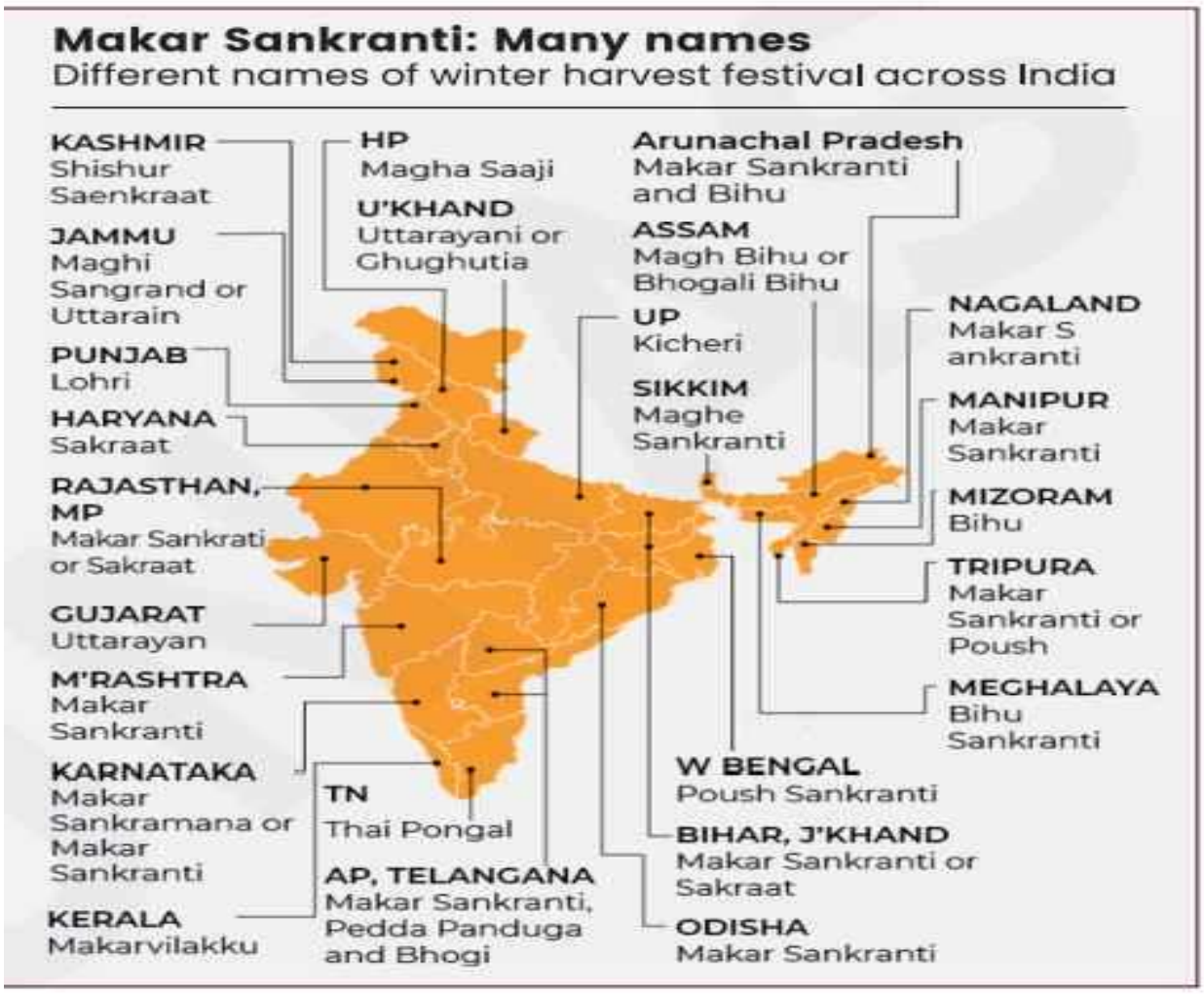
Archaeological Survey of India (ASI):

