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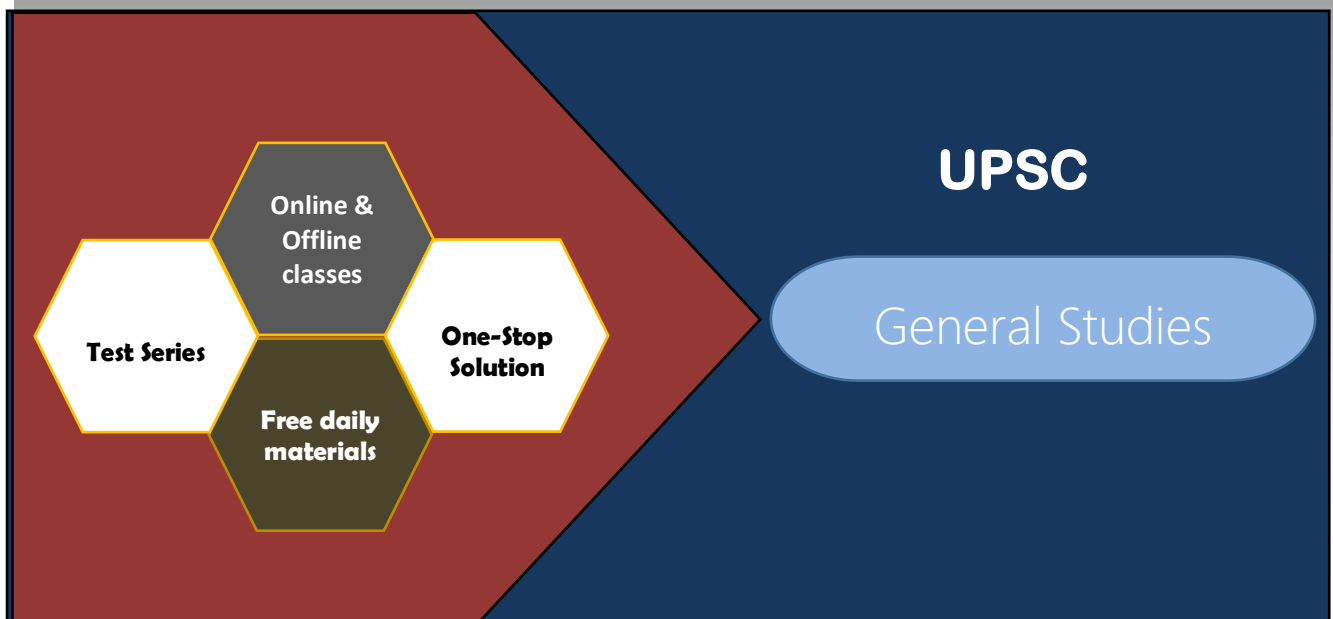
Monthly current affairs magazine

SHIKSHA

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**Articles of the day
THE HINDU & INDIAN EXPRESS**



Contents

GS 1 : Heritage,culture ,Geography of the World and Society

1. Diversifying Our Understanding of Religion and Caste in Contemporary India
2. Slowing of Overturning Circulation in Antarctic
3. What Mohenjodaro's Dancing Girl figurine tells us about the prehistoric civilisation
4. Delayed Arrival of the Southwest Monsoon
5. SC backs TN position on Jallikattu
6. Polygamy in India
7. Santiniketan in tentative list for UNESCO World Heritage list
8. Caste-Based Survey
9. Cyclone Systems
10. US seeks sanctions on Indian agencies over Religious Freedom Violations

GS 2 : Polity, Governance, International Relations

1. Link between poor Solid Waste Management and Stray Dog Attacks
2. India, its SDG pledge goal, and the strategy to apply
3. Can psychedelics treat depression?
4. India-China Border Tensions: An Assessment of the Current Situation and Proactive Steps for India
5. De-dollarisation: the race to attain the status of global reserve currency
6. What the law says about filing of FIR in sexual harassment cases
7. With Supreme Court's ruling on divorce, a look at its powers under Article 142 – and their criticism
8. Twenty Point Programme: Government shines on 11 parameters
9. Russia overtakes Australia as top supplier of pulverised coal injection to India
10. Article 355 imposed in Manipur
11. Legalizing Cannabis Cultivation and Decriminalizing Drug Use
12. Covid is no longer an Emergency: what changes?
13. Law for mandatory recall of substandard drugs
14. Washington Declaration
15. Karnataka polls: EC issues advisory on advertisements

16. All India Survey on Higher Education: A Wake-up Call for the Muslim Community
17. Misleading food ads and regulations to curtail them
18. Indian Sludge Shows High Fertilizer Potential: First Study Reveals
19. Medical Value Travel
20. Anti-Conversion Legislation In India
21. Anti-Conversion Legislation In India
22. Maharashtra Political Crisis
23. Supreme Court guideline for granting Bail
24. The nutritional value of millets
25. Indo-Pacific Economic Framework for Prosperity (IPEF)
26. A Court recall that impacts the rights of the accused
27. Default Bail
28. India's Pension Reforms: Ensuring Pension Security
29. WHO Recommendation on Artificial Sweeteners
30. Exploring the Prospects of Integrated Medicine: A Dialogue on Ayush and Modern Healthcare
31. Union Health Ministry announces ambitious "75/25" initiative
32. WHO advises against use of sugar substitutes for weight loss
33. Freedom of speech
34. Strengthening Quad: The Need for a Biomanufacturing Hub in India
35. Digital Census and Self-enumeration through NPR Update
36. The Paradox of BRICS: Prospects for Expansion and Internal Imbalance
37. The Paradox of BRICS
38. Hysterectomy
39. Why do judges seek 'RECUSAL' for themselves?
40. India & South Pacific

GS 3 : Economy, Science and Technology, Environment

1. May Day and the Challenge of Regulating Working Hours
2. Sustainable Development Goals (SDGs): India's Progress Analysis
3. TRAI Recommendations on Ease of Doing Business in Telecom and Broadcasting
4. Business Ready (B-READY) rankings
5. Action plan to reduce Air Pollution

6. Dima Hasao insurgent group signs peace pact with Assam, Centre
7. 14 million jobs worldwide will vanish in the next 5 years: WEF
8. A Digitally Unprepared Workforce
9. CBDC for efficient Cross-Border Payment
10. RITES to Provide Technical Support for Waste Management under Swachh Bharat Mission-Urban 2.0
11. Foreign investment in Nuclear Power
12. FDA approves first vaccine for Respiratory Syncytial Virus
13. US Patriot Shoots Down Kh-47 Kinzhal
14. Space Science and Technology Awareness Training (START)
15. India's First National Water-Body Census
16. Creditor-led Insolvency Resolution Mechanism
17. China objects to Indian proposal to blacklist terrorist at UN
18. National MSME Council
19. Biodiversity funds are hardly spent on its conservation
20. Livestock and fishing sector see highest decadal GVO growth
21. Most Asia-Pacific countries ill-prepared for natural disasters: ESCAP
22. Study on butterflies' migration opens door for conservation
23. Storm Shadow Missiles
24. Study on butterflies' migration opens door for conservation
25. Storm Shadow Missiles
26. Studies on migration patterns of milkweed butterflies and their feeding habits can help protect them
27. Managing Inflation and Ensuring Food Security in India
28. Groundwater Extraction and Land Subsidence
29. Baby's got three parents: explaining Mitochondrial Donation Treatment
30. IIT-M scientists develop improved flow battery technology
31. Worldcoin: The Iris-scanning Cryptocurrency
32. Analysis of Sources of Funding of Regional Parties of India, FY 2021-22
33. Tripping trade
34. Cabinet nod for 1.08 lakh crore kharif Fertilizer Subsidy
35. DoT develops Facial Recognition Tool 'ASTR'
36. Methanol poisoning
37. RBI regulations on Green Deposits
38. SCO members adopt India's proposal for digital public infra
39. Bhopal's Voluntary Local Review: A Step towards Localizing SDG's in India
40. RBI to pull out 2000 notes from active circulation

GS 1 : Heritage, culture ,Geography of the World and Society

1. Diversifying Our Understanding of Religion and Caste in Contemporary India

- The recent outcome of the Karnataka elections provides an opportunity to broaden our understanding of religion and caste as categories of identity and belief. It is essential to recognize that these identities go beyond mere labels and hold pan-India significance. Amidst the rapid urbanization of Gurugram, the interplay of technology, finance, infrastructure, and land markets has brought about intriguing effects on traditional aspects of life. Notably, the strengthening of caste and religious identities has occurred alongside the transformation of the local landscape

Contemporary dynamics of the religion and caste in society

- **Social Media:** The emergence and widespread use of social media platforms have significantly influenced the dissemination of information and the expression. Social media platforms have provided individuals with new avenues to express their beliefs, connect with like-minded individuals, and engage in discussions and debates related to religion and caste.
- **Leisure Cultures:** Changing patterns of leisure activities and cultural practices have contributed to the reshaping of religious and caste identities. The ways in which people engage with leisure, entertainment, and cultural events often intersect with their religious and caste affiliations. These leisure cultures can reinforce existing identities, foster a sense of community, and contribute to the preservation and celebration of religious and caste traditions.
- **Globalization of Identities:** The increased mobility, migration, and transnational interactions have allowed for the transmission and adoption of religious and caste practices, beliefs, and ideologies across different geographical locations. This globalization of identities has influenced how individuals perceive and express their religious and caste affiliations.
- **Emphasis on Heritage:** The promotion and celebration of cultural heritage, rituals, and customs have become significant aspects of identity formation and community building. This focus on heritage can reinforce religious and caste affiliations and contribute to the preservation of traditional practices.

Complexities of contemporary identities

- **Intersectionality:** Contemporary identities are often multifaceted and intersectional, encompassing multiple dimensions such as gender, class, religion, caste, and regional affiliations. Individuals' identities are shaped by the interaction of these diverse factors, leading to complex experiences and perspectives.
- **For example:** In the context of Gurugram, caste identities intersect with the effects of urbanization, globalization, and economic transformations, creating intricate social dynamics.
- **Shifting Meanings:** The meanings attached to religious and caste identities have evolved over time. Globalization, technology, and changing social norms have influenced the ways in which individuals understand and express their religious and caste affiliations. These shifting meanings challenge traditional understandings and necessitate a deeper exploration of the contemporary dynamics surrounding religion and caste.
- **Hybridity and Adaptation:** As individuals navigate the complexities of a rapidly changing world, they might combine elements of their religious and caste backgrounds with new cultural practices, beliefs, and expressions. This hybridity reflects the fluid nature of contemporary identities and the ways in which individuals negotiate their sense of self within evolving social contexts.
- **Global Influences:** Increased exposure to diverse cultural and religious influences from around the world can impact individuals' beliefs, practices, and self-perception. This global exchange of ideas and cultural practices contributes to the complexities of contemporary identities, blurring traditional boundaries and fostering new forms of identity expression.
- **Individual Agency:** Contemporary identities are influenced by individual agency, as individuals actively construct and negotiate their own sense of self and belonging. People have the autonomy to choose, reinterpret, or reject religious and caste identities based on their personal experiences, beliefs, and aspirations. This individual agency adds complexity to the understanding of contemporary identities and challenges rigid categorizations.

Why religious and caste sentiments thrive despite the seemingly impersonal nature of modern relations?

- **Historical Significance:** Religion and caste have deep historical roots in India, shaping the social, cultural, and political fabric of the country for centuries. These identities have been intricately woven into people's lives and community structures, and their significance continues to endure even in the face of modernization. Historical legacies and the sense of identity associated with religion and caste contribute to the persistence of these sentiments.
- **Social Cohesion and Belonging:** Religion and caste provide individuals with a sense of belonging and community. They offer a framework for social cohesion, providing a sense of identity, support, and solidarity. In an

increasingly fragmented and individualistic society, religious and caste affiliations can offer a sense of belongingness and a support system that individuals seek for social integration and a sense of purpose.

- **Cultural Identity and Tradition:** Religion and caste are deeply intertwined with cultural practices, rituals, and traditions which provide individuals with a connection to their cultural heritage and a sense of continuity with their ancestors.
- **Social Networks and Support:** Religious and caste communities network foster a sense of mutual aid and communal bonds, creating a support system that individuals rely on in times of need. This social support and network-based assistance further reinforce the importance of religious and caste identities.
- **Political and Power Dynamics:** Religion and caste continue to play a significant role in political mobilization, electoral strategies, and the distribution of resources and benefits. Political parties often exploit religious and caste identities for electoral gains, further reinforcing their salience and significance in public discourse.

Why the newly emerging religious identities sometimes manifest as hostility towards those of different faiths?

- **Identity Assertion:** The formation of new religious identities can be driven by a desire to assert and strengthen one's own religious beliefs and practices. In some cases, this assertion may result in a sense of exclusivity and superiority, leading to hostility towards those who hold different beliefs. Individuals may perceive their newly emerging religious identity as being under threat from other faiths, and this defensive response can contribute to animosity and hostility.
- **Socialization and Group Dynamics:** If individuals are surrounded by like-minded individuals who reinforce a particular narrative of their religious identity, it can lead to the development of a group mentality that views other faiths with suspicion or hostility. Group dynamics, such as peer pressure, conformity, and the need for social acceptance, can further amplify negative attitudes towards different faiths.
- **Perceived Threats and Insecurity:** When new religious identities emerge, followers may perceive threats to their beliefs, traditions, or cultural practices from other faiths or societal changes. This perceived threat can evoke a defensive response, fueling hostility towards those seen as posing a challenge to their newly formed religious identity.
- **Political Instrumentalization:** Political actors may exploit religious sentiments and manipulate the narrative to gain support or advance their agenda. This instrumentalization can create an us versus them mentality,

deepening divisions and fostering animosity towards religious groups perceived as adversaries.

- **Economic Competition and Social Hierarchies:** Economic disparities and perceived inequalities can fuel resentment towards religious groups seen as benefiting disproportionately or hindering one's own economic advancement. This can result in the projection of animosity onto religious differences.
- **Lack of Interfaith Dialogue and Understanding:** Insufficient opportunities for interfaith dialogue and understanding can contribute to the persistence of hostility between religious communities. Limited interactions and communication between followers of different faiths may perpetuate stereotypes, misunderstandings, and a lack of empathy. Without platforms for open dialogue and mutual respect, tensions can escalate, leading to hostility.

Way forward: Adopting a forward-looking approach

- **Contextual Understanding:** Instead of relying solely on historical perspectives, it is crucial to engage with the complexities of the present. This involves analyzing the influence of social media, new leisure cultures, globalization of caste and religious identities, the politics of heritage, and the rise of consumer culture.
- **Critical Questions:** To address the contemporary manifestations of religious and caste identities, we need to ask fundamental questions. For instance, we must explore why religious and caste feelings gather strength despite the apparent prevalence of impersonal relations in a world organized through contracts and other similar mechanisms.
- **Contemporary Relevance:** The explanations regarding religious identity and caste should be grounded in the present rather than relying solely on the perspectives of historical figures like Gandhi and Ambedkar. While acknowledging their important contributions, we need to apply their vantage points to analyze and understand the contemporary realities.
- **Interdisciplinary Approach:** Addressing the complexities of caste and religious identities requires an interdisciplinary approach that combines insights from sociology, anthropology, history, political science, and cultural studies, among other disciplines. By bringing together diverse perspectives, we can gain a more comprehensive understanding of the multifaceted nature of these identities and their implications for contemporary society.
- **Dialogue and Empathy:** Encouraging interfaith dialogue, promoting understanding, and fostering empathy are crucial steps towards mitigating hostility and building bridges between different religious communities. Creating platforms for open and respectful discussions can help dispel stereotypes, bridge gaps in understanding, and promote mutual respect.

- **Evolving Definitions:** Given the altered meanings of caste and religion in a rapidly changing society, it is important to continuously reassess and redefine these concepts. By recognizing the shifting dynamics and meanings associated with caste and religion, we can develop more nuanced perspectives that align with the contemporary reality.

Conclusion

- As we witness the diversification of religion and caste in contemporary India, it is imperative to embrace a nuanced understanding that moves beyond historical interpretations. Recognizing the multifaceted factors influencing modern identities and the complexities of the present allows for a more comprehensive analysis. By exploring the contemporary dynamics and asking pertinent questions, we can better comprehend the changing meanings of religion and caste in today's society and address the challenges and opportunities they present.

2. Slowing of Overturning Circulation in Antarctic

- Recent research indicates that the Antarctic overturning circulation, a global network of ocean currents, is slowing down at a faster rate than previously predicted.
- The overturning circulation is crucial for redistributing heat, carbon, and nutrients, and maintaining Earth's climate stability and deep-ocean oxygen levels.

Overturning Circulation

- The overturning circulation (OC) refers to the large-scale circulation pattern in the global ocean, involving both surface and deep currents.
- It is a network of ocean currents that plays a crucial role in redistributing heat, carbon, and nutrients around the globe.
- It is driven by the sinking of dense, cold, oxygen-rich water from the ocean surface to the deep ocean and the rising of less dense water in different regions.

Key components and processes

- **Antarctic Bottom Water:** Cold, dense water forms near Antarctica and sinks to the ocean floor, spreading northward along the seafloor.
- **North Atlantic Deep Water:** Another dense water mass forms in the North Atlantic and sinks to great depths.

- **Thermohaline Circulation:** Temperature and salinity differences drive the sinking and rising of water masses, influencing the overturning circulation.
- **Deep Ocean Currents:** Once the dense water sinks, it flows along the deep ocean basins, connecting various regions of the world ocean.

Observing and studying the OC

- Monitoring the overturning circulation is challenging due to its vast scale and complex dynamics.
- Observations include ship-based measurements, moored instruments, floats, satellites, and numerical models.
- Scientists use a combination of measurements and simulations to understand the behavior and changes in the overturning circulation.

Importance of the Overturning Circulation

- **Heat redistribution:** The overturning circulation helps regulate Earth's climate by transporting heat from the equator to the poles and vice versa.
- **Assist carbon cycle:** It plays a vital role in redistributing carbon dioxide and other greenhouse gases, impacting the global carbon cycle.
- **Nutrient cycling:** The circulation also facilitates the transport of nutrients, affecting marine ecosystems and productivity.

Consequences of a Slowing OC

- **Climatic changes:** A slowdown in the overturning circulation can have significant consequences for Earth's climate and marine ecosystems.
- **Nutrient disruption:** It can disrupt the transport of heat, carbon, and nutrients, leading to changes in regional and global climate patterns.
- **De-oxygenation:** Reduced oxygen supply to the deep ocean can affect deep-sea marine life and potentially lead to shifts in species distribution.

Impact of Melting Antarctic Ice

- Melting Antarctic ice disrupts the formation of Antarctic bottom water, a key component of the overturning circulation.
- Freshening of surface waters due to melt-water makes them less dense and less likely to sink, slowing down the circulation.

Future Outlook

- Antarctica's ice loss is expected to continue and accelerate with global warming.

- Anticipated freshening due to increased ice loss will prolong the slowdown and further decrease deep-ocean oxygen levels.
- The consequences of the slowdown extend beyond Antarctica, affecting the global ocean, climate change, and sea level rise.
- Urgent action to reduce greenhouse gas emissions is necessary to address these issues.

Way forward

- Intensify efforts to reduce greenhouse gas emissions.
- Implement measures to mitigate ice loss from Antarctica and address the freshening of surface waters.
- Promote scientific research and monitoring to understand and respond to the ongoing changes.
- Raise awareness about the importance of the overturning circulation and its impact on climate and marine ecosystems.

3. What Mohenjodaro's Dancing Girl figurine tells us about the prehistoric civilisation

Prime Minister has recently inaugurated the statue of **Dancing Girl** of Mohenjodaro as mascot of **International Museum Expo**.

Discovering the Dancing Girl:

- The **Indus Valley Civilisation** (3300-1300 BC and mature stage- 2600-1900 BC) was discovered in **1924**.
 - The **Indus Valley Civilisation** was also known as the **Harappa-Mohenjodaro Civilisation**.
- In **1920s** the **sites** and **artefacts** from the civilisation were correctly **dated** and recognised as part of a full-fledged **ancient civilisation** similar to **Mesopotamia** and **Egypt**.
- After the **initial recognition** as an **ancient civilisation**, excavations were conducted in the **Harappa** and **Mohenjodaro**.
- The **Dancing Girl** was discovered in 1926, by **British** archaeologist **Ernest McKay** in a house of **Mohenjodaro's citadel**.
- The **bronze figurine** is placed in the **National Museum of India** as an artefact.

Features of the Dancing Girl statue:

- The Dancing Girl statue was created through the technique of the **metal blending** and **lost-wax casting**.

- **Lost-wax casting** is a process by which a **duplicate sculpture** is cast from an **original sculpture** to create highly **detailed** metallic artefacts.
- The Dancing Girl statue is **4,500 years old** bronze statue.
- The **5-foot tall** statue of Dancing Girl only wears multiple **bangles** and a **necklace** in her body.

4. Delayed Arrival of the Southwest Monsoon

India Meteorological Department (IMD) has predicted that the monsoon will be delayed this year.

Southwest monsoon system

- **Southwest monsoon** - It is a sea-breeze from the Arabian Sea and the Bay of Bengal that officially onsets over Kerala on June 1 and retreats from Rajasthan by the end of September.
- **Northeast monsoon** - It is the retreating monsoon, which is the key source of rainfall for several parts of Tamil Nadu, Andhra Pradesh and north interior Karnataka.
- **Rainfall** - Southwest monsoon brings more than 75% of India's annual rainfall.
- **Interdependent** - An early or delayed onset of southwest monsoon over Kerala does not in any way dictate monsoon performance over the rest of the season.
- **Movement** - The monsoon then moves northwards, the speed of its movement dictated by local atmospheric conditions and the development of low-pressure areas.
- **The Andaman and Nicobar Islands** - Start getting the rains at least two weeks before Kerala does.
- **No correlation** - There is no correlation between the date of arrival and intensity of the monsoon.

What are the reasons for the delayed onset of southwest monsoon?

- **Cyclone Mocha** - Have weakened the conditions for the arrival of southwest monsoon over the Bay of Bengal region.
- **Cyclone Fabien** - The twin cyclone of Mocha just below the Equator is disrupting the incoming monsoon flows.

- **Strong positive Indian Ocean Dipole (IOD)** - For the past 5 years the strong positive IOD haven been delaying the monsoon.

The Indian Ocean dipole (IOD) is the difference in temperature between the Eastern (Bay of Bengal) and western Indian oceans (Arabian Sea).

- **El Nino** - The warming of the equatorial Pacific Ocean that impacts weather events worldwide, is likely to develop earlier than expected.
- El Nino has the effect of suppressing the Indian monsoon rainfall.
- An El Nino event can increase the risk of a delayed monsoon in India.

The interplay of the wind and the monsoon system combined with the Earth system produces twin synchronous cyclones and the twin tropical cyclones are caused by what are called equatorial Rossby waves.

What are the implications of delayed southwest monsoon?

- The delayed monsoon **doesn't affect any crops**.
- The follow up showers after the southwest monsoon may be delayed as a result and it could **delay sowing** of oilseeds such as soybean.
- A prolonged dry period could result in the Government asking farmers to switch over to crops sowing to **nutri-cereals**, which consume less water unlike paddy.

How to overcome the challenges of delayed monsoon?

- Farmers can adopt **drought-resistant crops**.
- The government can provide **subsidies for irrigation** and other water-saving measures.
- The government can also **provide food assistance** to people who are affected by drought.

5. SC backs TN position on Jallikattu

- The Supreme Court Constitution Bench has upheld the amendments made by Tamil Nadu, Maharashtra, and Karnataka to the Prevention of Cruelty to Animals Act, 1960.
- The decision overturns a previous verdict that banned practices such as Jallikattu, a traditional bull-taming sport.

Overturning the previous verdict

- The court rejected the 2014 verdict of the Welfare Board of India v. A. Nagaraja case that deemed Jallikattu incompatible with animal rights.
- The Constitution Bench emphasized that Jallikattu has been a part of Tamil Nadu's cultural heritage for at least a century.

Significance of Pongal and Jallikattu

- Pongal is a harvest festival in Tamil Nadu, celebrated with thanksgiving for a bountiful harvest and rituals honoring cattle.
- Jallikattu, a bull-taming event, is an integral part of the festival and showcases the strength and skill of farm hands in southern Tamil Nadu.

Supreme Court's 2014 verdict and animal rights perspective

- The previous two-judge Bench ruling emphasized the importance of animal rights and suggested elevating them to the level of constitutional rights.
- Animal welfare organizations presented evidence of physical and mental torture inflicted on the animals during Jallikattu.

Issue with the sport

An investigation by the Animal Welfare Board of India concluded that "Jallikattu is inherently cruel to animals".

- **Human deaths:** The event has caused several human deaths and injuries and there are several instances of fatalities to the bulls.
- **Manhandling of animals:** Animal welfare concerns are related to the handling of the bulls before they are released and also during the competitor's attempts to subdue the bull.
- **Cruelty to animal:** Practices, before the bull is released, include prodding the bull with sharp sticks or scythes, extreme bending of the tail which can fracture the vertebrae, and biting of the bull's tail.
- **Animal intoxication:** There are also reports of the bulls being forced to drink alcohol to disorient them, or chilli peppers being rubbed in their eyes to aggravate the bull.

Arguments in favour

- **Native breed conservation:** According to its protagonists, it is not a leisure sport available but a way to promote and preserve the native livestock.
- **Cultural significance:** Jallikattu has been known to be practiced during the Tamil classical period (400-100 BCE) and finds mention in Sangam texts.
- **Man-animal relationship:** Some believe that the sport also symbolizes a cordial man-animal relationship.

- **Agrarian pride:** It represents a cultural infirmity to urban modernity that marginalizes rural and agrarian values.

Conclusion

- Tradition and culture should be considered in the rights discourse, recognizing the cultural context of practices like Jallikattu.
- Engagement and negotiation between animal rights advocates and local culture and tradition are necessary for a balanced approach.

6. Polygamy in India

Assam Chief Minister proposed to enact a legislative law to ban polygamy to address the growing incidents of the child marriages in the state.

Provisions that ban polygamy

- Polygamy is governed both by personal laws and the Indian Penal Code (IPC).
- **The Parsi Marriage and Divorce Act 1936** - Prohibited polygamy in the Parsi community.
- The law regulates the marriage and divorce among Parsis.
- **Shariat Act 1937** - Governs the marriage in Islam. The act allows Muslim man to have 4 wives.
- The Supreme Court in *Sarla Mudgal v Union of India* held that religious conversion for the sole purpose of committing bigamy is unconstitutional.
- The Supreme Court in *Lily Thomas v Union of India* case reiterated the judgment of *Sarla Mudgal v Union of India*.
- **The Special Marriage Act 1954** - A radical legislation that proposed the requirement of monogamy.
- **Section 4** of the act states that “at the time of marriage neither party should have a spouse living”.
- **The Hindu Marriage Act 1955** - Outlawed the concept of having more than one spouse.
- Buddhists, Jains, and Sikhs are also included under the Hindu Marriage act 1955.
- **Section 17** of the act states that bigamy is an offence.
- **IPC Section 494** - Penalizes bigamy or polygamy. A person wife or husband in any case engages in second marriage should be imprisoned for a period of 7 years and liable to fine.

- This provision does not apply to a marriage which has been declared void by a court
- **Section 495 of the IPC** - Protects the rights of the second wife in case of a bigamous marriage.
- **Article 44** - States that the State shall endeavor to secure for all the citizens a *Uniform Civil Code*.

Polygamy is the practice of having more than one married spouse (wife or husband).

What is the status of polygamy in India?

- **Kanwal Ram and Ors v The Himachal Pradesh Administration (1965)** - The Supreme Court reiterated the legal position that the standard of proof must be of marriage including second marriage should be performed as per customs.
- So the live-in-relationship doesn't come into the ambit of the second marriage.
- **Desertion of marriage** - IPC Section 494 penalizing polygamy doesn't apply in case of desertion by the spouse that is who has been continuously absent for 7 years.
- **Goa** - A crucial exception to the bigamy law for Hindus is Goa, which follows its own code for personal laws.
- A Hindu man in the state has the right to bigamy under specific circumstances mentioned in the Codes of Usages and Customs of Gentile Hindus of Goa.
- These specific circumstances include a case where the wife fails to conceive by the age of 25 or if she fails to deliver a male child by the age of 30.
- **No uniform civil code** - Even now various religions are governed by their respective religion personal laws.
- **Tribal population** - Since they are governed and protected by special laws and the prevalence of polygamy is high among tribal population.

Bigamy is the offence of marrying someone while already married to another person.

What is the way forward?

- Any move to outlaw polygamy for Muslims would have to be a special legislation which overrides personal law protections like in the case of triple talaq.
- The tribal population needs to be educated about the consequences of the polygamy.
- Uniform civil code needs to be followed to bring uniformity across India.

7. Santiniketan in tentative list for UNESCO World Heritage list

- The article announces that Santiniketan, the home of Nobel laureate Rabindranath Tagore in West Bengal, has been recommended for inclusion in UNESCO's World Heritage List.

Santiniketan

Santiniketan is a renowned cultural and heritage place located in Birbhum District, West Bengal, India. It holds historical significance and is known for its association with Nobel laureate Rabindranath Tagore. Here are key points about Santiniketan:

- It was the home of Rabindranath Tagore, where he lived and composed many of his literary works, including songs, poems, and novels.
- The Santiniketan campus is adorned with splendid sculptures, frescoes, murals, and paintings created by renowned artists such as Rabindranath Tagore, Nandalal Bose, Ramkinkar, Binodbehari Mukhopadhyay, and others.
- The region of Birbhum District, where Santiniketan is located, is also famous for its fairs and festivals. Some notable ones are Poush Mela (December), Joydev Mela (January), Basanta Utsav (Holi) in March, and the famous mystic Baul Singers.
- Special cultural events are held during Bengali New Year and Rabindra Janmotsav (birth anniversary of Rabindranath Tagore) in the Bengali month of Boisakh with great enthusiasm.
- Santiniketan celebrates unique festivals like Briksharopan (festival of Planting Saplings) and Halakarshan (festival of Plowing the Fields) on the 22nd and 23rd days of Sravana (August), respectively.
- Varshamangal, the festival of rains, is celebrated during August/September.
- Poush Mela is an annual fair and festival held in Santiniketan, starting on the 7th day of the month of Poush. The fair officially lasts for three days, but vendors may stay until the end of the month. It is known for live performances of Bengali folk music, particularly by bauls (traditional wandering minstrels), and also features tribal dances like Santali.