- The Archaeological Survey of India (ASI) was established in the year 1861 by **Alexander Cunningham**.
- After independence, it was established as a **statutory body** under the **Ancient Monuments and Archaeological Sites and Remains Act, 1958.**
- ASI is responsible for archaeological research and the conservation and preservation of cultural monuments in the country.
- Its activities include carrying out surveys of antiquarian remains, exploration and excavation of archaeological sites, conservation and maintenance of protected monuments etc.
- Concerned Ministry: **Ministry of Culture.**

7.6 Nation Celebrates Various Harvest Festivals

Makar Sankranti is a major harvest festival celebrated across India and different states celebrate festivals under different names, traditions and festivities.

- Festival is dedicated to Sun God, Lord Surya and marks the sun's transit into Makara (Capricon).
- Makar Sankranti heralds end of winter season and start of longer days as sun move northwards.
- Astronomically, a change in seasons is caused by the tilt of the earth and the earth's movement around the sun.

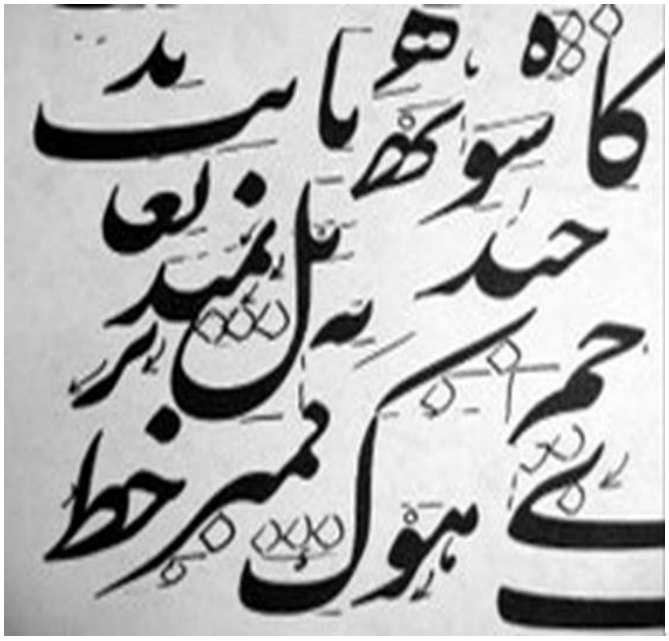


7.7 Farsi Language

The **External Affairs Minister** recently announced that the Government of India has decided to include Farsi (Persian) as one of the **classical languages** in India under the New Education Policy.

About the Farsi Language:

- Farsi, also known as **Persian Language**, is the most widely spoken member of the Iranian branch of the **Indo-Iranian languages**, a subfamily of the Indo-European languages.
- It is the **official language of Iran**, and two varieties of Persian known as Dari and Tajik are official languages in Afghanistan and Tajikistan, respectively.
- Significant populations of Farsi speakers can be found in other Persian Gulf countries (Bahrain, Iraq, Oman, Yemen, and the United Arab Emirates), as well as large communities in the US.



- It has about **62 million native speakers**, ranking it among the world's 20 most widely spoken first languages.
- Farsi in Iran is **written in a variety of the Arabic script** called Perso-Arabic, which has some innovations to account for Persian phonological differences. This script came into use in Persia after the **Islamic conquest in the seventh century.**
- **Its relatives are the languages of northern India** and, more distantly, the major **European languages including English**

Key Facts about Classical Languages in India:

- Criteria evolved by Government of India to determine declaration of a language as a Classical language is as under: -
- High antiquity of its early texts/recorded history over a period of **1500-2000 years**;
- A body of ancient literature/texts, which is considered a valuable heritage by generations of speakers;
- The literary tradition be **original and not borrowed from another** speech community;
- The classical language and literature being distinct from modern, there may also be a discontinuity between the classical language and its later forms or its offshoots.
- Currently, **six languages enjoy the 'Classical' status: Tamil** (declared in 2004), **Sanskrit** (2005), **Kannada (**2008), **Telugu** (2008), **Malayalam** (2013), and **Odia** (2014).
- The benefits it provides once a language is notified as a Classical language:
    - Two **major annual international awards** for scholars of eminence in classical Indian languages.
    - A **Centre of Excellence** for studies in Classical Languages is set up.
    - The **University Grants Commission** is requested to create, to start with at least in the Central Universities, a certain number of **Professional Chairs for the Classical Languages** so declared.

7.8 Buddha's teachings are not relics of the past, but a compass for our future: Vice-President (VP)

- **Teachings of Buddha**
  - In the 6th century BC, Buddha preached that life brings sorrow. To find freedom, one must overcome desire.
  - His teachings encompass 'Four Noble Truths' and 'Eight-Fold Path' or Ashtanga Marg.
  - He advocated a 'Middle Path', a simple, virtuous life between extreme austerity and luxury.
- **The central theme of Buddha's teaching**
  - **'Four Noble Truths'**: Suffering, cause of suffering, end of suffering, and the path that leads to the end of suffering.
  - **'Eight-Fold Path'** (Path to the end of suffering): Right- views, aspiration, speech, action, livelihood, effort, mindfulness, concentration.

- **Contemporary relevance**
  - **Citizen-centric governance**: **Right Speech, conduct, and livelihood** can help make administration more responsive and service driven.
  - **Promoting Scientific temper**: Mindfulness, concentration and **right understanding** can facilitate **spirit of inquiry.**
  - **Sustainable development**: Pursuit of 'Middle Path' can be a solution to consumerism, **climate change, corruption**, etc.
  - **Pursuance of just and egalitarian society**: Eliminate discrimination against vulnerable sections like sex workers, women, transgender, etc.
    - ♦ Buddha had opened the **institution of Sangha** to all persons (including **courtesans like Amrapali**) above fifteen years of age.
  - **Inter-faith harmony and Peace**: Buddha **neither accepted nor rejected the existence of God.** He was more concerned about the individual and his actions.
    - ♦ **Spirit of love** towards all living and emphasis on the **law of karma** can curb wars, **terrorism, extremism and violence.**

7.9 Nagara style

Why in NEWS?

Sri Ram temple in Ayodhya will be inaugurated on January 22. The complex is in the Nagara style of temple architecture, designed by 81-year-old **Chandrakant Sompura** and his 51-year-old son **Ashish.**

About the Nagara style:

- Nagara architecture is a classical architecture of temple design in **Northern India**, contrasted with Dravida architecture in **Southern India.**
- Nagara temples have a **Shikhara** (mountain peak) over the **Garbha griha** (sanctum sanctorum), a circumambulatory passage around it, and one or more **Mandapas** (halls).
- Shikhara is a symbolic representation of the cosmic order and the divine presence.
- There are **five modes** of shikhara design: Valabhi, Phamsana, Latina, Shekhari, and Bhumija.
    - Valabhi and Phamsana are Early Nagara modes, derived from barrel-roofed wooden structures.
    - Latina is a single, slightly curved tower with four equal sides, dominant for three centuries.
    - Shekhari and Bhumija are composite Latinas with attached sub-spires or miniature spires, creating a complex and ornate appearance.
- These modes are **scholastic classifications**, not rigid categories. There is much variation and innovation within and across these modes.