Recommendation by ICOMOS

- The recommendation for Santiniketan's inclusion was made by the International Council on Monuments and Sites (ICOMOS), which is the advisory body to the UNESCO World Heritage Centre.
- ICOMOS is a France-based international cultural body dedicated to the conservation and enhancement of global architectural and landscape heritage.

West Bengal's Representation in World Heritage List

- If selected, Santiniketan would be the second cultural symbol from West Bengal to be included in the UNESCO list.
- In 2021, UNESCO included 'Durga Puja in Kolkata' in its list of Intangible Cultural Heritage of Humanity.

8. Caste-Based Survey

Why in news?

The Patna high court has halted the ongoing caste-based survey in Bihar.

Why is Bihar conducting a caste census?

- To channel welfare policies and implement schemes effectively.
- Since Bihar's coalition government comprises mainly Other Backward Classes (OBCs) and they have been undermined in the current reservation system.
- Potential political benefits that would help identify the true population of the Bihar's OBCs.
- Even though UPA government in 2011 conducted a caste census it was not released due to various reasons.
- Survey would facilitate in preparing state budget tailored for welfare of oppressed classes.

What exactly Patna high court said?

- The court said that the state government had no power to conduct a census as it would infringe on the legislative powers of the parliament.
- **Difference between survey and census** - Census is a collection of accurate facts and verifiable details.
- Whereas a survey is intended at collection and analysis of opinions and perceptions of the general public, which may be aimed at a specific community.
- So the present exercise by Bihar is a census done in the name of survey.
- **Right to privacy** - Certain entries in the survey such as conditions of the labor work affects the right to privacy.
- **Data security** - Certain entries in the survey contains birth and death which may lead to data security.
- **Principle of voluntary disclosure** - Data should be entered only after each and every individual, who is a native of Bihar and not resident within the state, at the time of survey and not from the head of the family.

According to UDISE+ data OBC children comprise 45 per cent students in primary schools, SCs 19 % and STs 11 %.

What is the data are the enumerators collecting?

- The total number of **households** in the state are being counted in the first phase.
- In the second phase the following data will be collected
 - Castes, religions and economic backgrounds and
 - The number of family members living in and outside the state.
- The exercise covers an estimated population of 12.7 crore across 38 districts and will only enumerate caste and **not sub-caste**.

What is meant by caste census?

- Caste census means inclusion of caste-wise tabulation of India's population belonging to all castes, primarily the Other Backward Classes (OBCs), and not just SCs and STs.
- In 1952 census the first separate data on Scheduled Castes (SCs) and Scheduled Tribes (STs) was published.
- The first caste census data was released in 1931.
- The 2011 census even though had caste census the data was not released.

What is the importance of caste census?

- India runs the world's largest affirmative welfare programme based on caste identity.
- Reservation in educational institutes and government jobs are provided on the basis of caste identities.
- The absence of fresh caste census data means that the caste estimates of 1931 are being projected for formulating welfare policies in 2021.
- The highest reservation mandate for the Other Backward Classes (OBCs) at 27 % is caste based as the BP Mandal Commission ascertained the backwardness of the class on the basis of caste.

What is the socio economic and caste census (SECC) 2011?

- A study of socio economic status of rural and urban households.
- Allows ranking of households based on predefined parameters.
- SECC 2011 was conducted by ministry of rural development.
- This is the first time such a comprehensive exercise has been carried out for both rural and urban India.

- Article 162 provides that the executive power of a State shall extend to the matters with respect to which the Legislature of a State has power to make laws.
- In the 1931 census, the population of OBCs was estimated to be 52 %.
- According to SECC 2011
 - Total Households in the Country (Rural plus Urban) is 24.49 Crore.
 - Households considered for deprivation is 10.74 Crore.

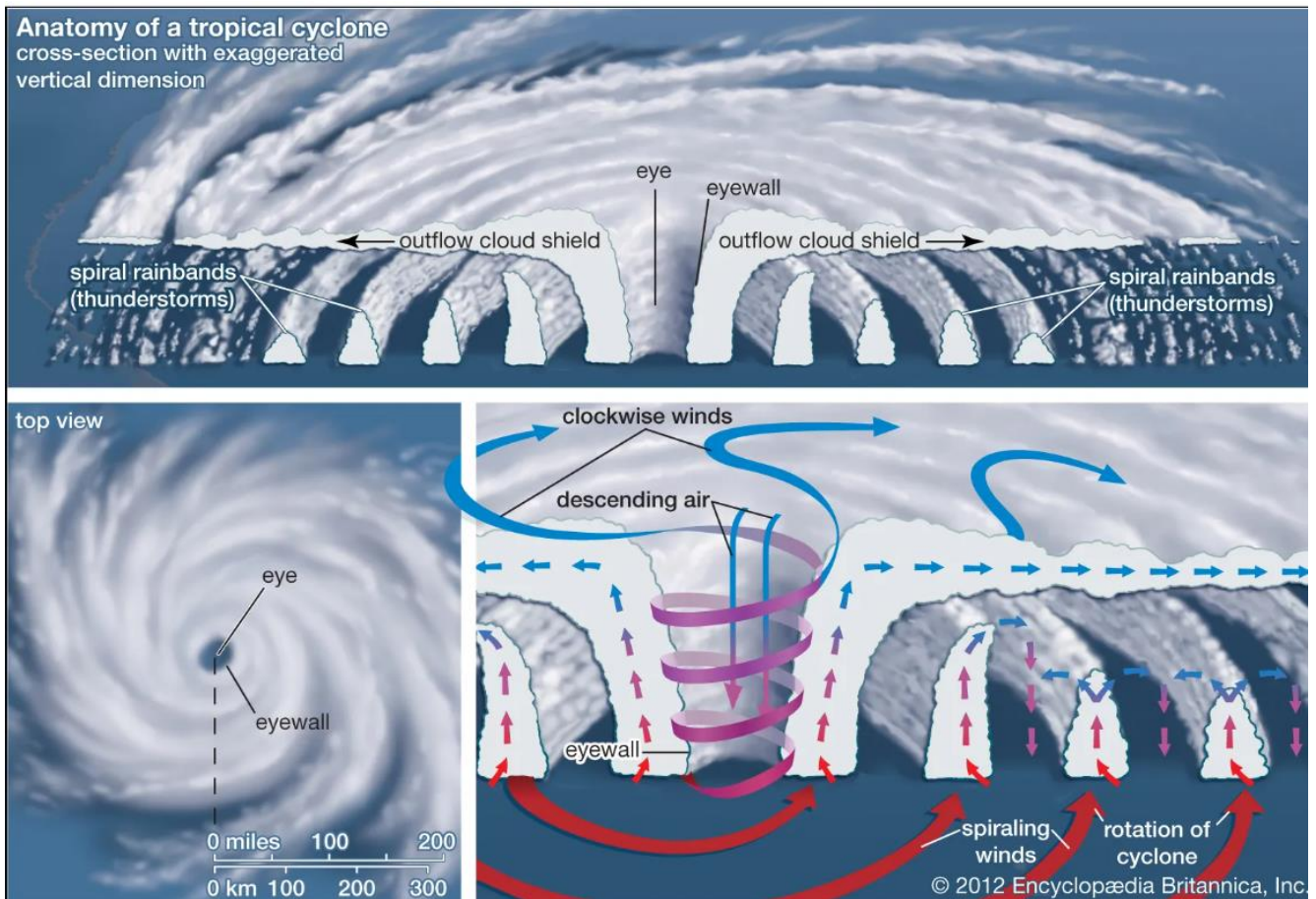
9. Cyclone Systems

Due to rapid intensification of cyclones there is a need for change in forecasting the cyclones.

What is cyclone?

- **Atmospheric disturbances** - Cyclones are caused by atmospheric disturbances around a low-pressure area distinguished by swift and often destructive air circulation.
- **Eye of the cyclone** - The low-pressure center of the cyclone is called the eye.
- Eye **provides energy** to the cyclones.
- The lower the pressure in the eye, the more intense is the cyclone.
- **Eye-wall** - Surrounds the eye with the strongest winds and heaviest rain and is the **most destructive part** of the cyclone.

The Cyclone Genesis Potential (GPI) to estimate the number of cyclones that may be born in a season is defined based on the variables that occur during the birth of cyclones



What is seedling of a cyclone?

- **Rotating low-pressure system** - It is the seed of the cyclone.
- It is the moisture converging near the surface when warm light air rises and takes the evaporated water with it.
- Rising air expands, cools and condenses to release energy in the middle atmosphere.
- **Madden-Julian Oscillations (MJO)** - Throw seeds of rotational low-pressure systems over the Indian and the Pacific Oceans.
- MJOs show a strong association with cyclogenesis, especially for the post-monsoon season.
- **El Niño and La Niña** - Influence the number of cyclone seeds and also the location and the expanse of warm water.
- **Easterly waves** - Produced by West Africa propagate cyclones from west from land onto the tropical Atlantic Ocean and sow the seeds for most hurricanes.

Tropics have all the critical environmental ingredients for cyclogenesis: Warm Ocean, atmospheric convection, vertical motion and mid-level humidity.

What is the environmental factors involved in cyclogenesis?

- Rotation or vorticity of a low-pressure system at the surface
- Sea surface temperatures or the volume of warm water available.
- The vertical motion of air in this low-pressure system.
- The amount of humidity available in the middle atmosphere.
- The vertical shear or the change in winds from the surface to the upper atmosphere.

10. US seeks sanctions on Indian agencies over Religious Freedom Violations

The Commission for International Religious Freedom (USCIRF) has urged to impose targeted sanctions on Indian government agencies and officials responsible for “severe violations” of religious freedom by freezing their assets.

USCIRF Report

- The USCIRF report assesses the status of religious freedom around the world.
- It provides a comprehensive analysis of the state of religious freedom in countries across the globe, highlighting issues of concern and making recommendations for action by the US government.
- The report is an important tool for raising awareness of violations of religious freedom and advocating for greater protection of this fundamental human right.

Allegations against India

(1) Policies

- It is alleged that the Indian government at the national, state, and local levels promoted and enforced religiously discriminatory policies, including:
 1. Laws targeting religious conversion
 2. Interfaith relationships
 3. Ban over wearing of hijabs and cow slaughter
- This has negatively impact Muslims, Christians, Sikhs, Dalits, and Adivasis.

(2) Laws of Suppression

- The report also alleges that the national government continued to suppress critical voices, particularly of religious minorities and those advocating on their behalf through-

1. Surveillance / Harassment / Cow Vigilantism
2. Accusation of Seditious
3. Demolition of Property
4. Detention under the Unlawful Activities Prevention Act (UAPA)
5. Targeted banning of NGOs ex. Missionaries of Charity under the Foreign Contribution Regulation Act (FCRA)
6. Constitution

India's response

- India has slammed USCIRF for “misrepresenting” facts and described it as an “organisation of particular concern”.
- The Indian government rejected the biased and inaccurate comments.
- Foundation of Indian and Indian Diaspora Studies (FIIDS) slammed USCIRF for its biased report and failure to acknowledge the cultural and economic significance of cows to Indians.

Why such reports often falsely target India?

- **Lack of objectivity:** There have been instances in the past where these reports have been criticized for being one-sided and lacking objectivity.
- **US lobby against everyone:** It is important to note that reports like USCIRF's are based on the organization's own assessments.
- **Inherent bias against India:** Such allegations are prevalent ever since India attained its Freedom.
- **Self-proclaimed father of democracy:** US has infamous for selectively promoting democracy and human rights, and for supporting authoritarian regimes that align with its strategic interests.
- **Anti-regime:** Such reports often overlook the efforts made by the present regime in India towards promoting religious tolerance and communal harmony.

Way forward

- **Urgent action:** India needs to take prompt and necessary steps to address religious freedom issues and take everyone's faith in the government and democratic process.
- **Nuanced understanding:** International organizations and foreign governments must make a conscious effort to understand the complexities of India's social, political, and economic landscape before making any recommendations or issuing reports.

- **Avoid sweeping generalizations:** It is important to avoid sweeping generalizations and presenting a one-sided view of the situation, which can be detrimental to India's reputation and lead to misunderstandings.
- **Self-reflection by the US:** The US must address its own issues related to religious freedom and human rights violations, and not just sermon other countries.

Conclusion

- **India's historical diversity and pluralism:** India has a long history of diversity, pluralism, and peaceful coexistence among different communities.
- **Constitutional guarantees:** The Constitution guarantees fundamental rights to all citizens, regardless of their religion, caste, or creed.
- **Media as a strong pillar:** The country has a vibrant democracy and a free and independent media that regularly scrutinizes the government and its policies. This eliminates the scope for anyone's oppression.
- **Nation-building:** All communities have contributed significantly to the country's cultural and social fabric. Success of India is often unwelcomed by the US. People should not fall prey to foreign propaganda.

GS 2 : Polity, Governance, International Relations

1. Link between poor Solid Waste Management and Stray Dog Attacks

Several incidents of stray dog attacks in Indian cities have shed light on the link between urban solid waste management and the issue of stray dogs.

Stray Dog Attacks in India

- Cities have witnessed a sharp increase in the stray dog population, which as per the official 2019 livestock census stood at 1.5 crore.
- However, independent estimates peg the number to be around 6.2 crore.
- The number of dog bites has simultaneously doubled between 2012 and 2020.
- Experts agree there may be a correlation between urbanisation and solid waste production, made visible due to the mismanagement of waste disposal.
- Tepid animal birth control programmes and insufficient rescue centres, in conjunction with poor waste management, result in a proliferation of street animals in India.

Reasons behind

- **Poor waste management:** Inadequate waste disposal facilities and the mismanagement of solid waste often lead to the congregation of stray dogs around garbage dumps and landfills, where they scavenge for food.
- **Unplanned urbanization:** The population boom in Indian cities has led to a sharp increase in the stray dog population. Rapid urbanization has led to the creation of slums and unmanaged solid waste, which attract dogs.
- **Lack of food and shelter:** The availability of food and shelter determines the carrying capacity of a city. In the absence of these facilities, free-ranging dogs become scavengers that forage around for food, eventually gravitating towards exposed garbage dumping sites.
- **Territoriality:** Stray dogs often become territorial and aggressive about public spaces where they are fed, leading to increased attacks on humans.
- **Improper sterilization and rescue centres:** Tepid animal birth control programmes and insufficient rescue centres, in conjunction with poor waste management, result in a proliferation of street animals in India.

Food wastage in India

- A population boom in Indian cities has contributed to a staggering rise in solid waste production. Indian cities generate more than 150000 metric tonnes of urban solid waste every day.
- According to a 2021 UNEP report, an estimated 931 million tonnes of food available to consumers ended up in households, restaurants, vendors and other food service retailers' bins in 2019.
- Indian homes on average also generated 50 kg of food waste per person.
- The presence of free-roaming dogs in urban areas is determined by the "carrying capacity" of a city, which is the availability of food and shelter.

Urban Stray Dogs and Waste Disposal

- **Food and shelter:** The wastage food often serves as a source of food for hunger-stricken, free-roaming dogs that move towards densely-populated areas in cities, such as urban slums which are usually located next to dumping sites.
- **Sanitation assists food hunt:** In the absence of proper sanitation and waste disposal facilities, stray dogs become scavengers that forage for food around exposed garbage dumping sites.

Impact of Unplanned and Unregulated Urban Development

- **ABC Program:** Under Animal Birth Control (ABC) program, municipal bodies trap, sterilize, and release dogs to slow down the dog population. This

approach aims to control the number of strays while avoiding the inhumane practice of killing them.

- **Rabies Control Measures:** Another anchor of India's response is rabies control measures, including vaccination drives. Rabies is a fatal disease that can be transmitted to humans through dog bites. Thus, preventing rabies is essential in addressing the issue of stray dogs.
- **Informal Measures:** These include mass killing of dogs in states like Kerala, which is a controversial practice as it is often inhumane and does not address the root causes of the issue. Other measures include imposing bans on the entry of stray dogs in colonies or feeding them in public.

Why address stray dog attacks issue?

- **Adds Vulnerability to the poor:** The disproportionate burden of dog bites may also fall on people in urban slums, which are usually located in close proximity to dumping sites.
- **Exposes harsher realities:** The rise in such attacks speak to core issues of lack of serviced affordable urban housing for all, lack of safe livelihood options and improper solid waste management".

Empathizing the strays

- **Abandoned, not strayed:** Stray dogs are sentient social beings capable of feeling pain, fear, and joy. Urban living patterns have largely impacted their abandonment.
- **Subjected to abuse:** They are often victims of neglect, abuse, and abandonment, and are forced to survive in harsh conditions on the streets.
- **Neglected community guardians:** Stray dogs can serve as community guardians by alerting us to potential dangers and can also provide emotional support to humans.

Way forward

- **Improve waste management:** Efficient management of solid waste can help reduce the availability of food for stray dogs and limit their population growth.
- **Increase vaccination and sterilization:** ABC and vaccination programs should be implemented in a more organized and efficient manner to control the stray dog population and the spread of rabies.
- **Encourage responsible feeding practices:** Regulating feeding around bakeries and restaurants and improving waste management in public spaces can reduce the carrying capacity of the environment for stray dogs and minimize the congregation of dogs in certain areas.

- **Develop national policy:** There is a need for a comprehensive national policy that addresses the issue of stray dogs and their management in a more systematic and humane manner.
- **Stop gruesome brutality:** Stopping brutality towards dogs is a crucial step towards creating a more compassionate and just management of stray dogs menace.

2. India, its SDG pledge goal, and the strategy to apply

Details:

- Prime Minister Shri Narendra Modi during the first meeting of Finance Ministers and Central Bank Governors under India's G20 Presidency raised concern about the slow progress on Sustainable Development Goals (SDGs).
- Due to the vast population of India, realizing SDGs at the global level is tied to the success of India.

Status of India with respect to Sustainable Development Goal:

- The framework of SDG has set targets for 231 indicators across 17 goals that should be achieved by 2030.
- A study that analyzed India's progress on 33 welfare indicators spanning over nine SDGs has shown a mixed picture with positive and negative trends.
- India is 'On-Target' to achieve 14 of the 33 SDGs. Some of the indicators that have substantially improved in the last five years are:
 - Neonatal and Under-Five Mortality
 - Full vaccination
 - Sanitation
 - Electricity accessibility
 - Eliminating adolescent pregnancy
 - Reducing multidimensional poverty
 - Women with bank accounts
- However, the national 'On-Target' does not equally apply to all districts. For instance,
 - 286 and 208 districts (out of 707) are not on track for achieving neonatal and under-five mortality respectively.
 - Similarly, the improved sanitation indicator excludes 129 districts.
- The current pace of improvement in 19 of the 33 SDG goals is very poor. For instance,
 - Around 479 (two-thirds) districts are 'Off-Target' in the context of clean fuel for cooking.

- Nearly 415 and 278 districts are 'Off-Target' for improved water and handwashing facilities respectively.
- No district in the country has eliminated child marriage. Around 539 (three-fourths) districts will not be able to reduce the prevalence of girl-child marriage by 2030.
- Despite huge improvements in mobile phone accessibility (93% of households), only 56% of women own mobile phones.

Lessons learned from the COVID-19 approach:

- It should be noted that designing and implementing policy is best considered as an “optimization problem” that relies on adequate resources, political will, data, and responsive administration.
- The approach adopted by India during the COVID-19 pandemic provides some important lessons.
 - Strong and sustained political leadership along with responsive administration at all levels (district, state, and national) helped India achieve success in vaccination coverage and the rollout of a comprehensive relief package.
 - Moreover, course correction was also undertaken in real time.
 - Such a mission-oriented approach is urgently required for achieving SDGs at the district level.
 - India's success during the pandemic can also be attributed to digital infrastructure, the Co-WIN data platform, and the Aarogya Setu application.
 - On the basis of this approach, India should consolidate its several siloed platform into an integrated digital resource.
 - The timelines were prescribed by the government of India for various schemes like Pradhan Mantri Garib Kalyan Anna Yojana during the pandemic.
 - It provided a mix of both in-kind and economic support, which helped in reducing the negative impact of the pandemic (specifically for vulnerable and socio-economically disadvantaged groups).

Conclusion:

- India should innovate a new policy path that is both healthy and sustainable to achieve the targets of SDGs in districts.
- India has showcased its ability to deliver a real-time response in tackling the COVID-19 pandemic

3. Can psychedelics treat depression?

Why in news?

Psychedelic substances has given strength to clinical/ research interests, and have added to psychiatry's ever-expanding therapeutic techniques.

Psychedelics

- **Psychedelics** – They are a group of drugs that alter perception, mood, and thought processing while a person is still clearly conscious.
- **Not toxic** – Psychedelics are non-addictive and non-toxic and the person's insight also remains unimpaired.
- **Two types** – The two most commonly used psychedelics are d-lysergic acid diethylamide (LSD) and psilocybin.

What is the status of psychedelics in India?

- **Prohibited** – In India, the Narcotic Drugs and Psychotropic Substances Act, 1985, prohibits the use of psychedelic substances.
- **Ketamine** – It is a dissociative anaesthetic with psychedelic properties, is used under strict medical supervision, for anaesthesia and to treat treatment-resistant depression.

What is the history of psychedelics?

- **Humphrey Osmond** – A psychiatrist named Humphrey Osmond first used the term psychedelic in 1957, to denote the therapeutic tendency of these drugs.
- The word is derived from the Greek words psyche, meaning mind, and deloun, meaning to manifest.
- **Arthur Heffter** – The modern-day use of psychedelics is commonly associated with the German chemist Arthur Heffter isolating mescaline from the peyote cactus in 1897.
- **Albert Hofmann** – In 1938, while investigating compounds related to ergotamine, the Swiss chemist Albert Hofmann first synthesised LSD.

Ergotamine is present in ergot, an alkaloid that causes constriction of blood vessels and is used in the treatment of migraine, and it is produced by the parasitic rye fungus *Claviceps purpurea*.

What is the experience of using psychedelic substances?

- **Changes** – Users of psychedelic substances report changes in perception, somatic experience, mood, thought-processing, and entheogenic experiences.

Somatic experiencing is a form of an alternative therapy aimed at treating trauma and stressor-related disorders like PTSD, with the primary goal of modifying the trauma related stress response.

- **Perceptual distortions** – They most commonly include the visual domain.

Entheogens are psychoactive substances that induce alterations in perception, mood, consciousness, and cognition for the purpose of spiritual development or in sacred contexts.

- **Synaesthesia** – An intriguing phenomenon called synaesthesia may occur, where the sensory modalities cross and the user may ‘hear colour’ or ‘see sounds’.

Synaesthesia is the production of a sense impression relating to one sense or part of the body by stimulation of another sense or part of the body.

How do psychedelic substances work inside the body?

- **Serotonin** – Classical psychedelics boost brain serotonin levels.

Serotonin is the substance that is found mostly in the digestive tract, central nervous system and platelets.

- **Psilocybin** – Psilocybin’s therapeutic effects requires activation of serotonin receptors.
- About half of the ingested psilocybin is absorbed via the digestive tract.
- **Psilocin** – In the body, psilocybin is converted to psilocin, which is then metabolised in the liver.
- LSD is completely absorbed in the digestive tract and then metabolised in the liver.

Can psychedelic substances cause harm?

- **No deaths** – Death due to direct toxicity of LSD, psilocybin or mescaline has not been reported in the 50+ years of recreational use.
- **Synthetic psychedelics** – They have been associated with acute cardiac, central nervous system, and limb ischaemia, as well as serotonin syndrome.
- The psychological effects of psychedelics depend on the interaction between the drug and the user’s mindset (together called a set), and the environmental setting.

What is psychedelic-assisted psychotherapy?

- **Psychedelic-assisted psychotherapy** - It has three types of sessions:
 - Preparatory
 - Medication (1-3 sessions with moderate/high doses of psychedelic)
 - Integration

Can psychedelics be really used to treat depression?

- Psychedelic substances provide an intriguing avenue through which to probe the broader constructs of creativity, spirituality, and consciousness, aside from their therapeutic effects.
- If larger trials establish their safety and therapeutic efficacy, the FDA and other regulatory bodies may clear these agents for routine clinical use.

4. India-China Border Tensions: An Assessment of the Current Situation and Proactive Steps for India

- India needs to take proactive measures to address the ongoing border crisis with China in Ladakh, rather than relying on a status quo approach. The government's silence and euphemistic language on the issue have given the impression of incompetence and inaction, leading to concerns over India's capability to handle the situation

Brief background on the Ladakh border issue

- The border dispute dates back to the 1950s and 60s, when China made claims to the region and occupied large parts of it.
- In 1962, the two countries fought a brief war over the issue, which ended in a Chinese victory and the establishment of a de facto border line known as the Line of Actual Control (LAC).
- Since then, the two countries have had several standoffs and skirmishes in the region, with tensions escalating in recent years. T
- he latest border standoff in Ladakh began in May 2020 and continues to remain unresolved.

The Depsang crisis of 2013

- **Depsang Plains of Ladakh:** The Depsang crisis of 2013 refers to a tense border standoff between India and China that took place in the Depsang Plains of Ladakh in April-May 2013.

- **Chinese troops set up a camp:** The crisis began when Chinese troops set up a camp in the Depsang Plains, which is located about 19 km inside what India considers to be its territory.
- **Strategically important area:** The area is strategically important as it overlooks the strategically important Darbuk-Shyok-Daulat Beg Oldie (DSDBO) road that India had built to improve its connectivity to the border areas.
- **Negotiations and agreement over the withdrawal:** The situation was resolved after three weeks of negotiations, with the Chinese agreeing to withdraw their troops in exchange for a pledge from India to scale down its military presence in the area.
- **The crisis led to other standoffs:** The crisis highlighted the long-standing boundary dispute between India and China, which has led to several other standoffs and skirmishes over the years.

What is the current situation?

- The current situation at the Ladakh border is that some areas have witnessed disengagement, while two areas, Depsang and Demchok, remain unresolved. Indian soldiers are not allowed to touch 26 of the 65 patrolling points in Ladakh.
- Diplomatic meetings and talks between corps commanders have not elicited any progress since September last year. Regular meetings between Indian and Chinese Ministers, Foreign and Defence, have not yielded results either.
- India needs to find a way to transfer the pressure back to China, as Beijing has never compromised unless it has been forced into an uncomfortable spot.

Way ahead: Steps to transfer the pressure back to China

- **Bold use of imagination:** The political leadership needs to use its imagination boldly to find a way to impose its will upon China.
- **Be proactive:** India needs to be proactive in dealing with China, as Beijing has never compromised unless it has been forced into an uncomfortable spot.
- **Tactful action on LAC:** Tactical actions on the LAC need to be daring, and the military needs to be used as an instrument to pursue policy ends and try to impose its will upon the adversary.
- **Increase strategic thought:** Strategic thought in Delhi needs to be bold and innovative to find a way to wrest the initiative from China.
- **Avoid fear of military escalation:** India's fear of military escalation is holding back progress in the Ladakh border issue, and the government needs to overcome this fear to take proactive steps.
- **Utilize diplomatic channels:** India should leverage diplomatic channels and international forums to put pressure on China to resolve the border issue.

- **Strengthen domestic capabilities:** India should focus on building domestic capabilities, including military and economic, to match up to China's strengths and position itself better

in negotiations.

Conclusion

- India needs to take proactive measures to address the ongoing border crisis with China in Ladakh. A status quo approach can no longer be the answer, and India will have to wrest the initiative from China. Failure to do so would be a national failure for India, and the government must show boldness and imagination to resolve the crisis.

5. De-dollarisation: the race to attain the status of global reserve currency

In recent times, especially, post the start of the Russia-Ukraine war, the attempts to de-dollarise have gained momentum.

De-dollarisation

- De-dollarisation refers to the replacement of the U.S. dollar with other currencies as the global reserve currency.
- A reserve currency is a currency that is used extensively in international transactions between countries and is commonly held as reserves by the central banks of various countries.
- Countries across the world have been looking to replace the U.S. dollar as the global reserve currency for several years for various reasons.
- However, the imposition of sanctions on Russia that limit the use of the dollar to buy oil and other goods from Russia has forced countries to ramp up their efforts to de-dollarize the global economy.
- Since the international transactions that are carried out in the form of the U.S. dollar must be cleared by American banks, countries opine that this accords the U.S. significant powers to oversee and control such transactions.

The U.S. dollar as a global reserve currency

- Economists opine that the U.S. dollar was not forced upon any country to be used for cross-border transactions but instead, it was used because people actually preferred the U.S. dollar and is more widely accepted than the other currencies.
- Other currencies are not as popular as the U.S. dollar in order to be used for international transactions.

- For instance, the efforts undertaken by India and Russia to carry out bilateral trade in the form of Indian rupees did not yield intended results as the value of India's imports from Russia is significantly more than its exports to Russia.
- This trade balance meant that Russia had excess rupees which it was unwilling to spend on Indian goods. Hence Russia demanded the settlement of bilateral trade in U.S. dollars.
- The global acceptability of the U.S. dollar is mainly due to the popularity of U.S. assets among investors.
 - The U.S. has been experiencing a persistent trade deficit since 1975. This means that the value of the U.S. imports has been more than the value of its exports to other countries.
 - Therefore, the rest of the countries across the world have accumulated excess dollars due to the U.S.'s trade deficit and these excess dollars are being invested in U.S. assets like the debt securities issued by the U.S. government.
- Furthermore, the "rule of law" in the U.S., is said to be another key reason for the high level of trust the global investors have in the U.S. financial markets.
- The currencies of economic superpowers usually end up being used as the global reserve currency and currencies like the British pound and the French franc have enjoyed the status of the global reserve currency in the past.
 - However, with the economic decline of these countries, the currencies lost their popularity and status of being the global reserve currency.
 - The British pound which hitherto enjoyed the status was replaced by the U.S. dollar as Britain lost its status as a global economic superpower.

Advantages enjoyed by global reserve currency

- A currency that enjoys the status of being a global reserve currency will enjoy an advantage over other countries.
- If the currency of a country enjoys the status of being a global reserve currency, the country will have the power to purchase goods and other assets from other countries by simply printing fresh currency.
- Countries, companies and individuals using U.S. dollars for their transactions ensure more liquidity of the currency.
 - Increased liquidity means that financial assets can be priced more easily and loans are more easily provided.
- If a country's currency is being used as a global reserve currency, then that country will have the leverage to impose financial sanctions and play a key role in shaping global geopolitics.

Path ahead

- Expansionary monetary policies adopted by the U.S. Federal Reserve in recent times threaten the status of the U.S. dollar as a global reserve currency.
- The U.S. Federal Reserve usually increases the supply of dollars in order to address economic downturns and fund the U.S. government's expenditures.
 - However, such expansion of the supply of dollars can lead to the debasement of the currency that threatens its status as a reserve currency.
- The recent instances of the imposition of unilateral sanctions on various countries by the U.S., have forced other countries, including the allies of the U.S. to develop an alternate and dollar-free system.
- Chinese yuan is currently being viewed as a possible alternative to the U.S. dollar on account of the rise and growth of China's economic might. However, the concerns over the "rule of law" in China have adversely impacted its prospects.

6. What the law says about filing of FIR in sexual harassment cases

The Supreme Court (SC) has recently issued notice to Delhi Police on a petition filed by wrestlers seeking an FIR against Wrestling Federation of India (WFI) president on allegations of **sexual harassment**.

Laws on registration of an FIR once a sexual harassment complaint is received by the police:

- The **registration** of an FIR is the **first** step towards the probe.
- **Section 154 (1)** of the Code of Criminal Procedure (CrPC) enables the police to **register** an FIR after **information** is received about a **cognizable offence**.
 - A **cognizable offence/case** is one in which a **police officer** may make an **arrest** without a **warrant**.
 - Sections related to **sexual harassment** and **sexual assault** of the **Indian Penal Code (IPC)** fall within the category of **cognizable offences**.
- FIR sets into **motion** the **investigation** and the police may seek **custodial interrogation** of the accused, file a **chargesheet** based on the **evidence**, or file a **closure report** if the probe reveals **no merit** in the **allegations** made in the FIR.
- **Section 154 (1)** of the CrPC provides for the registration of a '**Zero FIR**'.
 - Under this, even if the **alleged offence** has **not** been committed within the **jurisdiction** of the **police station** approached, the **police** can file an **FIR** and **transfer** it to the concerned **police station**.

Is failure to register an FIR an offence?

- The report of the **Justice J S Verma Committee** had recommended **insertion** of a **section** where if an **officer-in-charge** of a **police station** refuses 'or without **reasonable cause**' fails to record **information** related to a **cognizable offence**, he shall be **punished**.
 - The Justice J S Verma Committee is also known as the **Committee on Amendments to Criminal Law**.
- Based on the committee's recommendation, **section 166A** was inserted in the **Criminal Law (Amendment) Act, 2013**.
 - **Section 166A**: if a **public servant** knowingly **disobeys** any direction of law including **failing to record** any information given to him in relation to a **cognizable offence**, then he shall be punished with **rigorous imprisonment** for **minimum 6 months** and **maximum 2 years** along with paying a fine.
- **Section 166A** includes all **cognizable offences**, the provision particularly mentions **certain** sections of the **IPC**, including those related to **sexual harassment, rape, and gangrape**.

Recent steps by government on this issue:

- The Ministry of Home Affairs (**MHA**) had issued **advisories** on mandatory action by **police** in cases of crimes against **women**.
- In 2020, the MHA **reissued** an **advisory** stating the need to **compulsorily** register an FIR in cases of cognizable offences under **section 154 (1)** of the CrPc.

The FIR provisions under Protection of Children from Sexual Offences (POCSO) Act:

- The **POCSO Act** mandates reporting of **sexual offences** against children.
- **Section 19** states that any **person** who has an apprehension that an **offence** under **POCSO Act** has been committed shall provide such information to the **Special Juvenile Police Unit** or the **local police**.
 - It requires the registration of an **FIR**, ascribing **information** received with an **entry number** and a **record in writing**.
- **Section 21** of the Act states that any **failure** to report the **commission** of an **offence** or failure to record such an offence shall be punished with **imprisonment** extending to **6 months** or a **fine** or both.
- The Act makes it **mandatory** for a **report** to be filed on receiving a **complaint**, including from a **child**.

What are the other remedies if police refuse to file an FIR?

- **Section 154 (3)** states that a person who has been **aggrieved** after a **police in-charge** has refused to file an **FIR** can send the information to the **Superintendent of Police (SP)**.
- The SP after **verification** that the information **discloses** the **commission** of an offence, shall either **investigate** the case herself or direct for a **probe** by any **police officer subordinate** to her.
- If a person is aggrieved by the **police's refusal** to file an FIR, a complaint can be made before a **magistrate** under **section 156 (3) of the CrPC**.
 - The **magistrate court** can then order **registration** of a case at the police station.
 - The complaint before the **magistrate** would be treated as an **FIR** and the **police** can initiate its **investigation**.

Can a preliminary inquiry be conducted before registration of an FIR?

- The **preliminary inquiry** is **not** relevant at the stage of **registration** of an **FIR**, such as, whether the information is **falsely** etc.
- The scope of **preliminary inquiry** is **not** to verify the **veracity** or otherwise of the information received but only to ascertain whether the **information** reveals any **cognizable offence**.
- **List of categories** of cases where **preliminary** inquiry can be made- family disputes, commercial offences, medical negligence and corruption cases or cases where there is an abnormal delay in reporting the matter.
 - The court said that the **preliminary** inquiry should **not** exceed **7 days**.

7. With Supreme Court's ruling on divorce, a look at its powers under Article 142 - and their criticism

Recently, A five-judge or constitution bench of the Supreme Court (SC) held that a **court** can directly **grant divorce** under **Article 142** of the Constitution.

Article 142 of the Constitution

- It provides a **unique power** to the SC, to do "**complete justice**" between the parties, where, at times, the **law** or **statute** may **not** provide a **remedy**.

SC's views on Article 142:

The Prem Chand Garg case 1962:

- The SC **demarcated** the **power** under **Article 142(1)** by stating that an order to do **complete justice** between the parties must be consistent with the **fundamental rights** or **substantive provisions** of the relevant **statutory** laws.
 - **Article 142(1)** empowers the SC to deliver **complete justice**.

- **Art. 142(1)** does **not** confer SC powers which can **contravene** the provisions of **Article 32** (right to constitutional remedies).

Union Carbide Corporation vs Union of India case:

- The SC ordered **UCC** to pay **\$470 million** in **compensation** for the victims of the tragedy.
- The **prohibitions** on provisions contained in **ordinary laws** cannot, **ipso-facto**, act as **prohibitions** on the constitutional powers under **Article 142**.

Supreme Court Bar Association vs Union of India, 1998:

- The powers under Article 142 are **supplementary** in nature and could **not** be used to **supplant** or **override** a substantive law and **build** a **new law** where none existed earlier.

A. Jideranath vs Jubilee Hills Co-op House Building Society, 2006:

- The SC held that in its exercise **no injustice** should be caused to a **person not party** to the case.

State of Karnataka vs Umadevi, 2006:

- The SC held that “**complete justice**” under **Article 142** should **not** be used to encroach into the **legislative domain**.

Criticisms of Article 142:

- It allows the possibility of its **arbitrary exercise** or **misuse** by SC due to the absence of a **standard definition** for the term “**complete justice**”.
- Unlike the **legislature** and the **executive**, the **judiciary cannot** be held **accountable** for its actions.
- It contravenes the **separation of powers doctrine**, which says that the **judiciary should not** venture into areas of **law making** and that it would invite the possibility of **judicial overreach**.

8. Twenty Point Programme: Government shines on 11 parameters

As per the data by the Ministry of Statistics and Programme Implementation (MoSPI) the government shines in 11 parameters tracked quarterly under the Twenty Point Programme.

MoSPI Data:

- Government achieved a **more than 90% target completion** ("very good") in six parameters and **80-90% ("good") in five**.
- In the April-December 2022 period, the performance in **three of 14 parameters** was "**poor**" or below the **80% target**.
 - These include areas covered under **plantation (public and forest lands) and** construction of roads under the Pradhan Mantri Gram Sadak Yojana (PMGSY).
- **PMGSY**: Target of constructing **35,385 km of roads** during April-December 2022, only **18,808 km, or 53%**, of roads were completed.
 - **15 of the 32 states/UTs** had a completion rate of **less than 40%**, while only **Uttar Pradesh and Odisha** had achieved 90% or more.
- Pradhan Mantri Awaas Yojana Gramin: 82% of the targeted 4 million houses were constructed during April-December 2022.

Twenty Point Programme (TPP):

- TPP was launched by the Government of India in **1975**.
- It was **first revised in 1982** and again in **1986**.
- TTP-86 has been restructured in **2006**.
- **20 Points** comprises **65 items** which are synonyms with the programmes/schemes being administered by **various Ministries/ Departments** of the Government of India.
- It covers various **socio-economic aspects** like poverty, employment, education, housing, health, agriculture, land reforms, irrigation, drinking water, protection and empowerment of weaker sections, consumer protection, environment, e- Governance, etc.
- TPP covers **66 items** out of which **25 items** will be monitored on **monthly basis**, remaining items will be monitored on **annual basis**.

9. Russia overtakes Australia as top supplier of pulverised coal injection to India

Russia emerged as the top supplier of pulverised coal injection (PCI) to India's steel mills, for at least five months of FY23.

- Russia displaced **Australia** as the key supply nation.

Pulverised Coal Injection (PCI)

- PCI is a process that involves injecting large volumes of fine coal particles into the raceway of the **blast furnace (BF)**.
- Pulverized coal is an important **auxiliary fuel** used in **BF ironmaking**.

- PCI provides auxiliary fuel for **partial coke replacement**.
- PCI has proven both **economically and environmentally favorable**.
- It can result in **substantial improvement in BF efficiency**.

History of PCI:

- It was developed in the **19th century** but was **not implemented** for industrial use.
- PCI was successfully implemented in **AK Steel of USA and Shougang in China** in the early 1960s.

PCI process system:

- It consists of a **number of sub-systems** from coal receiving to the injection of pulverized coal at each tuyere for fulfilling the requirements for PCI.
- **Six numbers of sub-systems:**
 - Storage and discharge of the raw coal,
 - Pulverizing and drying of the raw coal,
 - Transportation, storage, and supply of the pulverized coal to the injection system,
 - Uniform distribution of pulverized coal to each tuyere,
 - Combustion of pulverized coal, and
 - Explosion prevention facilities.

10. Article 355 imposed in Manipur

- Recently, unrest in the state of Manipur was triggered by a decision of the High Court to pursue a 10-year-old recommendation to grant Scheduled Tribe (ST) status to the non-tribal Meitei community.
- In view of the prevailing unprecedented burning situation, the Centre has imposed Article 355 in the state, in an effort to control the situation, according to reliable sources.

Article 355

- Article 355 of the Indian Constitution is a provision that empowers the Union government to protect every state in India against external aggression and internal disturbances.
- It is a provision under Part XVIII of the Constitution, titled “Emergency Provisions”.

- It is based on the principle of “duty to protect” enshrined in the Constitution, which makes it mandatory for the Union government to protect every state from external and internal threats.

Restrictions under Article 355

Under Article 355, the Union government has the power to issue directions to any state to ensure compliance with the Union’s laws and regulations. However, there are certain restrictions on this power:

- The directions can only be given when there is a failure of the state machinery to comply with or give effect to any Union law or regulation.
 - The directions should be of an urgent nature and may not extend beyond the necessary period for remedying the failure of the state machinery.
- The state government should be given an opportunity to submit its views before the issuance of such directions.
- The Union government cannot use this power to intervene in the internal affairs of a state unless there is a failure of the state machinery.

Duration of restriction

- The duration of the assistance provided under Article 355 is **not specified** in the Constitution.
- The Union government can **withdraw its assistance when the situation is normalized** or when the state government requests it to do so.
- The duration of the assistance provided under Article 355 is **subject to judicial review** and can be challenged in court if it violates any fundamental rights or constitutional provisions.

Circumstances of imposition

Article 355 can be invoked by the President of India in certain circumstances, such as:

1. When a state fails to comply with or to give effect to any of the directions given by the Union under the Constitution.
 2. When the security of India is threatened by external aggression or internal disturbance.
 3. When there is a threat to the unity and integrity of India due to any
- violent activities by any group or organization.

- When a state requests for assistance from the Union to maintain public order and the Union is satisfied that the situation in the state cannot be controlled by the state's own forces.
- When a state fails to provide adequate protection to minorities, particularly in cases of communal violence.
- When a state government fails to ensure that the constitutional machinery is maintained in the state.

Reasonable restrictions

It is important to note that the use of Article 355 is subject to certain restrictions:

1. The President cannot use this article on his/her own initiative; it must be done on the **advice of the Union Council of Ministers**.
2. The use of Article 355 **does not authorize the President to intervene directly** in the affairs of the state.
3. The President can use this article **only to give directions to the state government**, and not to the state legislature or the judiciary.
4. The use of Article 355 should be limited in duration and scope, and **should not result in the permanent erosion of the state's autonomy** or the violation of its constitutional rights.

Centrestage of the row: Meitei Community

- Manipur is geographically divided into the Imphal Valley and the surrounding hills.
- The Imphal Valley is dominated by the non-tribal Meitei community, which accounts for more than 64% of the population.
- The hills, which comprise 90% of Manipur's geographical area, are inhabited by more than 35% recognized tribes, which are largely Christians.
- The Meiteis are largely Hindus followed by Muslims, while the 33 recognized tribes are broadly classified into 'Any Naga tribes' and 'Any Kuki tribes.'

Behind the ST status: The Meitei Argument

- The Manipur High Court directed the State government to submit a 10-year-old recommendation for the inclusion of the Meitei community in the Scheduled Tribe (ST) list.
- The ST status is needed to "preserve" the community and "save the ancestral land, tradition, culture, and language" of the Meiteis.
- The Meiteis were recognized as a tribe before the merger of the State with the Union of India in 1949.

Tribal groups' opposition to the ST Status

- **Advantaged community:** Many tribal groups say the Meiteis have a demographic and political advantage besides being more advanced than them academically and in other aspects.
- **Benefits at others cost:** They feel the ST status to the Meiteis would lead to loss of job opportunities and allow them to acquire land in the hills and push the tribals out.
- **Already benefited:** The language of the Meitei people is included in the Eighth Schedule of the Constitution, and many of them have access to benefits associated with the SC, OBC, or EWS status.
- **Political vendetta:** The demand for ST status is a ploy to attenuate the fervent political demands of the Kukis and Nagas, as well as a tacit strategy of the dominant valley dwellers to make inroads into the hill areas of the State.

Immediate triggers of unrest

- Some tribal groups with vested interests are trying to scuttle Chief Minister Nongthombam Biren Singh's crusade against drugs.
- The anti-drug drive began with destroying poppy fields and the theory that "illegal settlers" from Myanmar – ethnically related to the Kuki-Zomi people of Manipur – are behind clearing forests and government lands to grow opium and cannabis.
- The first violent protest on March 10 was against the eviction of the residents of a Kuki village.
- The large-scale arson and violence claiming the life of at least one person on May 3 and 4 followed a "tribal solidarity rally" against the reported move to include the Meiteis in the ST list.

11. Legalizing Cannabis Cultivation and Decriminalizing Drug Use

- Himachal Pradesh is reportedly considering legalizing cannabis cultivation, joining Uttarakhand, Gujarat, and Madhya Pradesh. The criminalisation of cannabis cultivation and drug use in India under the Narcotic Drugs and Psychotropic Substances (NDPS) Act 1985 has resulted in long pre-trial incarceration, stigmatisation of users, and poor rehabilitation prospects. A public health approach could help address drug dependence and reduce the burden on the criminal justice system.

Cannabis

- Cannabis, also known as marijuana among other names, is a psychoactive drug from the Cannabis plant used primarily for medical or recreational purposes.
- The main psychoactive component of cannabis is tetrahydrocannabinol (THC), which is one of the 483 known compounds in the plant, including at least 65 other cannabinoids, including cannabidiol (CBD).
- It is used by smoking, vaporizing, within the food, or as an extract.

Prospects of legalizing Marijuana

1. Health benefits:

- The cannabinoids found in Cannabis is a great healer and has found mentioned in Ayurveda.
- It can be used to treat a number of medical conditions like multiple sclerosis, arthritis, epilepsy, insomnia, HIV/ AIDS treatment, and cancer.

2. Ecological benefits:

- The cannabis plant and seeds apart from being labelled a super-food as per studies is also a super-industrial carbon-negative raw material.
- Each part of the plant can be used for some industry. Hemp currently is also being used to make bio-fuel, bio-plastics and even construction material in certain countries. The cosmetic industry has also embraced Hemp seeds.

3. Marijuana is addiction-free:

- An epidemiological study showed that only 9% of those who use marijuana end up being clinically dependent on it.
- The 'comparable rates' for tobacco, alcohol and cocaine stood at 32%, 15% and 16% respectively.

4. Good source of Revenue:

- By legalizing and taxing marijuana, the government will stand to earn huge amounts of revenue that will otherwise go to the Italian and Israeli drug cartels.
- In an open letter to US President George Bush, around 500 economists, led by Nobel Prize winner Milton Friedman, called for marijuana to be "legal but taxed and regulated like other goods.

5. A potential cash crop:

- The cannabis plant is something natural to India, especially the northern hilly regions. It has the potential of becoming a cash crop for poor marginal farmers.
- If proper research is done and the cultivation of marijuana encouraged at an official level, it can gradually become a source of income for poor people with small landholdings.

6. Prohibition was ineffective:

- In India, the consumption of synthetic drugs like cocaine has increased since marijuana was banned, while it has decreased in the US since it was legalized in certain states.
- Moreover, these days, it is pretty easy to buy marijuana in India and its consumption is widespread among the youth. So it is fair to say that prohibition has failed to curb the problem

7. Marijuana is less harmful:

- Marijuana consumption was never regarded as a socially deviant behaviour any more than drinking alcohol was. In fact, keeping it legal was considered as an enlightened view.
- It is now medically proven that marijuana is less harmful than alcohol.

All you need to know about Narcotic Drugs and Psychotropic Substances (NDPS) Act 1985

- The Narcotic Drugs and Psychotropic Substances (NDPS) Act is an Indian law that prohibits the production, manufacture, possession, transportation, sale, and consumption of narcotic drugs and psychotropic substances.
- The Act was enacted in response to the US-led global war on drugs in the 1970s.
- The NDPS Act has been amended several times since its enactment, with the most recent amendment being in 2014.
- The Act defines different categories of drugs and prescribes different punishment for different offenses.
- The Act has been criticized for its strict provisions, especially for small-scale drug users, who are often imprisoned and face difficulty accessing rehabilitation and de-addiction centers. In recent years, there have been calls for decriminalizing small-scale drug use and treating drug consumers as victims rather than offenders.

Why criminalizing drug users is not a good option?

- **Pre-trial incarceration and stigmatization:** Criminalization means long pre-trial incarceration and stigmatization of drug users, who are often from socially and economically vulnerable backgrounds.
- **Lack of access to de-addiction centres:** Many drug users lack access to de-addiction centres, which makes their rehabilitation difficult.
- **Difficulty in rehabilitation:** Putting drug users behind bars makes their rehabilitation difficult and exposes them to the risk of becoming peddlers.
- **Overburdened criminal justice system:** Over-criminalisation of drug users clogs already burdened courts and adds to the workload of overworked investigating agencies.
- **Squandering public resources:** Public resources that could have been deployed to set up a robust rehabilitation network are squandered away in the process.
- **Ineffective in deterring drug use:** Criminalisation was intended to deter the use of drugs. However, drug dependence has increased over the years across the world.
- **Undermining social well-being:** The over-criminalisation of drug users undermines their social well-being, which perpetuates the cycle of addiction and crime.

Steps to address the negative impact of criminalizing drug users

- **Decriminalization:** The government should consider decriminalizing the possession of small quantities of drugs for personal consumption, as recommended by the Ministry of Social Justice and Empowerment. This will treat drug users as victims rather than culprits and facilitate their rehabilitation.
- **Public health approach:** The government should adopt a public health approach to address drug use as a public health issue. This involves providing healthcare services to drug users, focusing on their well-being and rehabilitation, rather than just punishing them.
- **Differentiating between peddlers and consumers:** The government should differentiate between drug peddlers and drug consumers and take different approaches to dealing with them. While drug peddlers should be punished, drug users should be treated as victims and provided with rehabilitation services.
- **Setting up a robust rehabilitation network:** The government should allocate resources to set up a robust rehabilitation network for drug users. This will help address the root cause of drug use and reduce its negative impact on society.
- **Public awareness campaigns:** The government should conduct public awareness campaigns to educate people about the negative impact of drug

use on health and well-being. This will help reduce the demand for drugs and prevent drug use among the population.

12. Covid is no longer an Emergency: what changes?

The World Health Organisation (WHO) has declared an end to the global emergency status for COVID-19. It had in 2020 declared the disease as Public Health Emergency of International Concern (PHEIC).

Practical effects of WHO declaration

- The classification of COVID-19 as a global emergency is meant to warn political authorities of an extraordinary event that could constitute a health threat to other countries and requires a coordinated response to contain it.
- For the average person, the decision to end the global emergency classification will have no practical effect.
- WHO's emergency declarations are typically used as an international SOS for countries who need help or to spur countries to introduce special measures to combat disease or release extra funds.

PHEIC

Definition: Under the International Health Regulations (IHR), a public health emergency is defined as “an extraordinary event which is determined, as provided in these Regulations: to constitute a public health risk to other States through the international spread of disease; and to potentially require a coordinated international response”.

Emergencies declared so far

- WHO has previously declared global emergencies for outbreaks of swine flu, Zika, Ebola, polio, and monkeypox.
- Polio was declared nearly nine years ago, and its emergency status has persisted even as officials work to wipe out the disease from a shrinking number of countries.
- MPOX was declared a global emergency last July but technically remains a global emergency.

What criteria does the WHO follow to declare PHEIC?

- PHEIC is declared in the event of some “serious public health events” that may endanger international public health.

- The responsibility of declaring an event as an emergency lies with the Director-General of the WHO and requires the convening of a committee of members.

Implications of a PHEIC being declared

- There are some implications of declaring a PHEIC for the host country, which in the case of the coronavirus is China.
- Declaring a PHEIC may lead to restrictions on travel and trade.
- However, several countries have already issued advisories to their citizens to avoid travelling to China, while others are airlifting their citizens from it.

Is COVID-19 still a pandemic?

- Yes, COVID-19 is still a pandemic, as the virus is here to stay and thousands of people continue to die every week.
- WHO chief Tedros warned that the risk remains of new variants emerging that cause new surges in cases and deaths.
- Countries need to transition from emergency mode to managing COVID-19 alongside other infectious diseases.

When will the COVID-19 pandemic end?

- It is unclear when the COVID-19 pandemic will end, as the virus is still a public health threat and its continued evolution could cause future problems.
- **Pandemics only truly end when the next pandemic begins.**
- COVID-19 will continue to spread among people for a very long time but at a much lower level of threat that does not require extraordinary measures taken to try to curb the virus' spread.

13. Law for mandatory recall of substandard drugs

There is rise of substandard drugs in the India due to lack of regulatory standards and no law to recall drugs.

Why the drugs failure in the Indian market is on the rise?

- **Fragmented regulatory structure** - Since each state have its own regulators and there are totally 38 drug regulators in India, so if a drug is banned from one state it can be sold in another state.
- **Jurisdictional issues** - Many regulators has led to inconsistent enforcement of the law and jurisdictional issues.
- **No focus on process** - The Indian system is still oriented towards end products (medicines sold in the market) rather than processes.

- **No transparency** - There are no transparency requirements or mandatory disclosures of medicinal requirements in the law.
- **Drug regulation being complex** - Drug regulation section of the union health ministry find it difficult to regulate since the regulation process is complex.
- **Lack of expertise** - In the drug relation section of the union health ministry.
- **Pharmaceutical industry over protecting public health** - The government has greater interest in enabling the growth of the pharmaceutical industry than protecting public health.
- **No law on drug recall** - Even though government has been mulling for a binding a law on drug recall since 1976, there exists guild lines for drug recall.

What are the measures taken for law on drug recall?

- **Drugs Consultative Committee (DCC)** - In 1976 discussed the issues of recall of bad drugs.
- The meeting resolved to have greater cooperation between various state drug controllers in order to facilitate better coordination to recall and destroy drugs that failed tests.
- **Parliamentary Standing Committee on Health & Family Welfare** - In 2012 raised the issue of recall of drugs but it didn't materialize.
- **Central Drugs Standard Control Organization (CDSCO)** - Proposed a set of draft recall guidelines, but the national regulator didn't convert the guild lines into the binding law.
- **Drug Controller General of India (DCGI)** - Announced that the guild lines proposed by the CDSCO will be converted into the binding law but it didn't materialize.
- **Drugs Technical Advisory Board (DTAB)** - Also discussed the issues concerning the recall on drugs but there was no resolution taken.

What is the way forward?

- To have comprehensive and clear public health policy that prioritizes public health over profit.
- To create an effective recall mechanism, the responsibility of recalling drugs has to be centralized so as to have legal responsibility over the drug companies.
- All manufacturing facilities should be licensed by a single national regulator so that it can be held accountable.
- The health activist have to work in tandem with the government to remove the substandard drugs in the Indian market.

14. Washington Declaration

Recently, South Korean President has arrived in the U.S. to commemorate the **70th anniversary** of **U.S.-South Korea bilateral relations** along with signing the **Washington Declaration**.

Washington Declaration:

- An **American nuclear ballistic submarine** would be deployed in the **Korean peninsula**.
- A **nuclear consultative group** would be formed to **formulate** principles of joint response tactics.
- **South Korea** would receive **Intel** from the U.S. regarding **nuclear advancements**.
- The U.S. will strengthen **South Korea's nuclear deterrence** capabilities through **joint military training programs** and an annual intergovernmental simulation.
- **South Korea** would **not** create its own **independent nuclear** capabilities and would focus on **deterrence** measures through an alliance-based approach.
 - The declaration reaffirmed the **non-proliferation Treaty**.

Why is the U.S. not keen on South Korea having a nuclear arsenal?

- In the **1990s**, the U.S. withdrew **100 nuclear weapons** from South Korea as part of their "**Strategic Arms Reduction Treaty**".
 - The U.S. aimed to make **North Korea** unarm.
- The U.S. wants to control **global nuclear arms** production.

15. Karnataka polls: EC issues advisory on advertisements

- Ahead of the State Assembly election in Karnataka on May 10th, 2023, the Election Commission (EC) has directed the political parties to refrain from publishing any advertisement in the print media on the day of the election and the day before without prior certification.
- The Election Commission has added that advertisements during the silence period will have to be pre-certified by the Media Certification and Monitoring Committee (MCMC).
 - The silence period usually begins 48 hours before the polling day and ends after polling ends, during which there are restrictions on active campaigning by the candidates or political parties.
- The Election Commission further wrote to editors of newspapers in the State that the Press Council of India's (PCI) norms for journalistic conduct held

them responsible for all matters, including advertisements, published in their newspapers.

- On the 2nd of May 2023, the poll body had taken serious note of the “plummeting” level of campaign discourse for the Karnataka Assembly polls and had asked political parties to exercise restraint and focus on “issue” based debates.

Switching on India’s smart electricity future

India will soon have a smart transmission system incorporating features that can improve efficiency, disaster preparedness, etc.

About Smart Meters:

- Smart meters are **next-generation digital electricity meters** that measure energy consumption and communicate this information back to the utility company in near real-time.
- Unlike traditional electric meters that require manual reading, smart meters automatically send readings to the utility company, enabling a two-way communication between the meter and the utility.

India’s Vision:

- India is striving hard to implement this vision by installing **more than 5.5 million smart meters, with over 100 million sanctioned for installation.**
- The country aims to replace 250 million conventional electric meters with prepaid smart meters by 2025-26.
- To support this initiative, India is providing a results-linked **grant-cum-financing to power distribution companies (discoms)** to become financially sound and efficient in providing better services to consumers.

Benefits of Smart Meters over traditional electric meters: A recent study by the **Council on Energy, Environment and Water (CEEW)** found that the majority of smart meter users have already begun to experience some of the technology benefits.

- **Accurate billing:** Smart meters enable accurate billing as they eliminate the need for estimated bills, providing customers with accurate and transparent information about their energy usage.
- **Near real-time data:** Smart meters provide near real-time data on energy consumption, enabling customers to monitor their usage and make informed decisions about their energy consumption.

- **Dynamic pricing:** Smart meters have the potential to enable dynamic pricing, where electricity tariffs vary depending on the time of day, season or other factors, incentivizing customers to use energy when it's cheaper and reducing demand during peak hours.
- **Improved energy management:** Smart meters allow utilities to better manage energy supply and demand, reduce power outages, and integrate renewable energy sources more effectively.
- **Energy theft detection:** Smart meters can help detect and respond to energy theft, reducing losses for utilities and ensuring a fair distribution of energy costs.
- **Customer control:** Smart meters provide customers with more control over their energy consumption, allowing them to better manage their energy usage and reduce their bills.

Challenges:

- **High Capital Costs:** A full scale deployment of smart meters requires expenditures on all hardware and software components, network infrastructure and network management software, along with costs associated with the installation and maintenance and information technology systems.
- **Integration:** Smart Meter must be integrated with utilities' information technology systems, including Customer Information Systems (CIS), Geographical Information Systems (GIS), Outage Management Systems (OMS), Mobile Workforce Management (MWM), Distribution Automation System (DAS), etc.
- **Standardisation:** Interoperability standards need to be defined, which set uniform requirements for technology, deployment and general operations.
- **Release of Radiation:** Unlike the electronic meter, the smart meter allows 'communication' among the consumer and the meter, hence there is probability of release of radiation.

Way Forward:

India is on a unique journey of meeting its growing electricity demand while decarbonizing its generation sources. Smart meters comprise a critical part of the transition toolbox, by way of enabling responsible consumption, efficient energy management, and cost-effective integration of distributed energy resources.