7.10 Bhil Tribe

- Bhils are considered as one of the **oldest tribes in India**.
- The name 'Bhil' is derived from the word villu or billu, which according to the Dravidian language is known as Bow.
- They could be identified as one of the Dravidian racial tribes of Western India and belong to the Australoid group of tribes.
- They are mainly divided into two main groups: **the central and eastern or Rajput Bhils.**
- The central Bhils are found in the mountain regions in the Indian states of **Madhya Pradesh, Maharashtra, Gujarat and Rajasthan**. Bhils are also found in the north eastern parts of Tripura.
- They speak Bhili, which is an Indo Aryan language.
- Religion practice among the Bhils differ from place to place.
- Most of them worship local deities like **Khandoba, Kanhoba, Bahiroba**, and Sitalmata. Some worship the Tiger God called 'vaghdev'.
- They consult Badvas -the hereditary sorcerers on all the occasions.
- The Baneshwar fair is the main festival celebrated among the Bhils. This fair is held during the period of Shivratri and is dedicated to Baneshwar Mahadev also known as Lord Shiva

8. PERSONALITIES IN NEWS

8.1 Rani Velu Nachiyar (1730-1796)

- She was **princess of Ramanathapuram** (Tamil Nadu) and child of Raja of Ramnad kingdom.
- Known by Tamils as **Veeramangai**.
- She was proficient in languages like French, English, and Urdu.

Contributions:

- Was first queen to have ever actively opposed the British rule.
- In collaboration with Hyder Ali and Gopala Nayaker, waged war against British.
- Went on to produce first human bomb and established first army of trained women soldiers.
- **Reinherited Sivagangai kingdom of her husband.**
- Values: Bravery, Resilience, Patriotism.

8.2 Savitribai Phule

Every year on **January 3rd**, India celebrates **Savitribai Phule Jayanti.**

About Savitribai Phule:

- Born in a small village in **Satara district of Maharashtra** on January 3, 1831, Savitribai Phule was an **Indian social reformer**, **poet**, and **powerful voice in the Indian freedom struggle.**
- She was an active participant in the women's liberation movement.
- Savitribai trained at Ms. Farar's Institution in Ahmednagar and at Ms. Mitchell's school in Pune to become **the first female teacher in India.**
- Savitribai Phule and her husband, Jyotirao Phule (one of the most famous social reformers in Maharashtra), opened India's first school for women in Pune in 1848.
- Despite resistance from society, by 1851, **Phule was running 18 schools for children of different castes**, with a strength of 150 girls.
- They also established two educational trusts: the **Native Female School**, Pune, and the **Society for Promoting the Education of Mahars, Mangs**, and others from downtrodden castes.
- In 1852, the **British government** acknowledged the great work of the Phule family in the field of education and **honored Savitribai by naming her the best teacher**.
- She, along with her husband, Jyotirao Phule, actively worked **against the caste-based discrimination prevalent in society.**
- She played a crucial role in grooming Jyotirao Phule's pioneering institution, **Satyashodhak Samaj (1873)** that fought for equality of all classes.
- In 1852, she initiated the **Mahila Seva Mandal**, a platform aimed at creating awareness about women's rights. Notably, this platform brought together members of all castes, challenging entrenched social hierarchies.
- Savitribai Phule was a vocal advocate for the rights of widows. She campaigned against the prevailing customs that **forced widows into a life of deprivation and for the right of widows to remarry.**
- Savitribai organized a barbers' strike in both Mumbai and Pune to demonstrate their opposition to the practice of shaving the heads of widows.
- Savitribai also fought against dowry and other oppressive social customs.
- In 1863, Jyotirao and Savitribai began **Balhatya Pratibandhak Griha**, India's first home prohibiting infanticide, helping pregnant Brahmin widows and rape victims.
- Savitribai Phule wrote **two books**, **Kavya Phule** in 1854 and **Bavan Kashi Subodh Ratnakar** in 1892, which are collections of her poems.

- She wrote the famous poem **'Go Get Education'** to encourage backward and oppressed class people to get an education.
- Her birth anniversary, celebrated as Savitribai Phule Jayanti, is a day to commemorate her legacy and contributions to education and social equality.