Therefore, with the effective implementation, India can improve smart meter deployment and user satisfaction, making the smart-meter revolution a reality.

16. All India Survey on Higher Education: A Wake-up Call for the Muslim Community

- The recently released All India Survey on Higher Education 2020–21 has shown some alarming trends. While there have been improvements in the enrollment of certain communities in higher education, there has been a drastic drop in the enrollment of Muslim students. The survey provides a grim picture of the marginalisation of the Muslim community in higher education and the need for the government to take action to address.

Findings of the survey

1. Enrollment overview:

- Enrollment of Dalits, Adivasis and OBCs in higher education increased by 4.2%, 11.9%, and 4% respectively compared to 2019-20.
- The upper castes showed the highest growth rate of 13.6%, after declining with the implementation of Mandal II in the late 2000s.

2. Enrollment of Muslim students:

- The enrollment of Muslim students dropped by 8% from 2019-20, by 1,79,147 students. This level of absolute decline has never happened in the recent past for any group.
- UP accounts for 36% of the total decline in Muslim enrollment, followed by Jammu and Kashmir (26%), Maharashtra (8.5%), Tamil Nadu (8.1%), Gujarat (6.1%), Bihar (5.7%) and Karnataka (3.7%).
- Muslims constitute about 4.6% of total enrollment in higher education while they represent about 15% of society.
- Among major states, in 2020-21, Muslims did not do better than Dalits except in Tamil Nadu, Telangana and Delhi. Kerala tops in the percentage of Muslim youth (43%) who are currently attending higher education.

Factors behind declining enrollment of Muslim students

- **Lack of job opportunities:** Muslim students face a high unemployment rate, which means that they may not see higher education as a path to a good job.
- **Discrimination:** There is discrimination in the job market against Muslim candidates. Studies have shown that Muslim candidates are less likely to be invited to job interviews compared to candidates with Brahmin or Dalit names.
- **Economic factors:** Muslim students may not have the financial means to pursue higher education, and may have to work to support themselves and their families. This can lead to a high dropout rate.

- **Violence and ghettoization:** Violence against Muslims has increased, which has led to a sense of fear and insecurity, and has restricted their mobility. This has resulted in a trend towards ghettoization.
- **Discriminatory policies:** Some state governments have stopped providing financial support to Muslim students pursuing higher education. This has made it more difficult for them to access higher education opportunities.

All you need to know about Sachar Committee report, 2006

- The Sachar Committee was commissioned by the Indian government in response to concerns about the social and economic status of Muslims in India.
- The committee surveyed the status of Muslims across various parameters, including education, employment, and access to social services.
- The report found that Muslims in India were disproportionately affected by poverty, illiteracy, and lack of access to basic services such as healthcare and sanitation.
- The report highlighted the need for affirmative action policies to address the marginalization of Muslims, such as reservations in education and employment.
- The report also recommended the establishment of an Equal Opportunities Commission to address discrimination against Muslims and other minority communities in India.
- The Sachar Committee Report sparked a national debate about the social and economic status of Muslims in India and led to increased attention on the issue of affirmative action for marginalized communities.

Policy recommendations to address low Muslim students enrollment

- **Initiate positive discrimination policies:** The government could implement policies such as sub-quotas for Muslims within the OBC quota to improve their access to higher education opportunities.
- **Provide scholarships and fellowships:** The government could provide greater financial support to minority students pursuing higher education, such as scholarships and fellowships, to help them overcome economic barriers.
- **Address discrimination in the job market:** The government could work to create more job opportunities for Muslims and address discrimination in the job market to help improve their economic prospects.
- **Promote social and economic equality:** The overall goal should be to promote greater social and economic equality for Muslims in India, which could involve a range of policies and initiatives focused on education, employment, and other areas.

Conclusion

- The All-India Survey on Higher Education highlights the deepening marginalisation of the Muslim community in higher education and the need for the government to take action to address the situation. Positive discrimination in favour of Muslims, as recommended by the Sachar Committee Report, is the need of the hour to ensure equitable access to higher education for all communities. Without such efforts, India will not be able to realise its potential and contribute to the harmonious development of society.

17. Misleading food ads and regulations to curtail them

- FSSAI flagged 32 cases of food business operators (FBOs) making misleading claims and advertisements in contravention of the Food Safety and Standards (Advertisements & Claims) Regulations, 2018.
- The cumulative count of such offences has shot up to 170 in the last six months.
- FBOs urged to avoid making unscientific and exaggerated claims for larger consumer interest.

Regulations for tackling misleading ads and claims

- Regulations include-
- 1. FSSAI's Food Safety and Standards (Advertisements & Claims) Regulations, 2018
- 2. CCPA's regulations, and Cable Television Network Rules, 1994.
- FSSAI seeks truthful, unambiguous, meaningful, and scientifically substantiated claims.
- Claims suggesting suitability for prevention, alleviation, treatment, or cure of a disease, disorder, or particular psychological condition prohibited unless permitted under the regulations of the FSS Act, 2006.

Response of FSSAI

- Scrutinized products in categories such as health supplements, organic products, fast-moving consumer goods (FMCG) products, and staples endorsing certain health and product claims.
- Alleged violators include manufacturers and/or marketers of nutraceutical products, refined oils, pulses, flours, millet products, and ghee.
- Cases referred to concerned licensing authorities to issue notices and withdraw the misleading claims or scientifically substantiate them.

- Failure to comply would invite penalties of up to Rs 10 lakh, suspension, or cancellation of licenses for repeated offenses.

Recent observations in the food advertising ecosystem

- **Non-disclosure:** Close to 788 ads processed against food advertising, about 299 related to non-disclosure by food influencers, and 490+ ads found to be misleading.
- **Fairly violative sector:** Violations across different food categories and food.

Definitions of various terms

- **Natural food product:** A single food derived from a recognized natural source with no additives or chemicals.
- **Fresh:** This reference is allowed only for products not processed except washing, peeling, chilling, trimming, cutting, or low-dose irradiation.
- **Pure:** It is used for single-ingredient foods with nothing added and devoid of all avoidable contamination.

Expectations from a consumer's point of view

- **Clinical data:** Companies need to provide clinical data about the outcomes pertaining to the control group, the administered group, and the observed period of the claimed outcomes.
- **Interpretable ads:** Advertisements need to be modified in a way a consumer can interpret.

18. Indian Sludge Shows High Fertilizer Potential: First Study Reveals

The article discusses the results of an analysis of the sludge found in Indian sewage treatment plants (STP) that were set up to treat polluted water from the Ganga under National Mission for Clean Ganga.

Sludge classification

- India doesn't yet have standards classifying sludge as class A or B.
- Treated sludge can be classified as class A or class B, as per the standards of the United States Environment Protection Agency.

1. **Class A sludge:** It is safe to be disposed of in the open and useful as organic fertilizer.

2. **Class B sludge:** It can be used in restricted agricultural applications, with the edible parts of the crop not exposed to the sludge-mixed soil, and animals and people not come into extensive contact.

Current sludge disposal practices

- Currently, those awarded contracts for developing and maintaining STPs under the Namami Ganga Mission are also apportioned land for disposing off sludge.
- However, the sludge is rarely treated, and during rains, it often makes its way back into rivers and local water sources.

Study's findings

- The sludge analysed after drying fell into the class B category.
- Nitrogen and phosphorus levels were higher than those recommended by India's fertilizer standards, but potassium levels of some sludges were less than recommended.
- The degree of pathogens, as well as heavy metal contamination, was above the recommended fertilizer standards.
- The calorific value of sludge ranged from 1,000-3,500 kcal/kg, which is lower than the average calorific value of Indian coal.

Recommendations to improve sludge quality

- The report recommends storing the sludge for at least three months to kill pathogens and blending it with cattle manure and husk or local soil to reduce heavy metal.
- However, this would still put it in class B, and converting it into grade A sludge would require far more extensive treatment.

19. Medical Value Travel

India hosted 'One Earth One Health - Advantage Health Care-India 2023' summit at New Delhi to promote Medical value travel in India.

What is 'One Earth One Health - Advantage Healthcare India 2023' program?

- The Ministry of Health and Family Welfare in association with the Federation of Indian Chambers of Commerce & Industry has co-branded the 6th edition of One Earth One Health - Advantage Healthcare India 2023 with India's G20 Presidency.

- The event will emphasize the importance of global collaborations and partnerships for building resilient global health architecture.
- It is a two-day event is to showcase India as the *new hub of Medical Value Travel* and its emergence as a major hub for world-class healthcare, wellness services and medical tourism.
- It also aims to highlight India's significance in medical potential and create and explore opportunities for healthcare collaborations between the participating countries.

What is medical tourism?

- Medical tourism also known as medical value travel (MVT) is the practice of travelling *across international borders* seeking medical services, mainly elective or complex surgeries.
- Stakeholders in medical tourism include airlines, hospitals, wellness centers and hotels among others.
- Currently, the most sought-after destination for medical value travel is *Canada*.

NITI Aayog estimates that the Indian economy could earn an additional USD 9 billion by 2026 from MVT and wellness tourism.

Why is India a preferred MVT destination?

- **Trained and experienced doctors** - The doctors in India are more experienced compared to rest of the world.
- **Well trained nurses** - According to Ministry of Tourism website, India has 1000 recognized nurses-training centers with 10,000 nurses graduating annually.
- **India's traditional medical** - Such as ayurveda, yoga & naturopathy and other traditional systems of medicine are considered best for the treatment of various ailments, promoting wellness tourism.
- **Low cost of treatment** - The treatment in India is very low compared with the other countries.
- The cancer treatments are *65-90% cheaper rates* when compared to US, Europe, Australia or even Singapore.
- 200 types of medical services - India offers over 200 types of medical services ranging from fertility treatments to skincare.
- **Others** - *Cost-effective healthcare services*, quality diagnostic equipment and trained doctors, with many of them fluent in English.

India ranked tenth globally for medical tourism with a score of 69.80 on Medical Tourism Index 2020-2021 (MTI).

Initiatives to promote MVT

- **National Strategy and Roadmap for Medical and Wellness Tourism** - Was rolled out by union government in January 2022 to provide health services to the world at large.
- **Heal in India campaign** - Launched by union government to market the nation as a wellness and medical tourism destination.
- 37 hospitals including 30 private hospitals across 17 cities have been identified to cater to MVT.
- **E-visas** - India has launched e-visas for MVT travelers from 156 nations.
- **Online MVT portal** - The union government plans to launch a one-stop online MVT portal.
- The portal will include mapping of all medical facilitators including government and private hospitals, booking of services, payments and post-operative services.

What are the challenges to MVT sector?

- Lacks government regulations and monitoring.
- Lacks a separate body to head MVT and coordinate between various stakeholders.
- No standard prices for treatments across India.
- The lack of a price range leaves tourists susceptible to cheating.
- No medical insurance portability for MVT travelers.
- Lack of awareness about National Accreditation Board for Hospitals and Healthcare Providers, India's national medical accreditation.

20. Anti-Conversion Legislation In India

The Uttar Pradesh government has released figures regarding the Prohibition of Unlawful Conversion of Religion Act Amid the ongoing controversy over The Kerala Story movie.

- The government said 427 conversion-related cases were reported between January 1, 2021, and April 30, 2023.

Status of the anti-conversion law in India:

- There are several anti-conversion laws in India that regulate the conversion of one religion to another. These laws vary from state to state, and the specific provisions of the laws can differ significantly.

- **Constitutional Provision:** Article 25 of the Indian Constitution guarantees the freedom to practise, profess, and propagate any religion.
 - It also grants all religious groups the right to control their own religious affairs, subject to public morality, health, and order.
- **Existing Laws:** Religious conversions have not been subject to any national restrictions or regulations.
 - Private Member Bills to control religious conversions, however, have repeatedly been introduced in the Parliament since 1954 (but never passed by it).
- **Additionally, the Union Law Ministry stated in 2015** that Parliament lacks the legislative authority to enact legislation prohibiting conversion.
 - Several states have passed “Freedom of Religion” laws over the years to prohibit forced, fraudulent, or coerced conversions to another religion.
- In general, however, **anti-conversion laws in India require that individuals** seeking to convert to another religion must obtain permission from the government before doing so.
 - Some states have more stringent anti conversion laws than others, and some states have provisions that specifically target certain religious groups or activities.
- **In recent years**, there has been significant controversy and debate over the use of anti-conversion laws in India.
 - Some people argue that these laws are necessary to protect the cultural and social cohesion of the country,
 - while others believe that they are used to suppress minority religions and violate the right to freedom of religion.
- **The Supreme Court of India** has ruled that anti conversion laws are constitutional as long as they are not used to interfere with an individual’s right to freedom of religion.
 - However, there have been cases in which these laws have been used to target and persecute minority religious groups.

Supreme Court’s Observations:

- The **Supreme Court verdict in Rev. Stainislaus vs. State of Madhya Pradesh** in the 1960s is frequently cited in matters involving religious freedom.
- Then **Chief Justice of India A.N. Ray dissected Article 25** to hold that “the Article does not grant the right to convert other persons to one’s own religion but to transmit or spread one’s religion by an exposition of its tenets.”
- Recently, the Supreme Court emphasised that Forced religious conversions are “dangerous” and they affect the security of the nation.
- It urged the Union government to “step in” and apprise the court of the measures being taken to prevent such occurrences.

Arguments in Favour of anti-conversion:

- These laws only ban and punish forceful religious conversion.
- Fundamental rights under **Article 25 'Right to propagate a religion'** did not extend to forced conversions.
- There is no fundamental right to convert another person to one's own religion.

Arguments against anti-conversion:

- According to some activists **"Such laws are used to target religious minorities and interfaith couples"**.
- These laws would be used to target even voluntary conversions, and curb the fundamental rights **"Freedom of conscience" under Article 25**.
- These Acts do not satisfy the test of reasonableness and fairness, and also go against the Fundamental rights under **Article 14 and Article 21" of the Constitution**.

Right to Freedom of religion in India

- The Indian Constitution allows individuals the freedom to live by their religious beliefs and practices as they interpret these.
- In keeping with this idea of religious freedom for all, India also adopted a strategy of separating the power of religion and the power of the State

Constitutional Provisions:

- **Article 25:** Freedom of conscience and free profession, practice and propagation of religion
- **Article 26:** Freedom to manage religious affairs
- **Article 27:** Freedom to pay taxes for promotion of any particular religion
- **Article 28:** Freedom to attend religious instruction or worship in certain educational institutions.

Way Forward:

The right to religion did not include the right to convert other people to a particular religion, especially through fraud, deception, coercion, allurements, and other means. The conversion laws must be strengthened and rightly so to stop the use of lures and force but they should not discriminate among religions while identifying the perpetrators.

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22. Maharashtra Political Crisis

The Supreme Court has passed a unanimous judgement on the various issues related to the split in Shiv Sena in June 2022.

Case about

- The Maharashtra political crisis started in June 2022, when Uddhav Thackeray headed the Maharashtra government as part of the Maharashtra Vikas Aghadi (MVA).
- MVA is a three-party alliance consisting of the Shiv Sena, the Congress and the Nationalist Congress Party (NCP).
- The ruling Shiv Sena called a meeting of all its MLAs in Mumbai but some of its legislators have aligned themselves with the party's rebel leader (Eknath Shinde).
- Treating anti-party activities as 'voluntarily' giving up membership of the political party, Thackeray had issued 16 disqualification petitions, through Deputy Speaker under the **Tenth Schedule**.

Previous court orders

- **Shinde's petition** - The Shinde group challenged the notices before the Supreme Court on the grounds that a no-confidence motion for the removal of Deputy Speaker has been moved and that he couldn't decide on the disqualification petitions.
- In 2022, the vacation bench of the Supreme Court stayed the disqualification proceedings, and gave extended time period to the legislators led by Shinde to respond to these petitions.

- This order created a controversy because the Supreme Court, in its landmark judgment of **Kihoto Hollohan case**.

In **Kihoto Hollohan versus Zachillhu & Ors (1992)**, the SC had held that it could not interfere in the jurisdiction of a Speaker, except when there is an interim disqualification.

- **Thackeray's petition**- The then Governor Bhagat Singh Koshyari ordered a floor test to be held in the Assembly based on the request of the Shinde faction.
- This was challenged by the Thackeray-led government in the Supreme Court but the Court refused to interfere and did not stay the floor test.
- So, Thackeray resigned as Chief Minister and Eknath Shinde was later sworn in as the Chief Minister.
- In 2023, the Election Commission ruled that the Shinde faction had the right to use the name 'Shiv Sena' and the election symbol 'Bow and Arrow' that is reserved for the party under **The Symbols (Reservation and Allotment) Order, 1968**.

Recent Supreme Court ruling about

- **Disqualification of MLAs** - The SC said that it cannot interfere in the proceedings and the Speaker must decide on the issue of the disqualification of the 16 MLAs, including Shinde.
- **Restoring Uddhav Thackeray government** - Since Uddhav Thackeray resigned as the chief minister and did not face the floor test, his government cannot be restored.
- **Governor's role in calling floor test** - The court held that the then Maharashtra governor did not act in accordance with the law as he had no objective material to doubt the confidence of the Thackeray government.
- **Appointment of Chief whip** - The SC held the appointment of Bharat Gogawale as the Chief Whip of the Shiv Sena to be "illegal".
- It also held that the speaker should have conducted an independent inquiry to identify two whips issued by two factions of the political party.
- **Speaker and ECI** - The SC also held that the Speaker and Election Commission can concurrently adjudicate the disqualification issues and the dispute related to the poll symbol of Shiv Sena.
- **Issues with Nabam Rebia judgement** - The SC referred certain issues related to its 2016 judgment in the Nabam Rebia case to a larger bench.

In '**Nabam Rebia & Bamang Felix v. Deputy Speaker, Arunachal Legislative Assembly**' (2016), the SC had ruled that it would be constitutionally impermissible for a Speaker of the House to adjudicate upon disqualification petitions under the

anti-defection law as per Tenth Schedule while a motion of resolution for his/her own removal from Office of Speaker is pending.

23. Supreme Court guideline for granting Bail

The Supreme Court emphasized that orders in bail cases should adhere to the constitutional principle of personal liberty.

Supreme Court on Bail

- **Short debates:** Prolonged debates on bail may prejudice the accused in their case.
- **Upholding liberty:** Delays in pronouncing bail decisions impinge on the personal liberty of the undertrial.
- **No extensive discussions and elaborations:** The Supreme Court highlights the significance of brevity (state of being brief, concise) in bail orders.
- **No early delving into case details:** Long orders may unnecessarily delve into the details of the case, which is not appropriate at the bail stage.
- **Ensuring fairness and impartiality:** Such brevity ensures that the case is not unduly influenced or prejudiced during the bail proceedings.
- **Promptness in pronouncing bail decisions:** The Court emphasized the need for prompt pronouncement of bail decisions. Every day of waiting affects the personal liberty of the undertrial.

Bail

- Bail is the conditional release of a defendant with the promise to appear in court when required.
- The term also means the security that is deposited in order to secure the release of the accused.

Types of Bail in India

- Depending upon the stage of the criminal matter, there are commonly three types of bail in India:
 1. **Regular bail:** Regular bail is generally granted to a person who has been arrested or is in police custody. A bail application can be filed for the regular bail under section 437 and 439 of CrPC.
 2. **Interim bail:** This type of bail is granted for a short period of time and it is granted before the hearing for the grant of regular bail or anticipatory bail.

3. **Anticipatory bail:** Anticipatory bail is granted under section 438 of CrPC either by session court or High Court. An application for the grant of anticipatory bail can be filed by the person who discerns that he may be arrested by the police for a non-bailable offense.

Conditions for Grant of Bail in Bailable Offences

- Section 436 of the Code of Criminal Procedure, 1973, lays down that a person accused of a bailable offence under IPC can be granted bail if:
 1. There are sufficient reasons to believe that the accused has not committed the offence.
 2. There is sufficient reason to conduct a further inquiry in the matter.
 3. The person is not accused of any offence punishable with death, life imprisonment or imprisonment up to 10 years.

Conditions for Grant of Bail in Non-Bailable Offences

- Section 437 of Code of Criminal Procedure, 1973 lays down that the accused does not have the right to apply for bail in non-bailable offences.
- It is discretion of the court to grant bail in case of non-bailable offences if:
 1. The accused is a woman or a child, bail can be granted in a non-bailable offence.
 2. There is a lack of evidence then bail in non-Bailable offenses can be granted.
 3. There is a delay in lodging FIR by the complainant, bail may be granted.
 4. The accused is gravely sick.

Why bail needs reform?

- **Huge pendency of undertrials:** Referring to the state of jails in the country, where over two-thirds lodged are undertrials,
- **Indiscriminate arrests:** Of this category of prisoners, majority may not even be required to be arrested despite registration of a cognizable offense, being charged with offenses punishable for seven years or less.
- **Disadvantageous for some sections:** They are not only poor and illiterate but also would include women. Thus, there is a culture of offense being inherited by many of them.
- **Colonial legacy:** Theoretically, the court also linked the idea of indiscriminate arrests to magistrates ignoring the rule of “bail, not jail” to a colonial mindset.

What is the law on bail?

- The CrPC does not define the word bail but only categories offences under the Indian Penal Code as 'bailable' and 'non-bailable'.
- The CrPC empowers magistrates to grant bail for bailable offences as a matter of right.
- This would involve release on furnishing a **bail bond, without or without security**.

Way forward

- Bail Law would certainly take care of not only the unwarranted arrests but also the clogging of bail applications before various courts.
- With restrictive bail conditions and a conservative view on bail, we may forget the meaning of personal liberty, which is the greatest of human freedoms enjoyed in India.

24. The nutritional value of millets

Millets are gaining popularity across the world as the UN Food and Agriculture Organization (FAO) has declared 2023 to be the "International Year of Millets"

Millets

- Millets are mainly grasses that are cultivated across the world as cereal crops, particularly in the tropical regions of Africa and Asia.
- The most famous varieties of millet include pearl millet, barnyard millet, finger millet, and foxtail millet.
- India is the largest producer of millets in the world.
 - Evidence indicates that millets were first cultivated in the Indian subcontinent about five millennia ago.
- According to reports, India In 2021-2022 accounted for about 40.51% of the world's pearl millet production and 8.09% of sorghum.
- In India, pearl millet accounts for about 60% of all the millet production which is followed by sorghum (27%), and ragi (11%).

Significance of Millet cultivation

- **High nutritional value:** The nutritional value associated with millets is very high compared to other major extant food crops.
 - The nutritional content of millets includes carbohydrates, proteins, fibre, amino acids, and minerals.
- **Drought resistant:** Millets have the ability to withstand and grow in harsh, resource-poor conditions.

- Millets are drought-tolerant and can grow in warm weather, requiring less moisture and loamy soil.
- **Affordable nature:** Millets can grow on arid lands with minimal inputs. Thus cultivation of millet ensures that affordable foods can be produced that can contribute to healthy diets and a healthy environment.
- **Food security and economic viability:** Millets being climate-smart grains offer great opportunities for strengthening food security, nutrition security and bolstering economic growth.

Processing of Millets and its impact on nutritional content

- The 'whole grain' consists of the endosperm, germ, and bran (pericarp + aleurone). However, the "refined grain" refers only to the endosperm.
 - The endosperm is the largest part of the millet kernel and is called the "storage centre". The endosperm also has a protein covering called the "aleurone".
 - The pericarp has an outer covering called the husk. The husk and the pericarp protect the kernel from harsh conditions, diseases, and damages.
- Processing of millets for consumption can affect nutrients in three different ways, namely enhancing them, suppressing them, and ignoring them.
- During processing, the husk is first removed from the grains as it is made of cellulosic matter that the human body cannot digest.
 - However, this results in the decline of the phytic acid and polyphenol contents in the millets.
- The next step in processing involves decortication of the grain, wherein the outer covering is removed in order to expose the seed. This is made to make the grain more edible and attractive.
 - Decortication of the grains adversely impacts the crude and dietary fibre content in the millet grains.
- The next steps involve milling, grinding (into flour), and sieving to remove large impurities such as bran.
 - Studies have revealed that sieving made the flour more digestible. However, it also reduced nutrient content due to the removal of bran.
- Polishing is typically the last step and it is a process wherein brown rice, for example, is changed to white rice by rubbing off the bran and the germ.
 - According to various studies, polishing removed 8-10% of grain weight and also removed important nutritional contents such as iron, magnesium, phosphorus, potassium, and manganese.

25. Indo-Pacific Economic Framework for Prosperity (IPEF)

here are apprehensions that the U.S.-driven Indo-Pacific Economic Framework for Prosperity (IPEF) would result in a complete stranglehold over the economic systems of the participating countries.

IPEF

The 14 IPEF partners represent 40 % of global GDP and 28 % of global goods and services trade.

- **Launch** - IPEF is launched by by USA in 2022 to reassert U.S. economic engagement and to provide a U.S.-led alternative to China's economic statecraft in the region.
- **Member countries** - 14 - USA, Australia, Brunei Darussalam, Fiji, India, Indonesia, Japan, the Republic of Korea, Malaysia, New Zealand, Philippines, Singapore, Thailand, and Vietnam excluding China.
- **Aim** - To contribute to cooperation, stability, prosperity, development, and peace within the region.
- **No tariffs** - IPEF proposal completely removes the tariff element of typical trade deals.
- **Four pillars**
 1. Trade
 2. Supply chains
 3. Clean energy, decarbonization, and infrastructure
 4. Tax and anti-corruption
- The IPEF is flexible as IPEF partners are not required to join all four pillars.

India's position in IPEF

- India has joined 3 pillars except the trade pillar.
- Since India is in the process of firming up its own digital framework and laws, regarding privacy and data, India will wait for the final outlines to emerge.
- India expects that certain responsibilities of the developed world should also be an integral part of any such agreement.
- India has also few concerns about environment, labor, digital trade and public procurement.

In 2019, India walked out from the Regional Comprehensive Economic Partnership (RCEP) involving China, Japan, South Korea, Australia, New Zealand and the 10-state Association of Southeast Asian Nations (ASEAN) grouping.

What are the concerns in joining the IPEF?

- There is great pressure on India to join the trade pillar, but the other pillars also contribute to developing hard new economic architectures and structures that are not tariff-based.
- In the long run, it could have a stronger effect on economic and trade flows than tariffs.
- In an increasingly digitalising world, fixed supply chains and giving up policy spaces in key areas would lead to an irreversible economic dependency.
- The IPEF can already be seen to have deep implications in
 - Agriculture, in terms of genetically modified seeds and food,
 - Surrendering policy space for regulating Big Tech,
 - Compromising a comparative advantage in manufacturing because of unfair labour and environment standards.
- It will also seriously affect India's ability to create a vibrant domestic ecosystem in emerging areas such as a digital economy and green products.

26. A Court recall that impacts the rights of the accused

Supreme Court of India has recalled its decision on the Ritu Chhabaria vs Union of India case.

Introduction:

- On 1st May 2023, Supreme Court (SC) recalled its decision on the Ritu Chhabaria vs Union of India case.
- It was insisted by the Solicitor General of India that central investigation agencies were 'facing difficulties'.
- On 12th May 2023, SC issued an interim order clarifying that courts could grant default bail independent of and without relying on the Ritu Chhabaria judgment.
- It is argued that the Court's decision to suspend the rights of defendants in criminal cases might result in further erosion of the constitutional rights of the accused. It will also be against the fundamental principles of criminal procedure.

Right to Default Bail:

- The right to statutory bail also called default bail, is available to the accused in instances when the investigating agency cannot complete its investigation within the time limit.

- According to Section 167(2) of the Code of Criminal Procedure (CrPC), the maximum time available to investigators is 60 or 90 days.
- If the investigation is not completed within this time period, the accused can apply for default bail under the first proviso to Section 167(2) of the CrPC.
- This provision is designed to prevent long-term detention of the accused.
- In multiple instances, the court has reiterated that it is an indefeasible right that flows from Article 21 of the Constitution. For example,
 - In the Achpal vs State of Rajasthan (2018) case, the court ruled that an investigation report by an unauthorized officer could not bar the accused from availing of this right.
 - Similarly, in S. Kasi vs State (2020), it was ruled that the pandemic could not be used as the reason for the additional detention of the accused.

Historical Background:

- In the earlier version of CrPC, accused persons could be detained for a maximum of 15 days.
- The Law Commission in its 41st report recommended default bail due to abuse of the provision by the police that extended the custody of the accused.
- In 1978, CrPC was amended to add statutory bail and ensure that the accused is not detained for extended periods.

Associated Concerns:

- The investigating authorities bypass the default bail provisions by filing incomplete or supplementary charge sheets within the 60/90-day period.
- In Ritu Chhabaria's case, SC delegitimized the incomplete charge sheets from applying for default bail.
- Moreover, the case did not lay down any additional hurdles in the investigation.
- The court's order to recall judgment has not only raised concerns but also deferred decisions on default bail for accused persons across the country.

27. Default Bail

The Supreme Court directed lower courts to decide pending default bail applications without relying on its own judgment of Ritu Chhabaria case.

Default bail

- **Default bail** - The right to statutory bail, often known as default bail or compulsive bail, is granted because of the default of the investigating agency in not completing the investigation within the specified time.
- **CrPC** - Under **Section 167(2) of CrPC**, a Magistrate can order an accused person to be detained in the custody of the police for 15 days.
- Beyond 15 days, the Magistrate can authorise the detention of the accused person in judicial custody (jail) if necessary.
- **Maximum period of detention** - However, the accused cannot be detained for more than
 - 90 days (when an authority is investigating an offence punishable with death, life imprisonment or imprisonment for at least 10 years)
 - 60 days (when the authority is investigating any other offence)
- **Right to bail** - After the period of 90/60 days, if the investigation has not been completed and charge-sheet not filed, the accused person has the right to be released on bail.
- **Judicial custody** - The default bail prevents the misuse of judicial custody by the investigation agency.
- **Article 21** - The court in multiple judgments have held that the default bail flows from the Article 21 of the Constitution which guarantees the right to life and personal liberty.

The Code of Criminal Procedure, 1973 regulates the procedural aspects of criminal law, including arrest, investigation and bail.

What is Ritu Chhabaria case about?

- **Supplementary charge sheets** - Investigating authorities routinely file incomplete or supplementary charge sheets within the 60/90 day period, to prevent the accused from seeking default bail.
- **Ritu Chhabaria Case** - The Supreme Court, in Ritu Chhabaria, delegitimised such illegal practices and held that incomplete charge sheets filed by police would not prevent an accused from applying for default bail.
- It held that the right of default bail under Section 167(2) of CrPC is not merely a statutory right, but a fundamental right that flows from **Article 21** of the Constitution.

What is the Supreme Court's (SC) interim order about?

Article 141 of the Constitution provides that the law declared by the Supreme Court shall be binding on all courts within India.

- **Arguments of ED** - The government, through the Enforcement Directorate (ED), moved an application in SC to recall the Ritu Chhabaria judgment.

- The ED argued that the judgment contradicted the Supreme Court's own past verdicts.
- The ED also argued that the judgment would not apply to special laws like the Prevention of Money Laundering Act (PMLA).
- **SC's interim order** - The Supreme Court in its interim order directed courts to postpone any decision on default bail pleas filed on the strength of the Ritu Chhabaria judgment.

What are the concerns with the order?

- The Supreme Court's interim order is said to curtail the rights of undertrial prisoners seeking default bail.
- The Court's decision to suspend the rights of defendants in criminal cases would lead to erosion of constitutional rights of the accused and deviate from fundamental principles of criminal procedure.

28. India's Pension Reforms: Ensuring Pension Security

- The issue of government employees' pension has emerged as a critical political concern, leading several states to consider reverting from the New Pension Scheme (NPS) to the defined-benefit (DB) Old Pension Scheme (OPS). Acknowledging the significance of this matter, the Government of India has established a committee to enhance the NPS.

Pension

- A pension is a retirement plan that provides a stream of income to individuals after they retire from their job or profession. It can be funded by employers, government agencies, or unions and is designed to ensure a steady income during retirement.

Old Pension Scheme (OPS)

- The OPS, also known as the Defined Benefit Pension System, is a pension plan provided by the government for its employees in India.
- Under the OPS, retired government employees receive a fixed monthly pension based on their last drawn salary and years of service.
- This pension is funded by the government and paid out of its current revenues, leading to increased pension liabilities.

NPS

- NPS is a market-linked, defined contribution pension system introduced in India in 2004 as a replacement for the Old Pension Scheme (OPS).
- NPS is designed to provide retirement income to all Indian citizens, including government employees, private sector workers, and self-employed individuals

Reasons behind the growing demand for reverting to OPS

- **Stability and Predictability:** One of the primary motivations for the demand to return to OPS is the desire for stability and predictability in pension benefits. Under the OPS, employees receive a fixed pension based on their last drawn salary, which is increased periodically to account for inflation. This offers a sense of security and certainty about post-retirement income, ensuring a stable financial future.
- **Market Risk and Annuity Payouts:** The NPS, being a market-linked pension scheme, exposes pensioners to market risks. The returns on the pension fund are subject to market fluctuations, which can impact the overall corpus and subsequently affect annuity payouts. This volatility raises concerns among employees who seek a more secure and reliable pension arrangement.
- **Lower Annuity Prospects:** With the NPS, pensioners bear the market risk and face the possibility of lower-than-expected annuity amounts. This uncertainty about future pension prospects prompts many employees to advocate for a return to OPS, which offers a predetermined pension amount.
- **Comparisons with Other Pension Systems:** Employees often compare the OPS with pension systems in other countries, particularly those in the Organisation for Economic Co-operation and Development (OECD) economies. These comparisons reveal that OPS provides higher pension replacement rates, lower retirement ages, and covers the entire family. Such favorable aspects of OPS generate a perception of better benefits and incentivize employees to demand its reinstatement.
- **Perception of Unsustainability:** While the NPS was introduced to address fiscal strains associated with the unfunded OPS, there are concerns about its long-term sustainability. Some argue that OPS can be sustained through effective fiscal management and reform, rather than completely abandoning it. The perception of unsustainability drives the demand for reverting to OPS as a viable alternative.

Challenges involved in reverting back to OPS

- **Fiscal Sustainability:** The OPS operates on a pay-as-you-go (PAYG) system, where present workers finance the retired. With declining birth rates and increased life expectancy, the burden on the future workforce to fund

pensions will intensify. The OPS, being an unfunded scheme, poses challenges in maintaining fiscal sustainability in the long run.

- **Demographic Shifts:** The dependency ratio is expected to increase substantially, with fewer workers supporting a larger number of retirees. This demographic shift adds to the challenges of sustaining the OPS, as it puts additional strain on the funding mechanism and the ability to meet pension obligations.
- **Inflationary Pressures:** The OPS guarantees periodic increases in pension payouts through dearness allowance (DA) adjustments to account for inflation. However, relying on fixed increments tied to DA can pose challenges during periods of high inflation. Ensuring that pension payments keep pace with inflation without compromising fiscal stability can be a complex task for policymakers.
- **Budgetary Constraints:** The financial burden of reverting to OPS can put a significant strain on the government's budget. Pension liabilities already account for a substantial portion of states' revenue receipts and own revenues. Increasing pension obligations may lead to a reduction in development expenditure or necessitate additional borrowing, potentially exacerbating the issue of public debt.
- **Inter-generational Equity:** Maintaining inter-generational equity is a crucial consideration in pension reforms. Reverting to OPS might fulfill the aspirations of current employees, but it can impose a heavy burden on future generations. Striking a balance between providing reasonable pension security for present employees and ensuring the sustainability of the pension system for future generations is a key challenge that needs to be addressed.
- **Economic Factors:** The economic environment, including interest rates and investment returns, can impact the financial viability of OPS. Changes in economic conditions, such as low interest rates or inadequate returns on pension fund investments, can strain the financial resources needed to sustain OPS and meet pension obligations.

Way ahead: Building sustainable and inclusive pension systems

- **Comprehensive Reform:** Governments should undertake comprehensive reforms which may involve revisiting the pension architecture, introducing alternative pension models, and exploring hybrid schemes that combine elements of defined-benefit and defined-contribution systems. Reforms should be guided by a thorough analysis of demographic trends, fiscal constraints, and economic conditions.
- **Adequate Funding Mechanisms:** Pension systems must establish robust funding mechanisms to ensure that pension obligations can be met. This may involve setting up dedicated pension funds, implementing sound investment

strategies, and establishing appropriate contribution rates for both employees and employers.

- **Strengthening Pension Governance:** Effective governance is crucial for the success of pension systems. Governments should strengthen the regulatory framework, improve transparency, and enhance accountability in the management of pension funds. Establishing independent oversight bodies and adopting international best practices can help ensure the integrity and efficiency of pension governance.
- **Promoting Financial Literacy:** Financial literacy programs should be implemented to educate individuals about the importance of retirement planning, investment strategies, and the risks and benefits associated with different pension options. Empowering individuals with financial knowledge will enable them to make informed decisions and take an active role in securing their retirement income.
- **Encouraging Voluntary Savings:** Governments should encourage voluntary retirement savings programs to complement the mandatory pension schemes. Providing incentives, such as tax benefits or matching contributions, can incentivize individuals to save for retirement beyond the mandatory contributions. Voluntary savings options, such as individual retirement accounts or employer-sponsored plans, can offer individuals greater flexibility and control over their retirement savings.
- **Flexibility and Portability:** Pension systems should adapt to the changing nature of work and support individuals with diverse employment patterns. Portable pension accounts that allow individuals to carry their accumulated benefits across jobs can ensure continuity of retirement savings. Flexibility in pension payout options, such as lump sum withdrawals or phased withdrawals, can accommodate different financial needs and preferences of retirees.
- **Social Safety Nets:** To address the needs of vulnerable populations, social safety nets should be incorporated into pension systems. These safety nets can provide minimum income guarantees or targeted assistance for individuals with limited or interrupted work histories, low-income earners, and those facing economic hardships in retirement.

Conclusion

- Amidst the debate between NPS and OPS, it is crucial to devise a pension system that ensures security without compromising fiscal sustainability and inter-generational equity.

29. WHO Recommendation on Artificial Sweeteners

The World Health Organization (WHO) has recommended against using artificial sweeteners to achieve weight loss and prevent lifestyle diseases.

Artificial sweeteners

- **Artificial sweeteners** - They are sugar substitutes that are used to sweeten foods and beverages with very little to no calories.
- They are also called as non-nutritive sweeteners (NNS), non-sugar sweeteners (NSS), low calorie sweeteners and intense sweeteners.
- **Common NSS** - Acesulfame K (Ace-K), aspartame, advantame, cyclamates, neotame, saccharin, sucralose, stevia, and stevia derivatives

Recommendations by WHO

- **Lacks long term benefits** - Artificial sweeteners do not provide any long term benefits in reducing body fat in adults or children.
- **Diseases caused** - The use of sugar alternatives has been found to increase the risk of type 2 diabetes, depression, cardiovascular diseases, and causes digestive issues.
- It also causes bladder cancer and **preterm births** when consumed by pregnant women.
- **Weight loss** - Even though there could be weight loss in short term, in long term it leads to weight gain.
- The WHO has made these recommendations for everyone other than those who are already diabetic.

In India, the Food Safety and Standards Authority of India (FSSAI) prescribes the maximum limit of artificial sweetener.

Recommendations by health experts

- **Natural Alternatives** - Health experts recommend considering natural alternatives such as fruits, dates, carrots, etc. to artificial sweeteners.
- **Limiting Intake** - Emphasize the need to be conscious of limiting the intake of artificial sweeteners.
- **Well balanced diet** - Including high quality natural foods, while avoiding high calorie drinks and snacks.
- **Diet colas** - Diet colas may not be as healthy as they seem. They may lead to weight gain and other health problems.

What is the way forward?

- More research is needed so that it could help to clarify the risks and benefits of artificial sweeteners, and it could also lead to the development of new, safer artificial sweeteners.
- Artificial sweeteners could be regulated more strictly.
- Consumers could be educated about the potential risks and benefits of artificial sweeteners.

30. Exploring the Prospects of Integrated Medicine: A Dialogue on Ayush and Modern Healthcare

- In a recent development, the Indian Council of Medical Research (ICMR) and the Ministry of Ayush have agreed to enhance cooperation in health research related to integrated medicine. This collaboration aims to establish Ayush departments within prestigious medical institutions like AIIMS. However, this move has sparked a debate regarding the efficacy and viability of an integrated system of medicine.

Integrated system of medicine

- An integrated system of medicine refers to an approach that combines elements from different healthcare systems or modalities, such as conventional medicine and traditional or complementary/alternative medicine, with the goal of providing comprehensive and patient-centered care.

Common features of integrated system of medicine

- **Holistic Approach:** An integrated system of medicine takes a holistic approach to healthcare, recognizing the interconnectedness of various aspects of health, including physical, mental, emotional, and spiritual well-being. It considers the whole person rather than focusing solely on symptoms or specific diseases.
- **Multiple Healthcare Modalities:** It incorporates multiple healthcare modalities and disciplines, such as conventional medicine, traditional medicine systems (e.g., Ayurveda, Traditional Chinese Medicine), complementary and alternative medicine (e.g., acupuncture, herbal medicine), mind-body practices (e.g., yoga, meditation), and other evidence-based therapies.
- **Collaborative and Interdisciplinary Care:** An integrated system of medicine encourages collaboration and cooperation among healthcare providers from different disciplines. This interdisciplinary approach allows for a

comprehensive assessment of the patient's needs and the development of personalized treatment plans.

- **Evidence-Based Practice:** The integration of different healthcare modalities is based on scientific evidence, research, and clinical guidelines. It emphasizes the use of evidence-based practices, ensuring that treatments and interventions are safe, effective, and supported by reliable data.
- **Individualized Treatment:** An integrated system of medicine recognizes that each person is unique and may require personalized treatment approaches. It considers individual circumstances, preferences, and goals when developing treatment plans, allowing for customized care.
- **Emphasis on Prevention and Wellness:** It places importance on preventive measures, health promotion, and wellness-oriented approaches. It aims to identify and address underlying factors that contribute to illness, focusing on strategies to prevent disease and promote optimal health.
- **Patient-Centered Care:** An integrated system of medicine prioritizes the patient's needs, preferences, and values. It involves active patient participation in healthcare decision-making, education, and self-care practices. The patient is viewed as a partner in their own healthcare journey.
- **Continuity of Care and Care Coordination:** An integrated system of medicine strives for seamless coordination and continuity of care across different healthcare modalities. It emphasizes effective communication, information sharing, and collaborative management to ensure comprehensive and well-coordinated healthcare.

Ayush inpatient and outpatient departments at Central government hospitals

- **Dedicated AYUSH departments:** The Ayush Ministry has decided to open dedicated AYUSH inpatient and outpatient departments at Central government hospitals to provide services related to Ayurveda, Yoga, Naturopathy, Unani, Siddha, and Homeopathy (collectively known as Ayush systems of medicine).
- **Aims to provide wider range of treatment options:** This initiative aims to integrate traditional and complementary medicine practices into mainstream healthcare, offering patients a wider range of treatment options and promoting holistic healthcare approaches.
- **Aims to promote and preserve traditional healthcare:** The decision to establish these departments reflects the government's recognition of the growing popularity and acceptance of Ayush systems of medicine in India. It aligns with the ministry's goal of promoting and preserving traditional healthcare practices, while ensuring their integration within the broader healthcare framework.
- **Facilitate and a boost to research:** Opening Ayush departments in Central government hospitals also facilitates research, as it allows for the

investigation of the effectiveness and safety of Ayush treatments in conjunction with conventional medical practices. This collaboration between Ayush and modern medicine can lead to the development of standardized protocols, better understanding of the potential benefits, and improved patient outcomes.

31. Union Health Ministry announces ambitious "75/25" initiative

The **Union Health Ministry** of India has recently unveiled the ambitious "75/25" initiative on **World Hypertension Day 2023**.

- The **National Programme** for Prevention and Control of Non-Communicable Diseases has revised **operational guidelines** in consonance with it.

"75/25" initiative:

- **Aim:** to ensure that **75 million individuals** suffering from **hypertension** and **diabetes** receive standardised care by **2025**, primarily through **Primary Health Centers (PHCs)**.

Shashakt Portal:

- It will provide **training** to approx. **40,000 Primary Health Care Medical Officers** on the Standard Treatment Workflow for **non-communicable diseases (NCDs)**.
 - This will enable **healthcare** professionals to provide **improved services** at the **community** level.

About the World Hypertension Day 2023:

- **Theme:** Measure Your Blood Pressure Accurately, Control It, Live Longer
- The theme provides an opportunity for **health managers** to advocate for **increased availability** and use of **digital blood pressure measurement devices** across healthcare facilities to scale up **screening** and **monitoring**.
- **Celebrated on:** 17th May 2023

Hypertension in World:

- Hypertension is the single most important leading cause of cardiovascular disease mortality globally and in the **South-East Asia Region**.
- A quarter of the adult population in the **South-East Asia Region** has high blood pressure, but only **one in three** are on **treatment**.
 - 1 in 10 adults with the condition have it under **control**.

- The **South-East Asia Region** is prioritizing actions through **South-East Asia HEARTS initiative** (SEA HEARTS) to bring together **tobacco control**, salt reduction, and elimination of industrial **trans-fat** along with **hypertension** and **diabetes** control through PHCs.

32. WHO advises against use of sugar substitutes for weight loss

The **World Health Organisation (WHO)** has recently recommended against using **artificial sweeteners (AS)** to achieve **weight loss**.

Key highlights of the report:

- There is a need to **cut intake** of **sugar** but it should **not** be replaced by **AS**.
- **AS** provide the **sweet taste** with very little to **no calories** and **no nutritional value**.
- The **AS** are found in **manufactured foods and beverages**, or sold on their own to be added to foods and beverages by consumers.
- There can be some **weight-loss** and **reduction in Body Mass Index** in the **short term** as the **AS** bring down the **calories** consumed.
 - But in the long run **artificial sweeteners** can lead to **weight gain**.
- The **AS** can lead to an **increased risk of Type-2 diabetes**, cardiovascular diseases, and mortality in the long run.
- The use of **AS** can lead to **bladder cancer** and **preterm birth** when consumed by pregnant women.
- The guideline does **not apply** to personal products containing **AS** such as toothpaste, skin cream or to **low-calorie sugars** and **sugar alcohols (polyols)**, which are **sugars** or **sugar derivatives** containing **calories** and are not considered as **AS**.

Why are diet colas damaging?

- While the **normal cola** contains **high** amount of sugar, **diet colas** contain **zero calories**.
- Drinking **diet colas** can lead to **long-term** negative consequences, including **insulin resistance** and **diabetes**.

About the Artificial sweeteners:

- It is a **food additive** that provides a **sweetness** like that of **sugar** but contains **less food energy** than sugar-based sweeteners.
- It may be derived through **manufacturing of plant extracts** or processed by **chemical synthesis**.
- **Natural sweeteners** are stevia, maple syrup, and agave nectar.
- **Saccharin** or **Ortho-sulphobenzimide** was the **first** popular AS agent.

- It was discovered in **1879** and about **550 times** sweeter than cane sugar.
- It is **excreted** from the body in **urine unchanged**.
- It appears to be entirely **inert** and **harmless** when taken.
- **Aspartame** is **methyl ester** of **dipeptide** formed from **aspartic acid**.
 - It is roughly **100 times** as sweet as cane sugar.
 - **Use:** cold foods and soft drinks as it is **unstable** at **cooking temperature**.
- **Alitame** is more stable than **aspartame**, the control of **sweetness** in food is difficult while using it.
- **Sucralose** is stable at cooking **temperature** and does **not** provide calories.

33. Freedom of speech

The Andhra Pradesh High Court has struck down the government order of Andhra government that seeks to regulate public assemblies, processions which violates the freedom of speech.

Freedom of speech

- Freedom of speech implies that every citizen has the right to express his views, opinions, belief and convictions freely by word of mouth, writing, printing, picturing or in any other manner.
- **Article 19** provides for the right
 - to freedom of speech and expression
 - to assemble peaceably and without arms
 - to form associations or unions
 - to move freely throughout the territory of India
 - to reside and settle in any part of the territory of India
 - to practise any profession, or to carry on any occupation, trade or business
- These rights are not absolute and are subject to reasonable restrictions on certain grounds. It includes
 - Sovereignty and integrity of India
 - Security of the state
 - Friendly relations with foreign states
 - Public order
 - Decency or morality
 - Contempt of court, defamation and
 - Incitement to an offence

The Supreme Court includes the following rights under freedom of speech and expression

Right to propagate one's views as well as views of others	Right to know about government activities
Freedom of the press	Freedom of silence
Freedom of commercial advertisement	Right against imposition of pre-censorship on a newspaper
Right against tapping of telephonic conversation	Right to demonstration or picketing but not right to strike
Right to telecast	Right against bundh called by a political party or organization

What is the issue?

- **Government Order** - The Government of Andhra Pradesh had issued the G.O. in the wake of two stampedes witnessed during the rallies organised by the Opposition Party.
- It was issued under relevant provisions of the **Police Act, 1861**
- The government had said that the G.O. was aimed at regulating the rallies and meetings on public roads and highways.
- The government had contended that the G.O. did not prohibit, or ban any public gathering, but would only regulate such meetings by making prior permission mandatory.
- **High Court Observations** - The High Court observed that the G.O. was in violation of Section 30 of the Police Act, 1861.
- It also held that the power conferred by the G.O. is "arbitrary, excessive, and also fails on the test of proportionality".
- It clarifies that Section 30 of the Police Act only gives authorities the power to "regulate" the conduct of assemblies, processions, etc., on public roads.
- Hence, the state cannot restrict the right to assemble or protest peacefully in streets, public places or thoroughfares.
- The court noted that freedom of speech is the **bulwark of democracy** and is regarded as the first in the hierarchy of liberties.
- The court relied on the 'Mazdoor Kisan Shakti Sangathan v Union of India and Another, 2018', which laid down guidelines for peaceful assembly.

Guidelines laid down in the 2018 SC ruling

- The court laid down guidelines for regulating protests and demonstrations while adding that the right to peaceful assembly under **Article 19(1)(b)** can be reasonably restricted.
- The guidelines included
 - regulating the intended number of participants in such demonstrations.

- prescribed the minimum distance from the Parliament House, North and South Blocks, SC, and the residences of dignitaries within which no demonstrations were allowed
- imposed restrictions on certain routes where the PM, Central Ministers, and Judges pass through
- said that demonstrations would not be allowed when foreign dignitaries were visiting a place or route
- disallowed demonstrators from carrying firearms, lathis, spears, swords, etc.

34. Strengthening Quad: The Need for a Biomanufacturing Hub in India

- The Quad, comprised of Australia, India, Japan, and the United States, established a Critical and Emerging Technology Working Group in March 2021 to foster collaboration and explore opportunities in critical and emerging technologies, including biotechnology. However, there remains untapped potential for Quad cooperation in the field of biotechnology. The need of the hour is to establish a Quad-led biomanufacturing hub in India to enhance cooperation and leverage the complementary strengths of Quad nations.

QUAD's Critical and Emerging Technology Working Group

- The Quad's Critical and Emerging Technology Working Group is a collaborative initiative established by the Quad countries.
- It was formed in March 2021 with the aim of facilitating cooperation, monitoring trends, and exploring opportunities related to critical and emerging technologies. The working group focuses on identifying and addressing key issues and challenges in areas such as biotechnology, artificial intelligence, cybersecurity, quantum technologies, and other cutting-edge fields.
- It serves as a platform for the Quad countries to share expertise, exchange information, and coordinate efforts in order to harness the potential of these technologies for economic growth, national security, and societal development.
- For instance, in the field of 5G, the Quad members have worked on developing telecommunications networks to counter the pervasive presence of China's Huawei through the use of open radio access (O-RAN) networks.

Biomanufacturing

- Biomanufacturing refers to the use of biological systems, such as living organisms (microorganisms, cell cultures, or plants), to produce commercially valuable products on a large scale. It involves harnessing the power of biological processes and utilizing them in industrial applications.
- In biomanufacturing, living organisms are employed as “factories” to perform specific tasks or produce desired molecules. These organisms can be genetically engineered or naturally occurring, depending on the desired outcome.
- The organisms are cultivated in controlled environments, such as bioreactors, where they are provided with optimal conditions for growth and production. They are fed with specific nutrients, and their growth and metabolic activities are carefully regulated.
- Biomanufacturing can encompass a wide range of products, including pharmaceuticals, enzymes, biofuels, specialty chemicals, biomaterials, and more.
- Biomanufacturing is often more sustainable and environmentally friendly, as it relies on renewable resources and has the potential to reduce waste and pollution.

Why India stands as the ideal choice to host the biomanufacturing hub?

- **India’s ambition of biomanufacturing:** India’s National Biotechnology Development Strategy sets a target of reaching \$100 billion in the biomanufacturing sector.
- **Existing Infrastructure:** India already has existing infrastructure in place, including pharmaceutical manufacturing facilities and research institutions, that can be utilized to establish and expand biomanufacturing capabilities. This infrastructure provides a solid foundation for the development of a biomanufacturing hub.
- **Pharmaceutical Manufacturing Expertise:** India has a long-standing reputation as a major player in the global pharmaceutical industry. The country has established expertise in manufacturing and quality control processes, which can be leveraged for biomanufacturing. The experience gained in pharmaceutical manufacturing can be applied to biomanufacturing, ensuring compliance with regulatory standards and maintaining high-quality production.
- **Skilled Workforce:** India possesses a large pool of skilled professionals in the life sciences and biotechnology sectors. The country’s workforce includes scientists, engineers, and technicians with expertise in various aspects of biomanufacturing. This skilled workforce can contribute to the success of the biomanufacturing hub by driving research, development, and production activities.

- **Research Output:** India has demonstrated its research capabilities in biomanufacturing, ranking high in terms of the quality of research output and the share of research publications. The country's strong research base provides a solid foundation for innovation and advancements in biomanufacturing processes and technologies.
- **Cost-Effectiveness:** India has a competitive advantage in terms of cost-effectiveness. The cost of manufacturing in India is generally lower compared to countries like the United States, making it an attractive destination for cost-efficient biomanufacturing. This cost advantage can contribute to the affordability and accessibility of biomanufactured products.
- **Potential for Affordable Scale:** India has the potential to provide affordable scalability in biomanufacturing processes. With its large population and manufacturing capabilities, India can meet the demand for biomanufactured products on a large scale, leading to cost-effective production and availability of essential biopharmaceuticals and other biotechnological products.

Complementary Strengths of Quad Nations

- **Advanced Biotechnology Innovation Ecosystems:** Japan, Australia, and the United States have well-established and advanced biotechnology innovation ecosystems. These ecosystems comprise research institutions, universities, biotech companies, and startups that drive innovation and technological advancements in biotechnology.
- **Funding Capability:** The United States, being one of the Quad nations, brings significant funding capability to the table. The U.S. government and private sector invest heavily in research, development, and commercialization of biotechnology.
- **Skilled Workforce:** India, as a Quad member, offers a large pool of skilled manpower, particularly in the life sciences field. Collaborative efforts can facilitate knowledge sharing and capacity building to enhance the skills of the workforce across the Quad nations.
- **Manufacturing and Scale-Up Capabilities:** India has well-established pharmaceutical manufacturing capabilities. The country has a robust infrastructure and expertise in large-scale production, which can be harnessed for biomanufacturing purposes.
- **Intellectual Property and Technology Transfer:** The Quad nations, particularly Japan and the United States, have strong intellectual property protection systems and expertise in technology transfer. Sharing intellectual property and facilitating technology transfer can accelerate the development and commercialization of biomanufacturing technologies, benefiting all Quad nations.
- **Research Output and Innovation:** All Quad nations contribute significantly to global research output in the field of biotechnology. They produce high-

quality research publications and drive innovation in various subfields of biotechnology. Collaboration within the Quad can facilitate knowledge exchange, joint research projects, and the development of innovative solutions in biomanufacturing.

Way ahead

- **Collaborative Research and Development:** Foster collaborative research and development initiatives between the Quad nations and India. This can involve joint projects, knowledge sharing, and technology transfer to accelerate the development of biomanufacturing processes, products, and technologies.
- **Capacity Building and Skill Development:** Establish training programs, workshops, and exchange programs to enhance the skills and knowledge of professionals in biomanufacturing. This can include specialized training in areas such as advanced bioprocessing techniques, quality control, regulatory compliance, and technology transfer.
- **Infrastructure Investment:** Allocate resources for infrastructure development, including the establishment of specialized bioreactor facilities, research centers, and manufacturing capabilities.
- **Regulatory Framework Alignment:** Collaboratively work towards aligning regulatory frameworks among the Quad nations and India. This involves harmonizing regulations, streamlining approval processes, and ensuring consistent quality standards.
- **Public-Private Partnerships:** Foster public-private partnerships to leverage the expertise, resources, and capabilities of both sectors. Engaging industry stakeholders, academia, research institutions, and government agencies in collaborative initiatives can drive innovation, facilitate technology transfer, and accelerate the commercialization of biomanufactured products.
- **International Collaboration:** Explore collaborations beyond the Quad nations to foster international cooperation in biomanufacturing. Engaging with countries outside the Quad can expand opportunities for knowledge exchange, market access, and research collaboration.

35. Digital Census and Self-enumeration through NPR Update

- The article discusses implementation of a digital Census and the option for citizens to self-enumerate through updating their National Population Register (NPR) details online.
- Census 2021, the first digital Census, will allow citizens to “self-enumerate” when it is conducted.

- The government has not announced the date for the Census yet, and a notification from January 2, 2023, indicates that the exercise is postponed until at least September.

National Population Register (NPR)

- The NPR is a register that records the usual residents of the country.
- It is prepared at **various levels**, including local, sub-district, district, state, and national.
- The creation of the NPR is governed by the provisions of the **Citizenship Act 1955** and the Citizenship (Registration of Citizens and issue of National Identity Cards) Rules, 2003.
- It is **mandatory** for every usual resident of India to register in the NPR.
- A usual resident is defined as a person who has **resided in a local area for the past 6 months or more**, or a person **intending to reside for next 6 months or more**.

Differences between NPR and Census

- The census involves a detailed questionnaire, collecting information such as age, sex, marital status, occupation, religion, and more.
- The NPR collects basic demographic data and biometric particulars.
- The census is governed by the Census Act, 1948, while the NPR operates under a set of rules framed under the Citizenship Act, 1955.

Stipulated process for self-enumeration

- Self-enumeration for the Census will be available only to households that have updated their NPR details online.
- The Office of the Registrar General of India (ORGI), responsible for the Census, has developed a web-based “self-enumeration (SE)” portal, presently available in English.
- The mobile-friendly portal, yet to be launched, will allow users to register their mobile numbers in the NPR database, self-enumerate, and fill in Houselisting Operations details.
- During self-enumeration, the collection of Aadhaar or mobile numbers is mandatory.

How are NPR and NRC related?

- According to the Citizenship Rules 2003, the NPR is the initial step in compiling the National Register of Indian Citizens (NRIC/NRC).
- The NPR was updated in 2015, but new questions were added as part of a trial exercise involving 30 lakh respondents in September 2019.

- The exercise is seen as a step towards the compilation of the National Register of Indian Citizens (NRC) as per the Citizenship Rules, 2003.

What about data confidentiality?

- While similar data is collected through the Census, individual data remains confidential under Section 15 of the Census Act, 1948.
- Only aggregated data is released at administrative levels.
- Data collected under the NPR are shared with states and used by the Central government for various welfare schemes at the individual level.

Way forward

To ensure the success of the digital Census and self-enumeration process, the government should consider the following:

- Conduct thorough awareness campaigns to educate citizens about the self-enumeration process and its benefits.
- Provide multi-language support on the self-enumeration portal to accommodate diverse language preferences.
- Address concerns regarding data privacy and security to build trust among citizens.
- Establish a robust support system to assist citizens in case of technical issues or questions during self-enumeration.
- Regularly update and improve the self-enumeration portal based on user feedback to enhance user experience and ease of use.

36. The Paradox of BRICS: Prospects for Expansion and Internal Imbalance

- Mysterious are the ways in which multilateral groupings prosper and wither away. The case of BRICS grouping is truly remarkable. Despite initial achievements, BRICS has started losing its sparkle due to various global and regional challenges. However, the paradox lies in the fact that numerous nations are eager to join the group, showcasing the continuing appeal of BRICS.