8.3 Netaji Subhas Chandra Bose

Supreme Court said "Leaders like Netaji Subhas Chandra Bose are **immortal** and do not need bestowing of a recognition through a judicial diktat "

Netaji Subhas Chandra Bose:

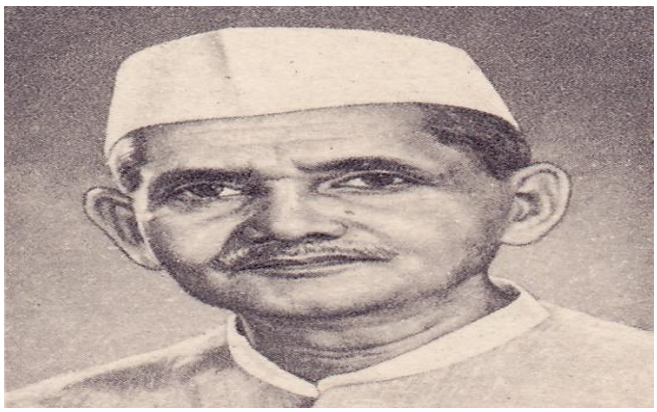
- He was an Indian nationalist leader who was a key figure in the Indian independence movement against British colonial rule.
- He was born on **January 23, 1897, in Cuttack, Orissa.**
- In **1920,** he passed th**e Civil Service Examination,** but in April **1921,** after hearing of the nationalist turmoil in India, he **resigned** from his position.
- Bose then joined the Indian National Congress and actively participated in the Indian independence movement.
- Bose at first worked with C.R. Das in Bengal, under whose mentorship he flowered.
- He was a close associate of Mahatma Gandhi and Jawaharlal Nehru.
- Bose was elected **president of the Indian National Congress** for two consecutive terms **1937, 1938 in Haripuri & Tripuri sessions** but resigned from the post following ideological conflicts with Mahatma Gandhi.
- In **1939,** he formed the **Forward Bloc**, an organization aimed at unifying all the anti-British forces in India.
- Netaji was strongly influenced by Swami Vivekananda's teaching and was known for his patriotic zeal as a student.
- At the outset of the Second World War, he fled from India and travelled to the Soviet Union, Germany and Japan, seeking an alliance with the aim of attacking the British in India.

- With Japanese assistance, he reorganized and later led the **Indian National Army**, formed from Indian prisoners-of-war and plantation workers from Malaya, Singapore, and other parts of Southeast Asia, against British forces.
- With Japanese monetary, political, diplomatic, and military assistance, he formed the **Azad Hind Government** in exile, and regrouped, and led the Indian National Army in battle against the allies at Imphal and in Burma.
- He is believed to have died on August 18, 1945, in a plane crash over Taiwan. The exact circumstances of his death are still shrouded in mystery and controversy**.**

Prarakram Divas.

- It is celebrated on January 23 to commemorate the birth anniversary of freedom fighter Subhas Chandra Bose.
- This year marks the 127th birth anniversary of Bose, fondly known as 'Netaji'.
- Parakram Diwas aims to instil fearlessness and patriotism, especially among the youth, inspiring them to stand strong in the face of challenges.

8.4 Shri Lal Bahadur Shastri (1904 - 1966)



- India's **2nd Prime Minister** was remembered on his death anniversary.
- Contributions
  - Participated in all mass movements launched during India's fight for freedom and **was imprisoned as many as seven times**.
  - In 1946, elected to **Uttar Pradesh Legislative Assembly** and was appointed Parliamentary Secretary to Chief Minister.
  - Led country during Indo-Pakistan War of 1965 and gave the **slogan of Jai Jawan Jai Kisan. Promoted white revolution.**

- Posthumously awarded **Bharat Ratna in 1966.**
- **Values**: Humility, Courage, Determination, Integrity.