BRICS's Origins and Evolution

- **Conception of BRIC:** The term BRIC was coined by economist Jim O'Neill in a 2001 research paper, identifying Brazil, Russia, India, and China as emerging economies with significant growth potential.

- **Formalization of BRIC:** The first formal meeting of BRIC leaders took place in 2009 on the sidelines of the G20 Summit in Russia, marking the group's establishment as a platform for cooperation and dialogue.
- **Addition of South Africa:** In 2011, South Africa was invited to join BRIC, expanding the group to BRICS. China advocated for South Africa's inclusion, seeking broader representation in Africa and increasing the group's diversity.
- **Economic Focus:** Initially, BRIC was primarily an economic grouping, emphasizing the rising influence of these countries in the global economy due to their large populations, expansive territories, and rapid economic growth rates.
- **Geopolitical Cooperation:** Over time, BRICS evolved to include geopolitical cooperation and joint positions on global issues. Leaders began discussing political matters and advocating for a more equitable international order.
- **Annual Summits:** BRICS started holding annual summits where leaders from member countries gather to discuss and coordinate their positions on various global challenges and explore avenues for cooperation

Key achievements of the BRICS

- **Economic Cooperation:** BRICS has fostered economic cooperation among member countries, leading to increased trade, investment, and business opportunities. The group has launched initiatives to expand trade and investment cooperation, promoting economic growth and development.
- **New Development Bank (NDB):** BRICS established the New Development Bank, also known as the BRICS Bank, which provides financial assistance for infrastructure projects and sustainable development initiatives in member countries and other emerging economies. The NDB has committed significant funds to various projects, contributing to infrastructure development and regional connectivity.
- **Contingent Reserve Arrangement (CRA):** The CRA, established by BRICS, acts as a financial mechanism to provide liquidity support during times of financial stress and protect against global liquidity pressures. This arrangement has helped member countries mitigate potential financial crises and enhance financial stability.
- **Geopolitical Influence:** BRICS has projected a non-western perspective on global and regional issues, strengthening the world's march towards multipolarity and curbing the dominating influence of the West. The group has articulated common positions on various global challenges, such as climate change, terrorism, and global governance reform.

Internal Imbalance and Challenges withing BRICS

- **Diverse Economic Systems:** BRICS member countries have diverse economic systems, ranging from state-controlled economies to market-based economies. These differences in economic models can lead to variations in policy priorities, approaches to trade and investment, and economic challenges, creating potential frictions within the group.
- **Varying Levels of Development:** BRICS member countries represent a wide spectrum of development stages. While China has emerged as a global economic powerhouse, other members like Brazil, India, Russia, and South Africa face developmental challenges and socioeconomic disparities. These differing levels of development can result in differing priorities and resource allocation, potentially straining cooperation within BRICS.
- **Geopolitical Ambitions and Rivalries:** BRICS member countries have their individual geopolitical ambitions and interests. As emerging powers, they may compete for influence and resources in certain regions, leading to potential rivalries or divergent approaches to geopolitical issues. These geopolitical dynamics can complicate decision-making and alignment within BRICS.
- **Political and Governance Differences:** BRICS comprises countries with varying political systems and governance structures. While some members uphold democratic values, others have different approaches to governance and human rights. These differences can result in divergent perspectives on political and human rights issues, potentially creating challenges in reaching consensus on certain matters.
- **Economic Vulnerabilities:** BRICS member countries are susceptible to economic vulnerabilities, including structural issues, external shocks, and fluctuations in commodity prices. Economic challenges, such as high inflation, fiscal imbalances, and currency volatility, can strain the economic cooperation and stability within BRICS.
- **Coordination and Decision-Making Processes:** BRICS operates as a consensus-based grouping, requiring agreement among member countries on various issues. Coordination and decision-making can be complex due to the diverse interests, priorities, and institutional frameworks of member countries. Reaching consensus on critical matters can be time-consuming and challenging.
- **Institutional Development:** The institutional development within BRICS, such as the New Development Bank and the Contingent Reserve Arrangement, requires effective governance structures, operational frameworks, and decision-making processes. Establishing and managing these institutions while addressing the diverse needs and interests of member countries can pose institutional challenges.

The demand for expansion in BRICS

- **Global Influence:** Many countries see BRICS as a prominent grouping that holds influence on the global stage. Joining BRICS would provide an opportunity for countries to enhance their global influence and have a voice in shaping global agendas.
- **Economic Opportunities:** BRICS represents a significant portion of the world's population and economy. Joining the group could potentially provide countries with access to a large market and increased economic cooperation, including trade and investment opportunities among member countries.
- **Limited Options:** Some countries may see BRICS as an attractive option for collaboration and engagement, particularly if they face limited opportunities to join other major multilateral groupings or regional blocs.
- **South-South Cooperation:** BRICS is seen as a platform for South-South cooperation, promoting dialogue and collaboration among countries in the Global South. Joining BRICS allows countries to strengthen ties with like-minded nations and contribute to a collective voice for the interests of developing countries.
- **Counterbalance to Western Influence:** The demand for expansion in BRICS can also stem from a desire to counterbalance the dominance of Western powers in global affairs. By joining BRICS, countries may seek to align themselves with a grouping that projects a non-western perspective and advocates for a more equitable international order.

Prospects for expansion of BRICS and the criteria for new member admission

1. Prospects for Expansion:

- There is a growing interest from several countries in joining BRICS, indicating the perceived significance and appeal of the group.
- As of now, 19 countries, including Argentina, Egypt, Indonesia, UAE, and Bangladesh, have expressed their desire to become members of BRICS.
- The interest in expansion stems from various factors such as the desire to enhance global influence, the fear of missing out on membership in a prominent group, limited options for joining other groupings, and the aspiration to create a substantial forum for the Global South.

2. Criteria for New Member Admission

- **Economic Size and Potential:** Potential new members should have a significant and growing economy, demonstrating the potential to contribute to the group's economic strength and cooperation.
- **Regional Representation:** BRICS has aimed to have diverse regional representation, as seen with the inclusion of South Africa to represent Africa.

New members could be considered based on their regional representation and the desire to ensure a broader geographic scope.

- **Political Stability and Compatibility:** Political stability and compatibility with the values and principles of BRICS, including democracy, human rights, and governance, could be important considerations in the admission process.
- **Commitment to Cooperation:** Prospective members should demonstrate a genuine commitment to international cooperation, multilateralism, and the principles and objectives of BRICS.
- **Mutual Benefits:** The admission of new members should be mutually beneficial for both the existing members and the prospective members, contributing to enhanced economic cooperation, geopolitical influence, and the achievement of common goals.
- **Consensus Among Existing Members:** Consensus among the existing BRICS member countries would be crucial in determining the admission of new members. The existing members would need to agree on the expansion and the specific countries to be admitted.

The Future of BRICS: Key aspects

- **Economic Collaboration:** BRICS has the potential to deepen economic collaboration and promote intra-BRICS trade and investment. By leveraging their collective market size and resources, member countries can explore new areas of economic cooperation, such as digital economy, technology, sustainable development, and infrastructure investment.
- **Institutional Development:** The New Development Bank (NDB) and the Contingent Reserve Arrangement (CRA) are key institutions established by BRICS. The group can focus on further developing and expanding the role of these institutions to effectively address financial challenges and support sustainable development projects.
- **Geopolitical Influence:** By coordinating their positions on global governance, security, and geopolitical issues, member countries can amplify their collective voice and influence international discussions and decision-making processes. BRICS can also foster South-South cooperation and advocate for the interests of developing countries in global forums.
- **Expansion and Outreach:** The interest from other countries to join BRICS presents an opportunity for expansion and outreach. The group can carefully consider the admission of new members, ensuring that the expansion aligns with the group's objectives, principles, and criteria. By including new members, BRICS can broaden its geographic representation and potentially strengthen its collective influence.
- **Innovation and Technology Cooperation** Member countries can collaborate in areas such as artificial intelligence, renewable energy, space exploration,

and digital governance. Sharing expertise, research, and best practices can propel the group's technological advancement and foster mutual growth.

- **Adaptation to Global Challenges:** BRICS should collectively address global challenges such as climate change, public health crises, and sustainable development. By coordinating efforts, sharing knowledge, and pooling resources, the group can contribute to finding solutions and shaping global agendas on critical issues.

Conclusion

- The paradox of BRICS lies in its diminishing allure while attracting numerous nations eager to join. Despite facing internal tensions, BRICS has made significant contributions to the world's multipolarity and economic cooperation. By addressing internal imbalances, seizing opportunities for growth, and staying responsive to global dynamics, BRICS can continue to play a significant role in shaping the international order and promoting the interests of emerging economies and the Global South.

37. The Paradox of BRICS

BRICS continues to attract interest from numerous nations despite facing challenges and losing some of its initial shine.

BRICS

- BRICS comprises of Brazil, Russia, India, China and South Africa.
- It was launched by a meeting of the Foreign Ministers of Brazil, Russia, India and China in **2006**.
- BRIC turned into BRICS in 2010, with the entry of South Africa.
- BRICS is chaired by member countries in rotational basis.
- BRICS together **represent 27% of the world's land mass**, and 42% of the world's population, 24% of global GDP, and 16% of Global trade, and produce 33% of the world's food.
- The first summit was held in **Yekaterinburg** in 2009.
- The 19 countries seeking for BRICS admission are
 - Latin America (4) - Argentina, Nicaragua, Mexico and Uruguay,
 - Africa (5) - Nigeria, Algeria, Egypt, Senegal and Morocco and
 - Asia (10) - Saudi Arabia, the United Arab Emirates (UAE), Turkey, Syria, Iran, Afghanistan, Indonesia, Thailand, Kazakhstan and Bangladesh.

Originally conceived as BRIC by **Jim O'Neill**, the grouping consisted of Brazil, Russia, India, and China.

Why the admission for the BRICS is in rise?

- **Global influence** - China is pushing the expansion as a strategic device to extend its global influence.
- **FOMO** - The demand to join BRICS stems from FOMO or 'fear of missing out' on the membership of a club.
- **Lack of choice** - Many countries realize that the doors of other groupings are closed to them.
- **Global South** - Prevailing anti-western sentiments and a pervasive desire to create a sizeable forum of the Global South.
- **Curb west's domination** - BRICS strengthened the world's march towards multi-polarity, thus helping to curb the dominating influence of the West.
- **New Development Bank** - Has committed USD 32.8 billion in 96 projects on the economic front.
- **Contingent Reserve Arrangement (CRA)** - A financial mechanism to protect against global liquidity pressures and a comprehensive programme to expand trade and investment cooperation among the five-member countries.

Initiatives such as the New Development Bank, the Contingent Reserve Arrangement, and trade and investment cooperation programs are launched by BRICS.

Some concerns about BRICS

- **UN Security Council** - The China and Russia did not back any of the member countries to join UN Security Council.
- **Ukraine-Russia war** - Has undermined the role of Russia in the grouping and Russia have at many times supported China.
- **Inner trouble** - China pushing for intra-BRICS trade is also symptomatic of the group's inner troubles.

The 2023 BRICS summit will be hosted by South Africa.

What could be the possible outcome of the forth coming BRICS summit?

- A mega expansion that raises the membership from 5 to 21, thus surpassing the G-20.
 - India favors expansion if it is based on agreed criteria and moves gradually.
- Chances are that the summit will held in digit space due to the notification by international criminal court (ICC) to arrest Russian president Putin.
- There might be a change in the grouping name if the new members are added.

38. Hysterectomy

The Ministry of Health and Family Welfare urged State Governments to audit hysterectomy trends in public and private hospitals.

Hysterectomy

- **Hysterectomy** - It is a surgery to remove a woman's uterus or womb, which results in no menstrual periods and no pregnancy in operated women.
- In medical terms, it is also known as **surgical menopause**.
- Hysterectomy adversely impacts the woman's health as it could lead to hormonal imbalance, calcium deficiency and constant body aches, among other things.
- Hysterectomies are presented to women as a permanent solution for health issues, even when other low-invasive treatments could work.

What are the international conventions associated with hysterectomies?

- Unnecessary hysterectomies **violate international conventions** to which India is a signatory.
- The international conventions include:
 - International Covenant on Economic, Social and Cultural Rights - It recognizes people's right to control their health and body including reproductive and sexual freedom
 - Convention on the Elimination of All Forms of Discrimination Against Women
 - International Covenant on Civil and Political Rights.

The average age at which hysterectomies are conducted among Indian women is 34 per community-based studies.

Measures taken so far

- **Health Ministry** - In 2022 issued guidelines to prevent unnecessary hysterectomies.
- The guidelines listing possible indications of when hysterectomy may be required and alternative clinical treatments for gynecological issues.

- **Supreme Court order** - States and Union Territories are expected to conduct audits of hysterectomy trends and furnish a report, as per the Supreme Court order.
- **Grievance portal** - Proposed by government to be monitored by monitored by the National Hysterectomy Monitoring Committee, for hysterectomy beneficiaries.
- **Ayushman Bharat Pradhan Mantri Jan Arogya Yojana** - Provides health insurance provides health cover of Rs5 lakhs for 1,949 procedures including hysterectomies.
- **Clinical Establishments (Registration and Regulation) Act 2010** - It blacklists the hospitals and healthcare facilities which coerces women into hysterectomies without informed consent.
- **11 States** - Including Arunachal Pradesh, Sikkim, Uttar Pradesh, Rajasthan, Bihar, Jharkhand and Karnataka, have adopted Clinical Establishments (Registration and Regulation) Act 2010.

Draft National Policy for Women which recognizes gaps in healthcare for menopausal women, there is little focus on women in their procreating ages or when they cross 45.

Need of the hour

- Increase awareness of the risks and benefits of hysterectomies among women and healthcare providers.
- Ensure that women are given informed consent before undergoing a hysterectomy.
- Crack down on unethical practices by healthcare providers, such as performing unnecessary hysterectomies for financial gain.
- Provide more access to quality healthcare, so that women have more options for treating their medical conditions.

39. Why do judges seek 'RECUSAL' for themselves?

Recusals by judges have been a frequent occurrence in recent weeks, raising important questions about the circumstances under which judges should recuse themselves, the need for recording reasons for recusal, and the reliance on individual judges' discretion.

Recusal

- Recusal is the removal of oneself as a judge or policymaker in a particular matter, especially because of a conflict of interest.

- Recusal usually takes place when a judge has a conflict of interest or has a prior association with the parties in the case.
- For example, if the case pertains to a company in which the judge holds stakes, the apprehension would seem reasonable.
- Similarly, if the judge has, in the past, appeared for one of the parties involved in a case, the call for recusal may seem right.
- A recusal inevitably leads to delay. The case goes back to the Chief Justice, who has to constitute a fresh Bench.

Reasons for Judicial Recusal

- **Conflict of interest:** Recusal often occurs when a judge has a direct conflict of interest or a prior association with the parties involved in a case. For instance, if a judge holds stakes in a company involved in the case, it would be reasonable to recuse themselves.
- **Earlier difference of opinion:** Similarly, if the judge previously represented one of the parties in a case, recusal may be necessary.
- **Prevent bias:** Some judges may recuse themselves based on apprehension of bias, while others may refuse to withdraw, considering the potential damage to the institution.
- **Absence of Codified Rules:** India currently lacks codified rules specifically governing recusals, but the Supreme Court has addressed the issue through various judgments.

Procedure for Recusal

- **Automatic and Plea-based Recusal:** Recusal can happen automatically when a judge recognizes a conflict of interest or when a party raises a plea for recusal due to bias or personal interest.
- **Judge's Discretion:** The decision to recuse rests solely on the conscience and discretion of the judge; no party can compel a judge to withdraw.
- **Transfer of the Case:** When a judge recuses, the case is transferred to the Chief Justice, who reassigns it to an alternate bench to ensure the continuity of proceedings.

Recording Reasons for Recusal

- **Responsibility of Judges:** Since there are no statutory rules, judges are responsible for recording their reasons for recusal.
- **Oral or Written Disclosure:** Reasons for recusal can be specified orally in open court or through a written order, or they may remain undisclosed.

Criticism

- **Lack of transparency:** This regarding reasons for recusal has faced criticism, particularly when mass recusals occur in sensitive cases.
- **Motives undisclosed:** Some judgments have argued for the need to indicate reasons to avoid attributing motives to recusals, while others express concerns that specifying reasons could lead to challenges and hinder the recusal process.
- **Inevitable delay:** Recusal inevitably leads to delays in the proceedings as the case is transferred back to the Chief Justice, who must assign it to a fresh bench.

Past Supreme Court Rules on Recusal

- **Factors for Impartiality:** The Supreme Court has established various factors to determine the impartiality of a judge in previous judgments.
- **Reasonableness of Apprehension:** The reasonableness of the party's apprehension of bias is a crucial consideration when deciding whether recusal is necessary.
- **Definition of Judicial Bias:** Judicial bias is defined as a predisposition that compromises a judge's impartiality.
- **Real Danger Test:** Pecuniary interests automatically disqualify a judge, while other cases require applying the "real danger" test to evaluate the possibility of bias.

Issues with Recusal

- **Abdication of Duty:** Recusal has been viewed as a potential abdication of a judge's duty, raising concerns about maintaining institutional civility while fulfilling the independent role of judges as adjudicators.
- **Importance of Providing Reasons:** Justice Kurian Joseph, in his separate opinion in the 2015 National Judicial Appointments Commission (NJAC) judgment, emphasized the importance of judges providing reasons for recusal to enhance transparency.
- **Constitutional Duty for Transparency:** Indicating reasons for recusal is a constitutional duty, reflecting the need for judges to be transparent and accountable.

Practices in Foreign Jurisdictions

- **United States:** It has well-defined laws and codes that explicitly detail grounds for recusal, such as financial interests, prior involvement as a lawyer or witness, and relationships with parties.

- **United Kingdom:** It has adopted the “real danger” test to disqualify judges based on substantive evidence of bias, although this approach has faced criticism.

Importance of Appearance of Bias

- The European Convention of Human Rights emphasizes the significance of the “appearance of bias” to ensure fairness from the perspective of a reasonable observer.

Way Forward

- To ensure fairness and maintain public trust in the justice system, it is crucial to establish clear guidelines and rules for recusal in India.
- Codifying principles, requiring judges to record reasons for recusal, and promoting transparency can address concerns about bias and uphold the integrity of the judiciary.
- Learning from foreign jurisdictions, such as studying the comprehensive recusal laws in the United States, can provide valuable insights for developing a robust framework for recusal in India.
- Enhancing transparency and accountability in the recusal process will contribute to a stronger and more trusted judicial system.

40. India & South Pacific

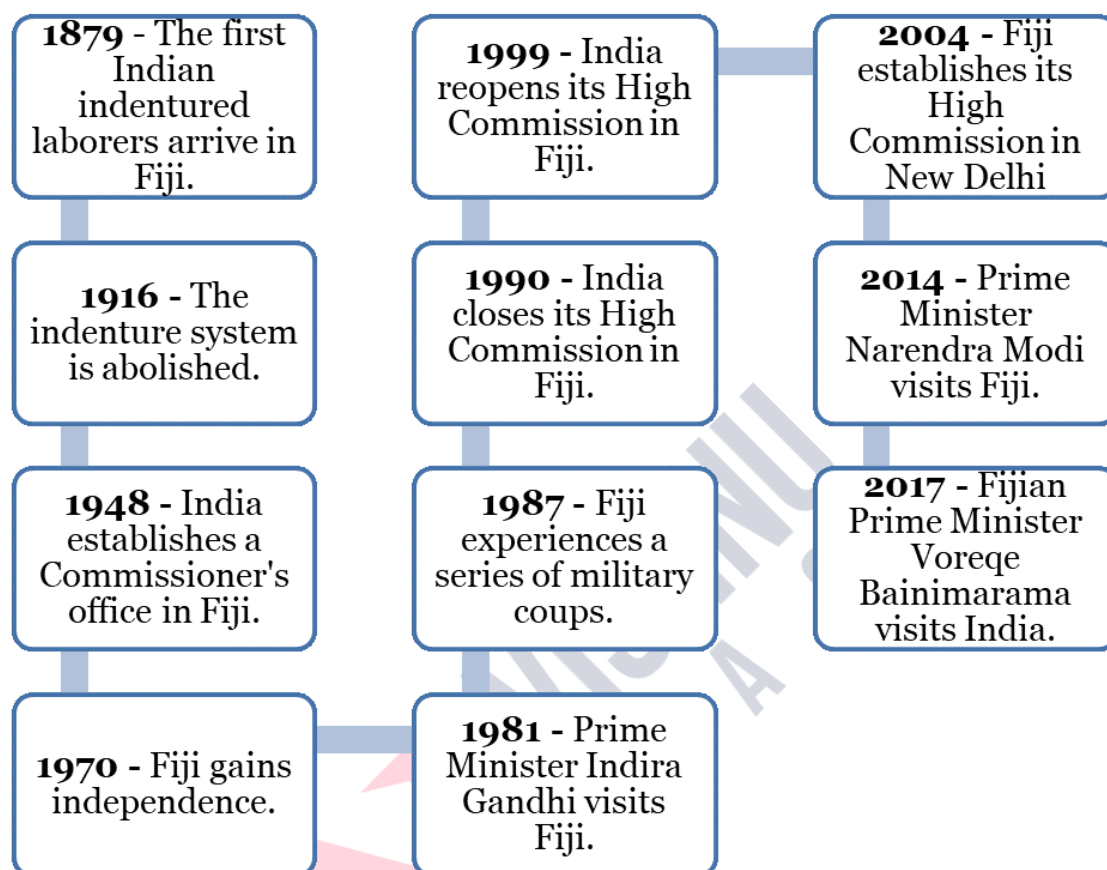
The visit of the Indian PM to south pacific region, reflects India’s global status, and its significance of its engagement with Pacific Island Countries (PICs) and the Forum for India-Pacific Islands Cooperation (FIPIIC).

What are the PICs?

- PICs is a cluster of 14 island nations dotting the Southwestern Pacific: the Cook Islands, Fiji, Kiribati, the Marshall Islands, Micronesia, Nauru, Niue, Samoa, the Solomon Islands, Palau, Papua New Guinea, Tonga, Tuvalu, and Vanuatu.
- All these islands are located at the crossroads of strategically important maritime trade corridors.
- Of the 14 PICs, Fiji and Papua New Guinea (PNG) are the ones with the biggest populations and the most heft.

Relationship between India with Fiji and PNG

- India's interaction with the PICs has traditionally focused on its engagement with Fiji and PNG, mainly due to the presence of a large diaspora.
- About 37% of Fiji's 849,000 population (2009 estimates) is of Indian origin, and about 3,000 Indians live in PNG.



Relationship between India and Pacific Island Countries (PICs)

- **Fiji and Papua New Guinea** - India's interaction with the PICs has traditionally focused on its engagement with Fiji and PNG, mainly due to the presence of a large diaspora.
- **India's Act East Policy** - Indian officials say the engagement with the 14 PICs is part of India's Act East Policy.
- **Strengthen India's engagement** - The visit aimed to strengthen India's engagement with the Pacific Island Countries (PICs) and the Forum for India-Pacific Islands Cooperation (FIPIIC).
- **Reassuring presence** - India aimed to establish a reassuring presence in the region that is not solely based on financial assistance.
- **Global South** - India to amplify the voice of global south in international forums.
- **South-South cooperation** - India's engagement with the PICs includes development assistance through South-South Cooperation.

- This assistance takes the form of capacity building, training, scholarships, grants, and loans.
- Community development projects, such as solar electrification, supply of agricultural equipment, and infrastructure development, are also part of India's engagement.
- **Climate Change and Resilience** - India's initiatives such as International Solar Alliance (ISA) and the Coalition for Disaster Resilient Infrastructure (CDRI) complement its relationship with the PICs.
- **Reliable Partner** - Recent visit by Prime Minister Modi has emphasized India's role as a reliable partner to the PICs.
- **FIPIC** - Prime Minister Modi attended FIPIC which was held at Papua New Guinea.
- **Humanitarian Assistance and Disaster Relief (HADR)** - Provided by India to PICs during critical times which includes supply of covid-19 vaccines.
- India aims to be a development partner based on mutual respect and aligned with the priorities of the PICs.

What is the status of China in Pacific Island Countries (PICs)?

- China has made forays into the Pacific Islands through economic incentives and has sought to boost its security relationship with the island states.
- There is an increasing rivalry between China and the US and its allies in the region.
- China's increasing presence in the region has unnerved the US and has caused alarm in Australia and New Zealand.
- China's development support peaked in 2016, and its loans and grants amounted to 8% of all foreign aid to the area between 2011 and 2017, surpassing the US's 0.3% over the same period.

GS 3 : Economy, Science and Technology, Environment

1. May Day and the Challenge of Regulating Working Hours

- May 1st commemorates the historic Haymarket Square affair and is celebrated globally as International Labour Day or May Day. The day holds immense significance as it signifies the struggle of workers to secure their rights. However, the idea of reducing working hours to improve social welfare is still a dream for many in India, despite it being adopted by several countries. Instead, we see a growing trend of increasing working hours,

especially in the garment and electronic industries, in the name of increasing productivity.

Significances of International Labour Day

- **Honouring the labour movement:** International Labour Day is an occasion to pay tribute to the labour movement and honour the contributions of workers worldwide.
- **Celebrating the rights of workers:** The day is an opportunity to celebrate the hard-won rights of workers, including the right to fair wages, safe working conditions, and the right to form unions.
- **Advocating for workers' rights:** International Labour Day is also a platform to raise awareness about the need to protect and advocate for workers' rights, particularly in countries where labour laws are weak or not enforced.
- **Recognizing the role of labour unions:** Labour unions have played a significant role in securing better working conditions and benefits for workers. On International Labour Day, the contributions of labour unions are recognized and celebrated.
- **Promoting social justice:** The day promotes social justice by advocating for fair treatment of workers, regardless of their gender, race, or other factors that may lead to discrimination or exploitation.
- **Remembrance of struggles:** International Labour Day is also an opportunity to remember the struggles of workers in the past and the sacrifices made by those who fought for workers' rights.
- **Building solidarity among workers:** The day fosters a sense of solidarity among workers, encouraging them to come together to promote their rights and advocate for better working conditions.

What are the reasons behind growing trend of increasing working hours?

- **Global competition:** Companies feel pressure to work longer hours to keep up with international competition and maintain their market share.
- **Cost-cutting:** Employers may increase working hours to cut costs and boost productivity, rather than hiring more workers.
- **Increased demand:** As demand for goods and services grows, companies may feel the need to work longer hours to meet that demand.
- **Technology:** Advances in technology have made it easier to work remotely, leading to an expectation of being available and connected 24/7.
- **Flexibility:** Employers may offer more flexible schedules, but with the expectation of working longer hours to complete tasks.

- **Emphasis on economic growth:** Mainstream economists prioritize economic growth, even if it is at the expense of labor rights and human rights. They believe that working longer hours and increasing exports will lead to economic growth.
- **Subsidies and exemptions:** Regional governments offer subsidies and exemptions to attract global and domestic capital, and employers may prefer weaker unions in exchange for these incentives.

What are the concerns over increasing working hours?

- **Adversely Affecting Health:** Extending working hours can lead to physical and mental fatigue, stress, and burnout, which can affect the health of the workers. This, in turn, can lead to an increase in absenteeism, accidents, and medical costs.
- **Diminishing Marginal Productivity:** As the hours of work increase, the efficiency and productivity of the worker may decrease, leading to a decline in the quality of output. It can also lead to a decrease in the quality of life of the workers, as they have less time for family and leisure activities.
- **Violation of Labour Rights:** Increasing working hours can be a violation of the fundamental rights of the workers, as it denies them the right to rest and leisure, which are essential for the physical and mental well-being of the workers.
- **Job Insecurity:** Increasing working hours can lead to job insecurity as employers may replace workers with automation or outsourcing to cut costs. It can also lead to a decline in wages, as employers may argue that they are paying for more working hours.
- **Adverse Impact on Women Workers:** Increasing working hours can disproportionately affect women workers, who may be responsible for domestic chores and childcare. Long working hours can lead to a decline in their physical and mental health and an increase in their workload, which can have an adverse impact on their family life.

Why it is necessary to regulate working hours?

- **Protecting workers' health:** Working long hours can have adverse effects on workers' physical and mental health. It can lead to fatigue, stress, sleep disorders, and other health issues.
- **Ensuring safety at the workplace:** Workers who are overworked may become fatigued, which can increase the risk of accidents and injuries at the workplace. Regulating working hours can help ensure a safe and healthy work environment.
- **Promoting work-life balance:** Long working hours can negatively impact workers' personal lives, reducing their time with family and friends, and

limiting their ability to engage in other activities outside of work. Regulating working hours can help promote a healthy work-life balance.

- **Enhancing productivity:** Research has shown that working long hours can lead to a decline in productivity and an increase in errors and accidents. By regulating working hours, employers can ensure that workers are well-rested and productive.
- **Protecting workers' rights:** Regulating working hours is an essential component of protecting workers' rights. It helps to prevent exploitation and ensures that workers are compensated fairly for their time and labor.

Conclusion

- May Day serves as a reminder of the struggle of workers for their rights. In this context, India must prioritize the welfare of its labour force and regulate working hours to improve their social welfare. The government must ensure that labour laws are not weakened, and trade unions must unite to ensure that the rights of workers are protected. Multinational corporations must be held accountable for skilling their workers and not exploiting the cheap labour offered by developing countries. Only then can India move towards inclusive and sustainable development.

2. Sustainable Development Goals (SDGs): India's Progress Analysis

India's Prime Minister Narendra Modi, while addressing the first meeting of Finance Ministers and Central Bank Governors under India's G20 Presidency, expressed concern about the slowing down of Sustainable Development Goals (SDGs). Given India's large population, the success of achieving these goals is crucial for global progress. While India has made progress towards achieving some SDG targets, there are concerns regarding others.

India's progress on SDG's

- **Neonatal and under-five mortality:** India is on target to meet the SDG indicators for neonatal and under-five mortality. Both indicators have substantially improved in the last five years.
- **Full vaccination:** India is on target to meet the SDG indicator for full vaccination.
- **Improved sanitation:** India is on target to meet the SDG indicator for improved sanitation. The country has made significant progress in this area in the last five years.

- **Electricity access:** India is on target to meet the SDG indicator for electricity access.
- **Access to banking:** The number of women having bank accounts has improved across a vast majority of the districts between the years 2016 and 2021.
- **Adolescent pregnancy:** The SDG indicator for eliminating adolescent pregnancy has improved across a vast majority of the districts between the years 2016 and 2021.
- **Multidimensional poverty:** The SDG indicator for reducing multidimensional poverty has improved across a vast majority of the districts between the years 2016 and 2021.
- **Women's well-being and gender equality:** India has made progress in increasing mobile phone access, with 93% of households having access to mobile phones. However, only 56% of women report owning a mobile phone.

Lessons from COVID-19 Approach

- **Leadership:** Strong political leadership and responsive administrative structure are critical to success, and India's COVID-19 response demonstrated that a mission-oriented ethos that provides adequate support for accomplishing district-level SDGs is urgently needed.
- **Infrastructure and Coordination:** India's success with COVID-19 was largely possible both because of the existing digital infrastructure, as well as new, indigenous initiatives such as the Co-WIN data platform and the Aarogya Setu application. Following these examples, India must put in place a coordinated, public data platform for population health management.
- **Targeted delivery:** A targeted SDG strategy delivered at scale must be executed with the same timeliness of India's COVID-19 relief package. Key to this relief programme was a mix of spending to provide direct in-kind and economic support, as well as measures aimed at revitalising the economy, small businesses, and agriculture.

Concerns regarding India's progress towards achieving SDGs

- **Unequal progress across districts:** While India is on target to meet 14 out of 33 SDG indicators, the progress is not uniform across all districts.
- **For example:** neonatal and under-five mortality rates are on target for the country as a whole, but many districts are not on track to meet these indicators.
- **Pace of improvement:** The current pace of improvement is not sufficient to meet the SDG targets for 19 out of 33 indicators.

- **For instance:** despite a national policy push for clean fuel for cooking, more than two-thirds of districts remain off-target for this indicator.
- **Gender inequality:** India is facing significant challenges in achieving gender-related SDG targets.
- **For example:** no district in India has yet succeeded in eliminating the practice of girl child marriage before the legal age of 18 years. Also, despite the overall expansion of mobile phone access in India, only 56% of women report owning a mobile phone, with many districts remaining off-target for this indicator.
- **Multidimensional poverty:** Although India has made progress in reducing multidimensional poverty, many districts are still off-track to meet this SDG indicator.
- **Environmental sustainability:** India has made progress in some areas related to environmental sustainability, such as improved sanitation and access to electricity. However, the country is still off-target for indicators related to clean cooking fuel, water and handwashing facilities, and reducing greenhouse gas emissions.

Way ahead

- Implement targeted policies and programs that are aligned with the SDG goals, particularly for areas where progress has been slow or lacking.
- Improve the digital infrastructure, and create a coordinated public data platform for population health management.
- Ensure strong and sustained political leadership that is supported by a responsive administrative structure at all levels.
- Prioritize and accelerate efforts to address gender inequality and women's well-being.
- Strengthen implementation and monitoring mechanisms to ensure timely and effective delivery of SDG policies and programs.
- Foster partnerships between government, civil society, and the private sector to mobilize resources and expertise to achieve SDG targets. Develop a decadal plan that outlines concrete steps and targets for achieving SDG goals in the next ten years.

Conclusion

- India needs to innovate a new policy path to achieve its SDG targets, especially those related to population health and well-being, basic quality infrastructure, and gender equality. India's successful COVID-19 response has shown that it is possible to deliver at scale in such an ambitious and

comprehensive manner. To achieve SDG targets, India needs a similar concerted, pioneering, and nationwide effort.

3. TRAI Recommendations on Ease of Doing Business in Telecom and Broadcasting

The Telecom Regulatory Authority of India (TRAI) has recently released its recommendations on ease of doing business in telecom and broadcasting sectors.

TRAI Recommendations for Infrastructure and Services in India's Broadcast and Cable Sector

TRAI has suggested according infrastructure status to the "broadcast and cable sector and submarine cable laying and repair in Indian Territorial Water and Exclusive Economic Zones of India." The regulator has also proposed that Cable Landing Stations in India be considered as "critical and essential services."

Consultation Process and User-friendly Portal

The TRAI's recommendations were made after a suo motu consultation, and it recommended that a user-friendly, transparent and responsive digital single-window system-based portal be established for end-to-end inter-departmental online processes. It has also recommended that each Ministry establish a standing Ease of Doing Business (EoDB) Committee to regularly review, simplify, and update existing processes and ensure ease of doing business as an on-going activity.

Spectrum Royalty Fee and Mobile App for Registration

TRAI has suggested that Wireless and Planning Commission charge the spectrum royalty fee for temporary live event uplinking on a pro-rata basis for the actual event days. In addition, TRAI has recommended that I&B Ministry create a mobile app for local cable operators to register. The GatiShakti Sanchar Portal or RoW portal should also incorporate all service providers, including LCOs, and the DoT should seek RoW approvals for LCOs while consulting with MIB.

Reducing Compliance Burden and Online Submarine Cable Network

To reduce the compliance burden on Internet Service Providers, the TRAI has recommended revision in the periodicity for submission of information by the ISPs on details of ISP Nodes or Points of Presence (PoP) with their locations and number of subscribers. The TRAI has also recommended that the website blocking process should be incorporated on the single window portal. It further suggested that permissions of laying and operations of submarine cables network should be made online as a part of Saral Sanchar portal.

Standing Committee and Special Corridor

TRAI has recommended that DoT should constitute a standing committee comprising two senior-level officers of joint secretary level each from MeitY, DoT, WPC, TEC, BIS, and two representatives from product manufacturers. The TRAI suggested that the committee should distinctly recognize one testing scheme for the product to be tested. Additionally, TRAI recommended that the committee should assess the global best practices and practicality to identify and declare a specific passage in the Indian marine context.

4. Business Ready (B-READY) rankings

Recently, the World Bank released the **Business Ready (B-READY) rankings**.

Business Ready (B-READY) rankings:-

- The World Bank Group is implementing a new corporate flagship, **Business Ready (B-READY)**.
- **Objective:** to assess the business and investment environment worldwide annually.
- In September 2021, the World Bank Group (WBG) Senior Management decided to **discontinue the Doing Business (DB) report** and data and announced a new approach for assessing the business and investment climate.
- **B-READY improves upon and replaces Doing Business.**
- The new approach is informed by advice from **experts in the WBG and recommendations from qualified academics and practitioners outside the institution, including the External Panel Review on DB methodology.**
- The new benchmarking exercise is being developed in the **Development Economics (DEC) Global Indicators Group (DECIG)**.
 - This Group will **design, pilot, and implement the new benchmarking exercise.**
 - It will be under the guidance of the **WBG Chief Economist and DEC Senior Vice President.**
- The **data collection and reporting process** will be governed by the **highest possible standards**, including sound data gathering

The key features of the new project are as follows:-

- **Working Title.** The working title of the new project is **Business Enabling Environment**, with the acronym '**BEE**'.
- The title will be refined after due consideration for branding impact.

- The objective of this benchmarking exercise is to provide a quantitative assessment of the business environment for private sector development.
- **Scope:** BEE will assess the economy's business environment by focusing on the regulatory framework and the provision of related public services for firms and markets, as well as the efficiency with which they are combined in practice.

5. Action plan to reduce Air Pollution

Delhi Chief Minister announced a 14-point action plan to reduce air pollution during the summer months with a focus on controlling dust pollution.

Highlights of the action plan:

- The Delhi government will conduct a real-time apportionment study of 13 identified hotspots to find sources of pollution and solutions to curb them.
- People will have to register to carry out construction work on land measuring more than 500 square meters.
- The government will increase green cover by planting 59 lakh saplings.
- Urban farming will also be increased and 400 workshops will be conducted and free training kits will be given to people.
- The government is preparing a new policy to deal with industrial waste management and techniques to collect and scientifically dispose of industrial waste to curb industrial pollution.

About Air Pollution:

- Air pollution refers to the release of pollutants into the air that is detrimental to human health and the planet as a whole.

Source of Air Pollution

- **Nitrogen dioxide:** It is one of the major pollutants and major sources of NO_x include emissions from motor vehicle exhaust, industrial facilities, and chemical solvents.
- **Agriculture & Allied Sources:** Ammonia (NH₃) -It is another gaseous pollutant that is monitored.
 - It occurs naturally in air, soil and water, and is used as an agricultural fertiliser and in cleaning products.
 - Short-term inhalation of high levels of ammonia can cause irritation and serious burns in the mouth, lungs and eyes.

- **Stubble burning:** It is also one of the major sources of air pollution in northern India, especially in winters.
- **Sulphur dioxide (SO₂):** They emitted from the combustion of fossil fuels have, historically, been the main component of air pollution in many parts of the world.
 - The largest source of SO₂ in the atmosphere is burning fossil fuels by power plants and other industrial facilities.
 - Short-term exposure to SO₂ can harm the respiratory system, making breathing more difficult.
- **Particulate Matter:** Particulate matter (PM) are inhalable and respirable particles composed of sulphate, nitrates, ammonia, sodium chloride, black carbon, mineral dust and water.
 - **Both PM_{2.5} and PM₁₀** are capable of penetrating deep into the lungs but PM_{2.5} can even enter the bloodstream, primarily resulting in cardiovascular and respiratory impacts, and also affecting other organs.
 - In 2013, outdoor air pollution and particulate matter were classified as carcinogenic by **WHO's International Agency for Research on Cancer (IARC)**.
- **Carbon monoxide (CO):** It is a toxic, colourless and odourless gas, given off when fuel containing carbon, such as wood, coal and petrol, are burned.
 - Major sources of methane include waste and fossil fuel and agricultural industry.
- **Ozone (O₃):** It occurs both in the Earth's upper atmosphere and at ground level. At the ground, O₃ is created by the chemical reaction between **oxides of nitrogen (NO_x) and volatile organic compounds**.
 - It is formed when pollutants emitted by cars, power plants, refineries and other sources chemically react in presence of sunlight.
 - It can trigger a variety of health problems, including chest pain, throat irritation and airway inflammation.

Associated risks

- Air pollution is a threat to health in all countries, but it hits people in low- and middle-income countries the hardest.
- Every year, exposure to air pollution is estimated to cause **7 million premature deaths** and result in the loss of millions more healthy years of life.
- In children, this could include **reduced lung growth and function, respiratory infections and aggravated asthma**.
- In adults, ischaemic heart disease and stroke are the most common causes of premature death attributable to outdoor air pollution, and evidence is also emerging of other effects such as diabetes and neurodegenerative conditions.
- This puts the burden of disease attributable to air pollution on a par with other major global health risks such as unhealthy diet and tobacco smoking.

- There is a body of scientific evidence to prove that air pollution is leading to severe health impacts and **90% of the entire global population is breathing polluted air.**

Steps taken by the government:

- **Graded Response Action Plan (GRAP)** is a set of emergency measures that kick in to take required steps such as banning construction activities, implementing an odd-even scheme etc.
- Based on an initiative by the supreme court, legislation has been brought in to form the **Commission for Air Quality Management** to implement measures like GRAP and ensure inter-state coordination with a vast range of powers.
- **National Clean Air Program(NCAP)** to reduce pollution in non-attainment cities by 2024 compared to 2017 levels.
- Efforts to distribute turbo happy Seeder machines, expanding area under bio decomposers for in situ stubble management
- **Development of safe fewer polluting crackers** such as STAR (safe thermite cracker) and SWAS(Safe water releaser) by the Council of scientific and industrial research.

Way Forward:

The air does not belong to any one State therefore all have to work in close coordination with neighbouring States to curb air pollution. Policies to reduce air pollution offer a win-win strategy for both climate and health, lowering the burden of disease attributable to air pollution, as well as contributing to the near- and long-term mitigation of climate change.

The WHO also prescribed some steps to be taken by governments to improve the air quality and health. It urged countries to implement national air quality standards in line with the WHO's guidelines, usage of clean household energy, and implementation of stricter vehicle emissions and efficiency standards among other measures.

6. Dima Hasao insurgent group signs peace pact with Assam, Centre

Dimasa National Liberation Army (DNLA), which operates in the Dima Hasao district, has signed a peace agreement with the Assam State Government and the Centre.

Peace Agreement With DNLA:

- The agreement will put a **complete end to insurgency** in Assam.
 - There is **no more militancy in Dima Hasao** as well as Assam.

- Under the agreement, the DNLA representatives have agreed to **give up violence**, surrender including the **surrender of arms and ammunition**, **disband their armed organisation**, **vacate all camps occupied by DNLA cadres and join the mainstream**.

Dimasa Welfare Council (DWC)

- **Dimasa Welfare Council (DWC)** will be set up by the Government of Assam.
 - **Aim:** to protect, preserve and promote a social, cultural, and linguistic identity to meet political, economic and educational aspirations.
 - DWC will ensure **speedy and focused development of the Dimasa people** residing outside the jurisdiction of the Autonomous Council.
- The MoU also provides for the **appointment of a Commission** under the Sixth Schedule to the Constitution of India to examine the demand for the inclusion of additional villages contiguous to the **North Cachar Hills Autonomous Council (NCHAC)** with the DWC.

Development Package

- Special Development package of **₹500 crore** from both **Government of India and the Government of Assam** will be provided over a period of **five years**.
- It is for the all-round **development of NCHAC as well as Dimasa people** residing in other parts of the State.

Dimasa people:

About

- **Dimasas** are an **ethnolinguistic community** presently inhabiting in **Assam and Nagaland states** in Northeastern India.
- They are **one of the oldest inhabitants** of the Northeastern part of India and
- They are one of the many **Kachari tribes**.
- **Di-ma-sa** stands for **sons of big waters** referring to the **Brahmaputra River** (known as **Dilao** in Dimasa).
- **Language:** Dimasa, a **Tibeto-Burman language**.

Society

- Dimasas form a **"sealed" society** – every member drawing his or her **patriarchal lineage** from one of the **forty-two male clans** (sengphong – "holder of the sword") and the **matriarchal lineage** from one of the **forty-two female clans** (jalik or julu).
- These clans are distributed among **twelve territorial "sacred groves"** called **daikhos**.

- **Khunang** is a traditional village headman, who is at the **top of the village administration**.
- He has both **executive and judiciary powers**.
- He is assisted by another official called the **Dillik (Assistant Headman)**.
- **Daulathu** occupies third place.
- Next to the Daulathu is the **Haphaisgao**, who holds **office for two years**.
- Other village officials include **Phrai, Montri, Hangsbukhu, and Jalairao**.

Festivals

- The decision of the Dimasa community of **Dima Hasao**, the Autonomous Council of Dima Hasao had officially declared 27 January as **Busu Dima festival day**.

Dance

- Any Dimasa dance is called **Baidima** (**Bai** means dance, **Dima** means Dimasa).

7. 14 million jobs worldwide will vanish in the next 5 years: WEF

The **World Economic Forum** has recently released **4th edition** of its report- **Future of Jobs Report**.

About The Future of Jobs report:

- It aims to analyse how **macrotrends** as well as **technology adoption** will reconfigure **labour markets** and shape the **demand for jobs** and skills in the **2023-2027 timeframe**.
- It was first launched in **2016**.
- It surveys the perspective of **803 companies** that employs more than **11.3 million workers** in **27 industry clusters** and **45 economies** from world.

Key highlights of the report:

Global scenarios:

- The key driver for **job growth** will be **green transition** and **localisation** of supply chains.
- The **adoption of technology** and increased **digital access** will help create **net job growth**

- The **slower** economic growth, **supply shortages** and **inflation** pose the **greatest** risks to jobs indicating that the immediate **job losses** will be due to factors other than technology.
- The **macroeconomic** developments, including an **impending** growth, will **stifle** job creation, along with a **slower rate** of **skill development** to meet employers' requirements.
- The **largest** absolute gains in jobs will come from **education** and **agriculture**.
- By **2025**, the amount of **time spent** on current tasks at work by **humans** and **machines** would be **equal**.
- Advancing **technology adoption** and increasing **digitisation** will have an overall **net positive** in job creation.

The need of upskilling/reskilling:

- **44 %** of **workers' skills** needs to be updated for continued employment.

Digital commerce sector:

- Because of the **digital revolution**, **digital commerce** will benefit the most in terms of job creation.
- Around **2 million new digitally enabled jobs** will be created in the **digital commerce sector**.

Sustainability roles:

- Job roles will **increase** in sustainability roles, such as **sustainability specialists** and **environmental protection**.
 - It will lead to growth of approximately **1 million jobs**.

Education:

- The jobs in the **education industry** will grow by about **10 %** or **3 million additional jobs** for **vocational education teachers** and **university** and higher education teachers.

Agricultural professionals:

- Jobs especially for agricultural equipment operators, graders and sorters will grow by **15- 30%**.
 - This will lead to an **additional 4 million jobs** globally.

Technology related jobs:

- The employment of **data analysts** and **scientists**, big data specialists, AI machine learning specialists and cybersecurity professionals will grow on average by **30%** by **2027**.
 - **Big data** is the **top** technologies that will create **jobs**.

Indian scenario:

- Applications of **ESG standards** will drive **job growth**, followed by adoption of **new technologies** and greater access to **digital services**.
- The **biggest** obstacles to job changes are a lack of **personnel** and **skills shortages**.
- Before **2027**, 6 out of 10 workers will need **training**, but only **half** of **workers** currently have access to sufficient **training opportunities**.

8. A Digitally Unprepared Workforce

The need for the digital jobs is in high demand and India's demographic divided could be a leverage if the youth are equipped with adequate digital skills.

What are the challenges to digital workforce?

- **Pace of technological change** - Continues to accelerate and demand for such skills doesn't meet the skill supply.
- **Availability of training is not available in wide range** - The training provided by the government is available only in the few areas within the digital space.
- **Artificial intelligence** - According to World Economic Forum the AI will replace the jobs of the digital workforce but also create new jobs in different fields.
- **Lack of skills in Data-driven field** - The jobs of the future are expected to rely more on data-driven and machine-powered processes.
- **Disproportionate enrolment** - Youth enroll in IT-ITeS vocational or technical courses, with a significantly high percentage of 34.7%, in comparison to other courses.
- **Inadequate training** - 29% of the 30% trained workforce are unemployed due to inadequate training content or poor training quality.

What can be done to address the digital skills crisis?

- **Revamping skills** - To adapt to the changing job market the entire skill development system needs to be restructured.
- **Upskilling** - To upskill the workforce in line with the emerging technologies.

- **Strategic investment** - Particularly in the reskilling of the workforce to keep up with the digital transformation.
- **Skill India Mission and Pradhan Mantri Kaushal Vikas Yojana (PMKVY) 4.0** - Needs to be implemented efficiently to provide digital skills on digital skills on emerging technologies like artificial intelligence, mechatronics and robotics.

9. CBDC for efficient Cross-Border Payment

RBI Deputy Governor T. Rabi Shankar commented on CBDC platforms and their potential impact on cross-border payments during the G20 TechSprint.

Central Bank Digital Currency (CBDC)

- CBDC is a central bank-issued digital currency which is backed by some kind of assets in the form of either gold, currency reserves, bonds and other assets, recognised by the central banks as a monetary asset.
- The present concept of CBDCs was directly inspired by Bitcoin, but a CBDC is different from virtual currency and cryptocurrency.
- Cryptocurrencies are not issued by a state and lack the legal tender status declared by the government.

Hurdles in Cross-Border Payments

- **Fragmented and truncated data formats:** Lack of standardization in data formats creates inefficiencies in cross-border payments. Fragmented and truncated data formats create additional costs and delays in the processing of transactions.
 - **Complex processing of compliance checks:** Cross-border payments require compliance with different regulatory frameworks in different jurisdictions. Compliance checks can be complex and time-consuming, causing delays and additional costs.
 - **Limited operating hours:** Traditional banking systems have limited operating hours, which can cause delays in cross-border payments. International time zone differences also contribute to these challenges.
- **Legacy technology platforms:** Traditional banking systems still rely on legacy technology platforms, which can be slow and outdated. This can lead to inefficiencies and delays in cross-border payments.
- **Long transaction chains:** Cross-border payments often involve multiple intermediaries, which can lead to long transaction chains. Each intermediary adds additional costs and can increase the time it takes for a transaction to be completed.

□ **Funding costs:** Cross-border payments require funding in multiple currencies, which can lead to additional costs. Exchange rate fluctuations can also impact the cost of cross-border payments. **Weak competition:** The lack of competition in the cross-border payments industry can contribute to inefficiencies and high costs. The dominance of a few large players can limit innovation and hinder the development of more efficient solutions.

Potential benefits with CBDC

- **Less intermediaries:** CBDC can reduce the need for multiple intermediaries in cross-border payments, leading to a faster and more efficient process.
 - **Enhanced efficiency:** It can increase the speed and efficiency of cross-border payments by reducing processing times and delays.
 - **Enhanced integration:** It can enable better integration between different payment systems, reducing fragmentation and increasing interoperability.
- **Enhanced technical compatibility:** It can be designed to work with existing payment infrastructure, making it easier to adopt and integrate into the current system.
- **Enhanced safety:** It can provide enhanced security measures that can help mitigate the risk of fraud and cyber-attacks in cross-border payments.
- **Mitigation of cross-currency risks:** CBDC can help mitigate risks associated with cross-border and cross-currency transactions, such as exchange rate fluctuations, currency conversion fees, and transaction processing delays.

RBI's push for CBDC adoption @ G20

- RBI emphasized the need for increased adoption of CBDCs across countries for them to play a role in the cross-border payments arena.
- Countries need to decide to create CBDCs and create an infrastructure for various CBDCs to interface for CBDCs to be effective in cross-border payments.
- RBI suggested India's model of digitization, where the basic infrastructure was created by the public sector and the fintech/financial/start-up ecosystem was allowed to create innovative solutions, could also be successful with CBDCs globally

Conclusion

CBDCs could bring about a significant change in the sphere of cross-border payments, but coordination across countries and between the public and private sectors is essential for that to happen

10. RITES to Provide Technical Support for Waste Management under Swachh Bharat Mission-Urban 2.0

The Indian government has hired technical and infrastructure specialists from Rail India Technical and Economic Service (RITES) to create a uniform standard for processes and facilities that manage solid waste and used water in towns with less than one lakh population. The partnership was formalised with a Memorandum of Understanding signed between the Ministry of Housing and Urban Affairs and RITES, under the Swachh Bharat Mission-Urban 2.0.

The Vision of SBM-U

The overall vision of SBM-U is to create 'garbage-free cities', and a newly funded component for towns with less than one lakh population is used water management. The objective of the Swachh Bharat Mission-Urban 2.0 is to provide safe and sustainable sanitation access universally.

The Objective

The Memorandum of Understanding will allow states and urban local bodies to efficiently execute mission initiatives that ensure safe and sustainable access to sanitation universally, by securely containing, collecting, transporting, treating, and reusing waste.

More About the MoU

There are 3,700 towns in India with a population of less than a lakh. RITES will offer technical assistance for three years in setting standards and specifications for sewage and fecal sludge management, as well as for standardizing units used for treating waste water in these towns. For solid waste management, the areas of engagement will be process standardisation and engineering design of waste management facilities. The waste management facilities will incorporate the segregation of biodegradable waste that has partially or fully decomposed, plastic waste, textiles, metal, glass, and other materials. Moreover, RITES will lend a hand in creating model tender documents and procurement related to waste management.

11. Foreign investment in Nuclear Power

India considers foreign investment in nuclear power.

Introduction:

- As per multiple government sources, India is considering overturning a ban on foreign investment in its nuclear power industry and allowing greater participation by domestic private firms, as part of a push for cleaner energy.
- The measures have been recommended by a government panel, set up by think-tank Niti Aayog.
- The panel has recommended changes to the Atomic Energy Act 1962 and to foreign investment policies so that both domestic and foreign private companies can complement nuclear power generation by public companies.
- The panel has also recommended replacing old coal-based plants with small modular reactors (SMRs) to fast-track nuclear energy generation, which accounts for 3% of India's total power production.
 - Factory-built and ready-to-shift, each SMR produces up to 300 megawatts (MW) and requires less capital, time and land than conventional reactors. They can also safely be deployed in populated areas.

Current Status:

- India's current nuclear power capacity is 6,780 MW and it is adding 21 more units with a capacity of 7,000 MW by 2031.
- Under Atomic Energy Act 1962, the Union government plays a central role in developing and running nuclear power stations.
- Domestic private companies are allowed to participate as "junior equity partners" by supplying components and helping build them.
- India does not allow foreign investment in the nuclear power sector.
- As per the Department of Atomic Energy, previously, several foreign companies including Westinghouse Electric, GE-Hitachi, Electricite de France and Rosatom were interested in participating in the country's nuclear power projects as technology partners, suppliers, contractors and service providers.
- State-run Nuclear Power Corp of India Ltd. (NPCIL) and Bharatiya Nabhiya Vidyut Nigam are the only two nuclear power generators in India. Thermal power company NTPC and oil marketing firm Indian Oil Corp, both government-controlled, have formed partnerships with NPCIL for nuclear power.

12. FDA approves first vaccine for Respiratory Syncytial Virus

The Food and Drug Administration (FDA) has approved the first vaccine 'Arexvy' for respiratory syncytial virus (RSV) to lower respiratory tract disease in people older than 60 years.

What is Respiratory Syncytial Virus?

- Respiratory Syncytial Virus (RSV) is a common respiratory virus that can cause illness in people of all ages.
- It is the most common cause of lower respiratory tract infections in infants and young children, and it can also affect older adults and people with weakened immune systems.
- RSV is highly contagious and spreads through droplets when an infected person coughs or sneezes, or by touching a surface contaminated with the virus and then touching one's face.
- Symptoms of RSV can range from mild to severe, including runny nose, coughing, sneezing, fever, wheezing, and difficulty breathing.
- In severe cases, it can lead to pneumonia, bronchiolitis, or death.

Identification of Protein F

- In 2013, Barney Graham and other scientists identified the key protein, protein F, responsible for the RSV virus to infect human cells.
- The protein, introduced in humans, elicited neutralizing antibodies against the virus.

Approval and Efficacy of Arexvy

- The FDA has approved Arexvy, the first RSV vaccine to be approved anywhere in the world, manufactured by GSK.
- The approval was based on a phase-3 trial carried out on nearly 25,000 participants.
- It showed a single dose of the vaccine reduced the risk of developing lower respiratory tract disease caused by the RSV virus by 82.6% and severe disease by 94.1% in people older than 60 years.
- The vaccine will be available for older adults in the U.S. before the 2023-2024 RSV season.

13. US Patriot Shoots Down Kh-47 Kinzhal

On May 7, 2022, Ukraine announced that it had shot down a Kinzhal missile for the first time. The missile was targeted and brought down in the skies over Kyiv using a US Patriot air defense system. The downing of the Kinzhal missile is being viewed as a significant setback for Russia's long-range air strikes campaign against Ukraine.

What is Kinzhal Missile?

Kinzhal is a Russian term that means dagger. In 2018, President Putin unveiled six next-generation weapons, and Kinzhal missile is one of them. The Kinzhal missile has a range of up to 2,000 km (1,250 miles) and travels at a speed ten times faster

than the speed of sound, making it a challenging target to intercept. Additionally, the missile has the capability of carrying both conventional and nuclear warheads.

Technical Specifications

The Kinzhal missile is 8 meters long, has a body diameter of 1 meter, and its launch weight is approximately 4,300 kg. The missile is intended to be fired from MiG-31 fighter jets at an altitude of around 18 km (59,000 ft). During all stages of the flight, the missile maneuvers to overcome hostile air defense systems.

Expert Opinions

While Russia claims the Kinzhal missile to be a “hypersonic” missile, the Center for Strategic and International Studies states that nearly all ballistic missiles reach hypersonic speeds at some point during their flight. The UK’s Ministry of Defense stated that the use of the Kinzhal missile was unlikely to materially affect the outcome of Russia’s campaign in Ukraine.

Differences between Kinzhal and its Predecessor

One major difference between Kinzhal and its predecessor is that it is launched using an airborne vehicle and not from the ground, making it less predictable and more difficult to intercept. The missile can easily strike key targets like command centers and, with its high speed, can penetrate even deeply buried bunkers.

14. Space Science and Technology Awareness Training (START)

The Indian Space Research Organisation (ISRO) has recently launched an initiative to provide an overview of different aspects of Space Science and Technology to students. The program, named Space Science and Technology Awareness Training (START), is an introductory-level training program aimed at postgraduate and final-year undergraduate students of Physical Sciences and Technology.

Purpose and Benefits

The primary objective of the START program is to help Indian students become professionals in Space Science and Technology, as ISRO’s Space Science exploration program continues to expand into new domains. The program will provide a comprehensive understanding of the various aspects of the discipline, research possibilities, and professional pathways. The lectures will also cover topics related

to the Indian Space Science exploration program and research opportunities in Space Science and technologies.

The START program also aims to emphasize the cross-disciplinary nature of Space Science, highlighting how individual aptitudes can be applied to the field. It encompasses fields such as Astronomy and Astrophysics, Heliophysics, Sun-Earth interaction, Instrumentation, and Aeronomy.

Short Courses Offered by ISRO

In addition to the START program, the ISRO's National Remote Sensing Centre (NRSC) has also launched two short courses: Remote Sensing Data Acquisition and Remote Sensing Data Processing. These courses will be conducted by the Centre for Space Science and Technology Education in Asia and the Pacific (CSSTEAP), a UN-affiliated educational institution. The courses have been planned to take place between August 21 and September 1, and between October 9 and 20, correspondingly, and they will be conducted at NRSC's Earth Station situated near Hyderabad's Shadnagar area.

These short courses will provide students with knowledge and skills in remote sensing, which is a vital aspect of Space Science and Technology. Students will receive training on remote sensing data acquisition and processing, which will help them become proficient in the field.

15. India's First National Water-Body Census

Why in news?

The Jal Shakti ministry has released the report of India's first water-body census, which provides a comprehensive database of ponds, tanks, lakes and reservoirs in the country.

What is the need for water-body census?