8.5 Thiruvalluvar

- Thiruvalluvar Day is usually observed either on **January 15 or 16** in **Tamil Nadu** and is a **part of Pongal celebrations.**

About Thiruvalluvar:

- He was a poet and philosopher, is regarded as a cultural icon by Tamils.
- He is fondly referred to as **Valluvar** by Tamils.
- His most popular work is Thirukkural, a collection of **couplets on ethics, politics, economy and love**.
- Thiruvalluvar's primary work **Thirukkura**l contains **1330 couplets** (kurals) that are divided into 133 sections of 10 couplets each.
- The text is divided into three parts with teachings on **dharma, artha, and kama** (virtue, wealth and love).
- Each section covers a wide range of topics and imparts **moral, ethical, and practical guidance** to the readers.

CURRENT AFFAIRS MCQ'S FOR THE MONTH OF FEBRUARY 2024

1. Stonehenge, recently seen in the news, is a massive stone circle monument located in:
   a) France
   b) Cambodia
   c) United Kingdom
   d) Peru

2. 'Demaorchestia alanensis', that was in the news recently, is a:
   a) Bird discovered in the Amazon rainforest
   b) Marine amphipod discovered in Asia
   c) Deep-sea fish recently identified in the Pacific Ocean
   d) Flowering plant found in the Arctic region

3. With reference to different types of Faults, consider the following:
   1) A Strike-slip fault occurs when one mass of rock slides downward and pulls away from another mass of rock.
   2) A Normal fault occurs when two blocks of rock are sliding past horizontally with little to no vertical movement.
   3) Reverse faults, also called thrust faults, involve upward movement as the two blocks of rock collide and buckle upward.

   How many of the above statements are correct?
   a) Only one
   b) Only two
   c) All three
   d) None

4. Consider the following statements regarding Smooth-Coated Otter:
   1) It is endemic to Western Ghats of India.
   2) It is classified as 'Endangered' under the IUCN Red List.

   Which of the statements given above is/are correct?
   a) 1 only
   b) 2 only

c) Both 1 and 2
d) Neither 1 nor 2

5. Karrar Combat Drones, recently seen in the news, is developed by:
   a) Russia
   b) Iran
   c) Turkey
   d) China

6. Consider the following statements regarding the Indian Forest & Wood Certification Scheme:
   1) It is a voluntary third-party certification designed to promote sustainable forest management.
   2) The Indian Institute of Forest Management will act as its operating agency.

   Which of the statements given above is/are correct?
   a) 1 only
   b) 2 only
   c) Both 1 and 2
   d) Neither 1 nor 2

7. Consider the following statements regarding the Cinereous vulture:
   1) It is only found in the European countries.
   2) It is an altitudinal migrant which means it migrates from a higher to a lower altitude.

   Which of the statements given above is/are correct?
   a) 1 only
   b) 2 only
   c) Both 1 and 2
   d) Neither 1 nor 2

8. Consider the following statements regarding the Saiga antelope:
   1) It is a large migratory herbivore species.
   2) It is mainly found in the steppe grasslands and semi-arid desert region.

   Which of the statements given above is/are correct?
   a) 1 only
   b) 2 only

c) Both 1 and 2
d) Neither 1 nor 2

9. Bab al-Mandab strait, recently in news, is bordered by:
   a) Yemen, Somalia and Eritrea
   b) Yemen, Djibouti and Eritrea
   c) Oman, Yemen and Djibouti
   d) Yemen, Omen and Eritrea

10. Cassiopeia A, recently seen in news, is a:
   a) Remnant of a massive star
   b) Dwarf planet
   c) New plant
   d) Asteroid

11. Ibu Volcano, recently seen in the news, is located in:
   a) Japan
   b) Ethiopia
   c) Indonesia
   d) Chile

12. With reference to the Essential Services Maintenance Act (ESMA), consider the following statements:
   1) It is enforced to prohibit strike of employees in certain essential services.
   2) Central Government alone can enforce the ESMA provisions in specified territories.
   3) After ESMA is invoked, persons who commence the strike as well as those who instigate it are liable to both disciplinary and legal action.

   How many of the above statements are correct?
   a) Only one
   b) Only two
   c) All three
   d) None

13. Consider the following statements regarding Satpura Tiger Reserve (STR):
    1) It is located in Chhattisgarh.
    2) It is part of the Pachmarhi Biosphere Reserve.

    Which of the statements given above is/are correct?
    a) 1 only
    b) 2 only
    c) Both 1 and 2
    d) Neither 1 nor 2

14. Consider the following statements regarding Pashupatinath Temple:
    1) It is a shaivite temple located in Nepal.
    2) It is designed in the Nagara style of temple architecture.

    Which of the statements given above is/are correct?
    a) 1 only
    b) 2 only
    c) Both 1 and 2
    d) Neither 1 nor 2

15. Consider the following statements regarding Pradhan Mantri Uchchatar Shiksha Abhiyan (PM-USHA):
    1) It is a central sector scheme.
    2) It aims at providing strategic funding to eligible state higher educational institutions.

    Which of the statements given above is/are correct?
    a) 1 only
    b) 2 only
    c) Both 1 and 2
    d) Neither 1 nor 2

16. Consider the following statements regarding the DRESS Syndrome:
    1) It is a type of drug allergy which can happen as a reaction to medications.
    2) It is asymptomatic in nature and does not show any symptoms.

    Which of the statements given above is/are correct?
    a) 1 only

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

17. Consider the following statements regarding Hatti community:
    1) They are located in the border region of Himachal Pradesh and Uttarakhand.
    2) They are governed by a traditional council called khumbli.

    Which of the statements given above is/are correct?
    a) 1 only
    b) 2 only
    c) Both 1 and 2
    d) Neither 1 nor 2

18. With reference to the National Automated Fingerprint Identification System (NAFIS), consider the following statements:
    1) It is a database of crime and criminal-related fingerprints.
    2) It is managed by the National Informatics Centre.
    3) It assigns a unique 10-digit National Fingerprint Number for each criminal.

    How many of the above statements are correct?
    a) Only one
    b) Only two
    c) All three
    d) None

19. Consider the following statements regarding the Global Partnership on Artificial Intelligence:
    1) It aims to bridge the gap between theory and practice on Artificial Intelligence.
    2) India is its founding member.

    Which of the statements given above is/are correct?
    a) 1 only
    b) 2 only
    c) Both 1 and 2
    d) Neither 1 nor 2

20. Oil and Gas Decarbonization Charter, recently seen in the news, was launched at:

a) Conference of Parties (COP28)

b) Rio Earth Summit

c) Conference of Parties (COP27) C.

d) G20 Summit

KEYS

1. C	2. B	3. B	4. D	5. B
6. C	7. B	8. A	9. B	10. A
11. C	12. B	13. B	14. A	15. B
16. A	17. C	18. B	19. C	20. A

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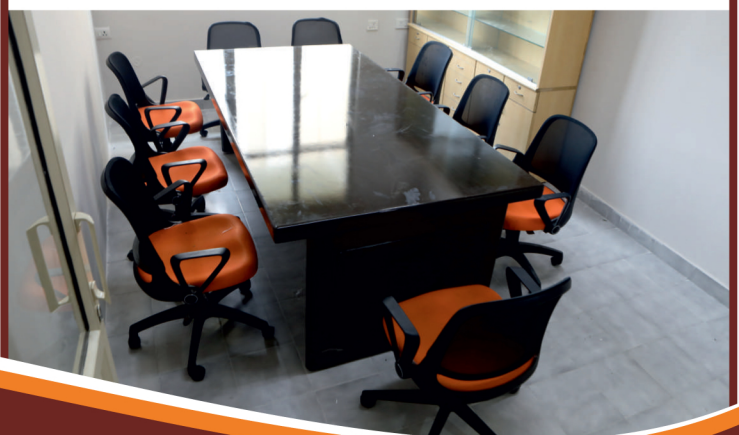

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