- To get a more accurate picture of the status of India's water.
- To formulate policies to address ground water crisis and biodiversity loss.
- Water bodies contribute to food and water security and livelihoods by recharging ground water.
- Water bodies are the sources of irrigation and livestock.
- Water bodies have an important role in supporting biodiversity.
- Water bodies are increasingly under threat from pollution, encroachment, urbanization, and drying up.

The country's water resources have become extremely polluted, with 70% of surface water found to be "unfit" for human consumption.

What are the salient features of the census?

- **Objective** - To develop a national database for all water bodies by collecting information on all important aspects of the subject including their size, condition, status of encroachments, use, storage capacity, status of filling up of storage.
- **Water bodies** - Are structures where water from ice-melts, streams, springs, rain or drainage from residential or other areas is accumulated.
- Storage of water diverted from a stream, river is also included.
- The definition **excludes** oceans, rivers, waterfalls, and swimming pools, covered water tanks made by individuals, factories and temporary water bodies.
- **Water bodies** - India has 2.42 million water bodies, out of which **97.1% are in rural areas** and 2.9% in urban areas.
- **Non-functional** - 83.7% are 'in use' and the remaining 16.3% are non-functional on account of drying up, silting and construction activities and so on.
- **Private entities** - 55.2% are owned by private entities and 44.8% are under public ownership.
- In the wetter states like Kerala, West Bengal and North Eastern states **more than three-quarters** of the water bodies are privately owned.
- **Encroachment** - Only 1.6% water bodies out of all the enumerated bodies have been encroached out of which 95.4% are in rural areas and remaining 4.6% in urban areas.
- **Water conservation** - **Maharashtra** State is the leading state for water conservation schemes.
- **Others** - West Bengal has highest number of ponds and reservoirs.
- Andhra Pradesh has highest number of tanks.
- Tamil Nadu has highest number of lakes.
- **Mid-sized** water bodies are largely **panchayat-owned**.
- In drier states, the water bodies are primarily used for irrigation and groundwater recharge.

More than 80% of water in the country is consumed in agriculture while the rest is used for domestic and industrial purposes.

What are the shortcoming of the census?

- **Lack of categorization** - The water bodies which were abandoned were had no categories such as industrial pollution, construction, and salinity.
- **Lack of focus** - No focus to conserve water bodies instead focuses on human use.
- **Lack of clarity in definition** - Glossary of the census defines a pond as a smaller water body than a tank, while “water conservation structures” might include check dams and percolation tanks.
- **Lack of standardization across states** - Some states like Gujarat don't show any water bodies not being in use, whereas Karnataka reports almost 80% of its water bodies as being in a state of disuse.

India accounts for 18% of the world's population, but has only 4% of its fresh water resources.

16. Creditor-led Insolvency Resolution Mechanism

The Creditor-led Insolvency Resolution Mechanism is a newly proposed mechanism that aims to reduce delays in the resolution process, which have escalated under the current system, causing legal challenges and a shortage of NCLT benches. As per the Insolvency and Bankruptcy Code (IBC), the Corporate Insolvency Resolution Process (CIRP) is mandatory, with a maximum of 270 days stipulated to resolve corporate bankruptcy.

The Delays

There is a considerable delay in filling vacancies at the National Company Law Tribunal (NCLT), creating a hindrance in resolution process. The layers of decision-making involved in tracking the right people and ensuring transparency in their operations and decision-making are taking significant time.

The Sudhaker Shukla Panel

To establish a regulatory approach for the fast-track resolution process under the IBC, the Insolvency and Bankruptcy Board of India (IBBI) has constituted a panel under Sudhaker Shukla, its whole-time member. The panel is composed of experienced bankers, an ex-central bank official, and an individual with expertise in resolving insolvency matters.

Recovery Percentage

According to IBBI, the average resolution time for the 611 bankruptcy cases under the IBC until December 2022 was 482 days, excluding the NCLT time. Creditors

recovered Rs 2.53 lakh crore, which is 30.4% of their admitted claims in these 611 cases. In the case of 516 firms, the realization was 84% of the fair value calculated when they were admitted for CIRP.

17. China objects to Indian proposal to blacklist terrorist at UN

China has objected to India's proposal to blacklist Abdul Rauf Azhar, a senior terrorist from Pakistan-based Jaish-e Mohammed (JeM) on the UN Security Council's 1267 List.

China's objection to the proposal

- China is a permanent, veto-wielding member of the UN Security Council.
- It has put a hold on proposals to blacklist other Pakistan-based terrorists in the past, including Hafiz Talah Saeed, Shahid Mahmood, and Sajid Mir.

The UNSC 1267 list

- The UNSC resolution 1267 was adopted unanimously on 15 October 1999.
- It came to force in 1999, and strengthened after the September 2001 attacks.
- It is now known as the Da'esh and Al Qaeda Sanctions Committee.

What is UNSC 1267 committee?

- It comprises all permanent and non-permanent members of the United Nations Security Council (UNSC).
- The 1267 list of terrorists is a global list, with a UNSC stamp.
- It is one of the most important and active UN subsidiary bodies working on efforts to combat terrorism, particularly in relation to Al Qaeda and the Islamic State group.
- It discusses UN efforts to limit the movement of terrorists, especially those related to travel bans, the freezing of assets and arms embargoes for terrorism.

How is the listing done?

(1) Submission of Proposal

- Any member state can submit a proposal for listing an individual, group, or entity.
- The proposal must include acts or activities indicating the proposed individual/group/entity had participated in the financing, planning, facilitating, preparing, or perpetrating of acts or activities linked to the said organizations.

(2) Actual decision

- Decisions on listing and de-listing are adopted by consensus.
- The proposal is sent to all the members, and if no member objects within five working days, the proposal is adopted.
- An “objection” means rejection for the proposal.

(3) Putting and resolving ‘Technical Holds’

- Any member of the Committee may also put a “technical hold” on the proposal and ask for more information from the proposing member state.
- During this time, other members may also place their own holds.
- The matter remains on the “pending” list of the Committee.
- Pending issues must be resolved in six months, but the member state that has placed the hold may ask for an additional three months.
- At the end of this period, if an objection is not placed, the matter is considered approved.

Here is a timeline of how China disrupts the global efforts against terrorism:

- **2009:** After the 26/11 Mumbai attacks, India moved an independent terror designation proposal against Masood Azhar but China blocked the move.
- **2016:** After seven years, India proposes listing of Masood Azhar as a global terrorist and is supported by the US, the UK and France. China blocks the move again.
- **2017:** The trio moves a third proposal only to be blocked by China again.
- **2019:** After the attacks on the CRPF personnel in J-K’s Pulwama, India calls 25 envoys of different countries to highlight the role Islamabad plays in funding, promoting and strengthening global terrorism. India moves the fourth proposal demanding Masood Azhar’s listing. China lifted its technical hold.
- **June 2022:** China blocked a proposal by India and the US to list Pakistan-based terrorist Abdul Rehman Makki as a ‘Global Terrorist’
- **August 2022:** China blocks India-US joint proposal to list Jaish-e-Mohammad (JeM) deputy chief Abdul Rauf Azhar as UNSC designated terrorist.

Conclusion

- China’s actions expose its double speak and double standards when it comes to the international community’s shared battle against terrorism.
- This clearly depicts its care for its vassal state Pakistan.

18. National MSME Council

The inaugural meeting of the National MSME Council, held on 10th May 2023, marked a significant milestone in overseeing coordination, synergies, and advancements within the Micro, Small, and Medium Enterprises (MSME) sector. This article explores the purpose, importance, and outcomes of the meeting, which operated within the framework of the RAMP programme. Launched by Prime Minister Shri Narendra Modi, the RAMP programme aims to enhance the performance and development of MSMEs.

Purpose and Objectives of the National MSME Council

The National MSME Council plays a pivotal role as an administrative and functional body responsible for coordinating efforts between Central Ministries/Departments, facilitating Centre-State synergies, and providing guidance and monitoring progress in MSME sector reforms.

Under the RAMP Programme

The first meeting of the National MSME Council was organized under the ambit of the RAMP (Raising and Accelerating MSME Performance) programme. Launched in June 2022 by Prime Minister Shri Narendra Modi, this initiative seeks to uplift and expedite the performance of MSMEs. The RAMP programme's objectives include:

- Improving market access and credit availability
- Strengthening institutional frameworks and governance
- Fostering collaboration between the Centre and states
- Addressing delayed payments
- Promoting environmental sustainability through the adoption of eco-friendly practices in MSMEs.

Leadership and Participation

Chaired by Union Minister for MSME, Narayan Rane, the meeting of the National MSME Council witnessed the active participation of representatives from 24 States/Union Territories (UTs). Bhanu Pratap Singh Verma, Minister of State for MSME, served as the Vice Chairperson. The event also saw the attendance of Secretaries from Central Ministries/Departments, Principal Secretaries, and Nodal Officers representing their respective regions.

19. Biodiversity funds are hardly spent on its conservation

A new analysis on State Biodiversity Boards has revealed that Biodiversity funds provided to them are hardly being used for their primary purpose of biodiversity conservation.

Analysis on State Biodiversity Boards:

- **Funds allocated to states** remain meagre compared to what they may require to meet their goals as specified under the **Biodiversity Conservation Act 2002**.
 - It should've been used in the conservation and management of biodiversity heritage sites, and the socio-economic development of areas from where biodiversity is accessed for commercial or other purposes.
- Only **0.44%** of the total assistance cumulatively given to 8 states in the past two years by National Biodiversity Authority has been allocated for establishing **Biodiversity Heritage Sites**.

Analysis of the component-wise assistance by NBA:

- It reveals that the **highest share of funds** is for hiring **contractual and/or outsourced personnel**, followed by the creation of Biodiversity Management Committees, preparation of People's Biodiversity Register, developing and revamping of website, the celebration of international biodiversity day etc.

States Funds:

- Out of the total of **21 responding states**, details concerning financial assistance from NBA were available for **16 states for 2021-22** and **14 states for 2022-23** respectively.
- The NBA's assistance to states had a **very large variation**.
 - In 2021-22, **Haryana** received ₹72 lakh from the Centre, whereas **Uttar Pradesh** received the lowest, around ₹7 lakhs.
 - Haryana was followed by **Kerala, Nagaland, Assam and Punjab**.
 - **Uttar Pradesh, Himachal Pradesh and Chhattisgarh** were on the lower side.
- In 2022-23, **Haryana** again received the **highest allocation** from the NBA, ₹47 lakhs.
 - Haryana was followed by **Uttar Pradesh**.
 - **Madhya Pradesh and West Bengal** were among the lowest around ₹1 lakh each.

State Biodiversity Board funds:

- In 2021-22, the funds provided by states ranged from ₹11 lakh to ₹16 crores.
 - **Punjab** has allocated **only ₹11 lakh, whereas Haryana** allocated **₹16 crores**.
- In 2022-23, **Punjab** has the lowest allocation of **₹14.5 lakhs** and **Haryana and Kerala** have had an allocation of **₹10 crores each**.

How NBA provide funds to any state?

- The Act or the Rules framed **does not** provide the basis on which NBA will have to assist any particular state.
- NBA may **not** have considered the **needs of state biodiversity boards** while deciding the amount to be granted to any particular state.
- **Example: Manipur and Nagaland** received **₹5 lakh and ₹6 lakh** respectively by NBA in 2022-23 but were **not given any funds** by their state governments for 2022-23.
- **Haryana** has the **lowest forest cover in the country** at **3.63%**.

What does the Biodiversity Act 2002 say?

- The Biodiversity Act 2002 states that the State Biodiversity Fund shall be applied for:
 - Management and conservation of heritage sites
 - Compensating or rehabilitating any section of the people economically affected by the notification
 - Conservation and promotion of biological resources
 - Socio-economic development of areas from where such biological resources or knowledge associated thereto has been accessed
 - Meeting the expenses incurred for the purposes authorised by this law.
- The Biological Diversity (Amendment) Bill, 2021, was introduced in Lok Sabha in December 2021.
 - It exempts **Ayush practitioners** from the ambit of the Biological Diversity Act, 2002.
 - It facilitates **access to biological resources and traditional knowledge** in the Indian traditional medicine sector.

Biodiversity heritage sites:

- There are **40 biodiversity heritage sites** in the country.
- These Sites are areas that support **unique, ecologically fragile ecosystems**.
- These ecologically fragile ecosystems include **terrestrial, coastal and inland waters and marine** having rich biodiversity comprising of any one or more of the following components:

- Richness of wild as well as domesticated species or intra-specific categories,
- High endemism (limited to only 1 location),
- Presence of rare and threatened species,
- Keystone species among others.
 - They also include sacred groves.

20. Livestock and fishing sector see highest decadal GVO growth

A recent report by the Ministry of Statistics and programme implementation (MoSPI) reiterates the growing importance of the livestock and fishing sector in India's agriculture mix.



Key highlights of the report:

Livestock and fishing sector:

- Livestock, fishing and aquaculture saw the **highest increase in gross value of output (GVO)** between 2011-12 to 2020-21.
- Livestock and fishing sector is dominated by **private players** and has little or **no government intervention**.

Agriculture and allied activities:

- **Share of GVA of agriculture and allied activities (FY2021):** it was **20.3 percent**, and it was the **highest in a decade** in the country's total GVA.
 - It can be because of Covid when other sectors fared poorly.

Crop Sector:

- The share of the crop sector dropped from **62.4 per cent to 54.9 per cent** in the total GVO between **2011-12 to 2020-21**.
- Within the crop sector, **fruits and vegetables** account for the **highest share of GVO**, followed by **cereals**.

Fruits and vegetables

- Among the fruits, output was the **highest for mangoes**, followed by **bananas**.
- Among the vegetables, **potato and tomato** together saw the **highest production**, accounting for about **14 per cent of the group**.
- The 'fruits and vegetables' group comprises **fruits, vegetables and floriculture**.
- During 2011-12 to 2020-21, there has been a **steady growth** in the real output of '**fruits and vegetables**'.
- It has increased from around **2.87 trillion** in 2011-12 to nearly **3.9 trillion** during 2020-21 at constant (2011-12) prices.
- **West Bengal** reported the **highest output in fruits and vegetables** in all these years (2011-12 to 2020-21).
 - However, WB's share in all-India output **reduced from 13.9 per cent** in 2011-12 to **11.7 per cent** in 2020-21.
- **Madhya Pradesh and Andhra Pradesh** increased their output during this period to claim the **second and fifth spots** in **2020-21**.

Cereals

- The GVO of cereals, at **3.36 trillion**, was the **highest among all crop groups** in **2011-12**.
 - However, in 2020-21, the GVO of 'fruits and vegetables' was **3.95 trillion**.
- **Uttar Pradesh (UP)** recorded the **highest output of cereals** in all the years (2011-12 to 2020-21).
 - UP's share in all-India output marginally **fell from 18.6 per cent** in 2011-12 to **18.3 per cent** in 2020-21.
- The share of **Madhya Pradesh** in cereals GVO has gone up considerably from **6.2 per cent** in 2011-12 to **8.9 per cent** in 2020-21.

Key Fact:

- The total **share of Tamil Nadu and Gujarat** in all-India output has **reduced** in 2020-21 compared to 2011-12.

21. Most Asia-Pacific countries ill-prepared for natural disasters: ESCAP

A new study by the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP) was recently released on the **natural disasters on Asia and the Pacific region**.

Key highlights of the report:

- Most countries in **Asia** and the **Pacific** are inadequately prepared to manage the rising challenges of **extreme weather events** and **natural disasters**.
 - This includes **lack** of necessary **data** and means to support **adaptation** and **mitigation** efforts.
- Over the past **60 years**, **temperatures** in the **region** have **increased** faster than the **global mean**.
- Of the **world's 10** most affected **countries** in terms of **disasters**, **6** are in this region.
- The region accounts for more than **half** of the **world's greenhouse gas** emissions.
- The region is one of the most **rapidly developing** regions of the world, with a significant **proportion** of the **global population**.
- The region is home to most of the **world's low-lying cities** and **vulnerable small island states**.
- The **annual average losses** from natural and biological hazards in the region is approx. **\$780 billion**.
- Some **85%** of the region's primary **energy supply** came from **fossil fuels** in **2020**.
 - **Steel** and **cement** production here relies heavily on **fossil fuels**.
- **Hydropower**, which holds the **largest** share of the region's **installed** renewable energy capacity has become **unreliable**.
- **85%** of the **regional trade agreements** signed since **2005** to which at least one Asia-Pacific economy is party contained **climate-related provisions**.

Suggestions:

- Close the **emissions gap** in **3 key sectors**- energy, transport and international trade and investment.
- Restructure **national energy** systems, new **technical capacities** and **investment** in **supply** and **infrastructure**.
- Increase **cross-border electricity grids** to increase the share of **renewable energy**.

- **Renewable energy** should be set up **locally**, as **high transmission** costs get **eliminated**.
- **Energy efficiency codes** must be aligned with **net-zero goals** to reduce **carbon footprint** in the building sector.

22. Study on butterflies' migration opens door for conservation

Research on migration patterns of milkweed butterflies in southern India.

Details

- The milkweed butterflies migrate between the Eastern and the Western Ghats in order to seek refuge from harsh summers.
- A group of researchers has recently analyzed their migration pattern and the impact of land use change, habitat degradation, and climate warming on migration.
- It is observed that after the southwest monsoon, milkweed butterflies migrate westward from the Eastern Ghats and plains to the Western Ghats. They become active for almost two months.
- These butterflies congregate in specific sites of the Western Ghats in large numbers during winter and dry seasons (between October and April).
- After summer rains, they migrate to the Eastern Ghats and the plains.
- It was found that the wings of the butterflies batter during their eastward journey (in comparison to their westward journey).
- It was also found that the dominant species (in migration) namely the Dark blue tiger and Double-branded crow do not breed in the mid and high-altitude evergreen and semi-evergreen forests of the Western Ghats.
- The migration of butterflies also plays an important ecological role in pollination and the entire ecosystem.
- The analysis of migration pattern and their feeding habits have the potential to unravel various mysteries of the nature and the interconnectedness of plant and animal life.

23. Storm Shadow Missiles

- Recently, the Defense Ministry of Russia reported that two industrial locations in the Russian-controlled city of Luhansk in eastern Ukraine were attacked by using Storm Shadow long-range cruise missiles provided by Britain.
- This marks the first instance of Britain supplying Ukraine with long-range cruise missiles, enabling them to strike Russian troops and supply depots well beyond the front lines in preparation for a significant counter-attack.

- According to the British Defense Minister, Ukraine has given assurance that these missiles will not be employed to attack targets situated inside Russia's recognized international borders.
- Storm Shadow is an Anglo-French low-observable, long-range (over 400 km), air-launched cruise missile developed since 1994 by Matra and British Aerospace, and now manufactured by MBDA, an European multinational developer and manufacturer of missiles.
- It can be launched from aircraft or ground-based launchers and is capable of hitting targets deep inside enemy territory.
- Storm Shadow is a highly accurate missile, designed to hit targets with pinpoint precision. It uses GPS and inertial navigation systems to guide it to its target, and has a circular error probable (CEP) of less than 3 metres, making it an extremely effective weapon for destroying high-value targets.
- Storm Shadow is currently in service with several countries, including the United Kingdom, France, Italy, and Saudi Arabia.
- It has been used in several other conflicts, including the Gulf War, the Kosovo War, and the Iraq War, and has proven to be an effective weapon for destroying high-value targets at long range.

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26. Studies on migration patterns of milkweed butterflies and their feeding habits can help protect them

Millions of Milkweed butterflies undertake a migration between the Eastern and Western Ghats in southern India.

Migration patterns of Milkweed butterflies

- Milkweed butterflies migrate between the Western and Eastern Ghats in southern India **twice a year**.

- **During the winter and dry seasons**, they congregate in large numbers at specific sites in the Western Ghats.
- When the summer rains cool southern India, they **migrate eastwards into the Eastern Ghats and the plains**.
- The wings of the majority of butterflies are **more battered during their eastward journey** than during their westward migration.
 - This is likely because they have to **fly further and against the wind**.
- The migration of milkweed butterflies plays an **important ecological role**.
- As pollinators, they help to **fertilize plants** and contribute to the **reproduction of plants and other organisms**.
- Their migration is threatened by **habitat destruction and climate change**.
- The dominant species involved in the migration, the **Dark blue tiger** and the **Double-branded crow**,
 - They are not found breeding in the **mid and high-altitude evergreen and semi-evergreen forests** of the Western Ghats.
- This suggests that these butterflies may be migrating in **reverse and breeding in the Eastern Ghats** and the plains of southern India.

Milkweed Butterflies:

- Milkweed butterflies are a group of butterflies that **feed on milkweed plants**.
- The most famous milkweed butterfly is the **monarch butterfly**.
 - **Monarch butterflies** are known for their long migration from **North America to Mexico**.
- Milkweed butterflies are poisonous to predators because they **ingest toxins from the milkweed plants they eat**.
 - The toxins in milkweed butterflies make them **unpalatable to predators**, which helps them survive.

Habitat:

- They are found in **North and South America**.
- They typically live in habitats with milkweed plants, such as **meadows, prairies, and forests**.

Threats:

- They are threatened by **habitat loss and the use of herbicides**.

27. Managing Inflation and Ensuring Food Security in India

- India's recent decline in consumer price index (CPI) inflation and food price inflation has brought a degree of comfort to the Reserve Bank of India (RBI). However, the challenge lies in managing inflation while aiming for a GDP growth of 6 to 6.5 percent in FY24. Collaborative efforts between the RBI and the Government of India are crucial to achieving this twin objective.

Current Inflation Scenario

- The CPI inflation for April 2023 stood at 4.7 percent, with food price inflation even lower at 3.84 percent.
- Maintaining overall inflation below 5 percent and GDP growth above 6 percent throughout the year would be a commendable achievement.

Importance of Managing Food Inflation

- Managing food inflation is crucial due to its significant weightage in the consumer price index (CPI) basket in India. The food and beverages component holds the highest weightage of 45.86% among G20 countries.
- Food inflation directly impacts the cost of living for the general population, particularly vulnerable sections that spend a significant portion of their income on food.
- High food inflation can lead to increased household expenses, lower purchasing power, and a decline in the overall standard of living.
- Food inflation can also have social and political implications, as rising food prices can cause public unrest and dissatisfaction.
- Effective management of food inflation contributes to maintaining price stability, ensuring food affordability, and supporting macroeconomic stability.

Implications of Monsoon Season

- **Agricultural Production:** The monsoon is crucial for agricultural production as it provides the majority of the water needed for irrigation. A normal or above-normal monsoon season supports adequate water availability, leading to higher crop yields and increased agricultural output. Conversely, a below-normal monsoon can lead to drought-like conditions, affecting crop productivity and agricultural incomes.
- **Food Prices:** The monsoon significantly influences food production, particularly for rain-fed crops. Insufficient rainfall can lead to lower

agricultural output, resulting in reduced supplies and higher food prices. Inadequate monsoon rains can impact staple crops such as rice, wheat, pulses, and oilseeds, leading to inflationary pressures on food prices.

- **Rural Economy:** As agriculture plays a vital role in the rural economy, the monsoon directly impacts rural livelihoods and income levels. A good monsoon season can boost rural incomes, increase agricultural employment opportunities, and stimulate rural consumption. Conversely, a poor monsoon can lead to income losses, lower agricultural wages, and reduced rural demand.
- **Hydroelectric Power Generation:** The monsoon contributes to water reservoirs, which are essential for hydroelectric power generation. Adequate rainfall ensures sufficient water levels in reservoirs, supporting electricity generation from hydroelectric plants. Inadequate monsoon rains can result in lower water levels, impacting power generation and potentially leading to electricity shortages.
- **Groundwater Recharge:** The monsoon plays a crucial role in replenishing groundwater levels. Adequate rainfall helps recharge aquifers, which are vital sources of water for irrigation, drinking water, and industrial use. Insufficient monsoon rains can lead to depleted groundwater levels, affecting agriculture, water availability, and overall water security.
- **Economic Growth:** The performance of the agricultural sector, influenced by the monsoon, has implications for overall economic growth. Agriculture contributes significantly to India's GDP and employment. A good monsoon season can stimulate rural demand, enhance agricultural productivity, and contribute to higher economic growth. Conversely, a poor monsoon can dampen agricultural output, impacting overall economic performance.
- **Fiscal Impact:** The monsoon season also has implications for government finances. Adequate rainfall supports agricultural production and reduces the need for government interventions such as subsidies or price support measures. In contrast, a poor monsoon can strain government resources, necessitating increased spending on irrigation infrastructure, relief measures, or support to affected farmers.

What are the challenges in milk inflation?

- **Supply-side Factors:** Milk inflation is influenced by supply-side dynamics. Factors such as adverse weather conditions, including drought or floods, can impact the availability of fodder and water for cattle, leading to reduced milk production. Any disruptions in the supply chain, such as transportation issues or logistical challenges, can also affect the supply of milk and contribute to inflationary pressures.
- **Disease Outbreaks:** Disease outbreaks among cattle, such as lumpy skin disease, foot-and-mouth disease, or other health issues, can affect milk

production. These outbreaks may result in a decrease in the number of healthy and productive cattle, leading to a decline in milk output and subsequently driving up milk prices.

- **Fodder Prices:** The cost of animal feed, such as fodder, plays a significant role in milk production costs. Fluctuations in fodder prices can impact the overall cost of maintaining dairy cattle. If fodder prices increase due to factors like supply-demand imbalances, weather conditions, or changes in agricultural practices, it can contribute to higher milk prices.
- **Input Costs:** Various input costs involved in milk production, such as labor, veterinary services, and energy costs, can affect the overall cost structure. Increases in input costs, including wages, veterinary medicines, or energy prices, can exert upward pressure on milk prices.
- **Import Dependence:** In some cases, countries may rely on milk imports to meet domestic demand. If the import costs increase due to factors like changes in international prices, trade policies, or exchange rate fluctuations, it can contribute to higher domestic milk prices.
- **Market Structure and Competition:** The market structure and competition within the dairy industry can impact milk prices. If the market is concentrated with a limited number of dominant players, it may lead to less competition, allowing suppliers to exercise greater pricing power. This can contribute to higher milk prices for consumers.
- **Government Policies and Regulations:** Government policies and regulations related to milk production, procurement, and pricing can influence milk inflation. Policies such as subsidies, import restrictions, quality standards, or pricing mechanisms can affect the overall supply-demand dynamics and pricing in the milk market

Way ahead

- **Focus on buffer stocking policy:** To tackle cereal inflation, using the buffer stocking policy more proactively is important. Unloading excess stocks in open market operations can be an effective tool in managing cereal inflation.
- **Preemptive policy actions:** It is important to implement policy actions in a preemptive manner rather than being reactive to events. This includes timely unloading of excess stocks and adjusting import duties to maintain price stability.
- **Monitor and address external shocks:** Given that food price inflation can be triggered by external shocks like droughts and supply chain disruptions, it is crucial to closely monitor such factors and take appropriate measures to mitigate their impact.
- **Strengthen milk production:** To address milk inflation, efforts should be made to address factors like the lumpy skin disease and high fodder prices

that have strained milk production. Policies supporting the growth and sustainability of the milk industry should be implemented.

- **Lower import duties on fat and skimmed milk powder (SMP):** By reducing import duties to around 10 to 15 percent, there could be an increase in imports of fat and SMP, which may help in controlling milk and milk product prices.

Conclusion

- By effectively managing inflation, implementing proactive policies, and fostering collaboration between the RBI and the Government of India, India can navigate the challenges of inflation management, ensure economic stability, and promote sustainable development in critical sectors.

28. Groundwater Extraction and Land Subsidence

Groundwater extraction in northwestern India, including Punjab, Haryana, Delhi, and Faridabad, has led to land subsidence and structural damage.

Groundwater

- Groundwater is the **water found underground** in the cracks and spaces in soil, sand and rock.
- It is stored in and moves slowly through geologic formations of soil, sand and rocks called aquifers.
- Aquifers are typically made up of gravel, sand, sandstone, or fractured rock, like limestone.
- Water can move through these materials because they have large connected spaces that make them permeable.
- **Aquifers, hand-dug wells, and artesian wells** are different types of sources of groundwater.

Reasons for Depletion

- **Increased demand for water** for domestic, industrial and agricultural needs and limited surface water resources lead to the over-exploitation of groundwater resources.
- **Limited storage facilities owing** to the hard rock terrain, along with the added disadvantage of lack of rainfall, especially in central Indian states.
- **Green Revolution enabled** water-intensive crops to be grown in drought-prone/ water deficit regions, leading to over-extraction of groundwater.
- **Frequent pumping of water** from the ground without waiting for its replenishment leads to quick depletion.

- **Subsidies on electricity and high MSP for water-intensive crops** is also leading reasons for depletion.
- **Inadequate regulation** of groundwater laws encourages the exhaustion of groundwater resources without any penalty.
- **Deforestation, unscientific methods of agriculture, chemical effluents from industries**, and lack of sanitation also lead to pollution of groundwater, making it unusable.
- **Natural causes** include uneven rainfall and climate change that are hindering the process of groundwater recharge.

Impact of groundwater depletion

- **Lowering of the water table:** Groundwater depletion may lower the water table leading to difficulty in extracting groundwater for usage.
- **Reduction of water in streams and lakes:** A substantial amount of the water flowing in rivers comes from seepage of groundwater into the streambed. Depletion of groundwater levels may reduce water flow in such streams.
- **Subsidence of land:** Groundwater often provides support to the soil. When this balance is altered by taking out the water, the soil collapses, compacts, and drops leading to subsidence of land.
- **Increased cost for water extraction:** As the depleting groundwater levels lower the water table, the user has to delve deep to extract water. This will increase the cost of water extraction.

Mechanism of Land Subsidence

- The relationship between excessive groundwater extraction and land subsidence became evident through the analysis of data from Gravity Recovery and Climate Experiment (GRACE) satellites.
- Excessive groundwater withdrawal, coupled with limited monsoon rain, has resulted in critically low groundwater levels in the region.
- Land subsidence occurs when underlying aquifers, which are deep water channels storing percolated water, are not adequately recharged.
- The depletion of aquifers causes the layers of soil and rock above them to sink gradually.
- This sinking of soil is similar to “soil settlement” observed in mining operations.

Regulation of Groundwater in India

(1) Central Ground Water Authority (CGWA)

- It has the mandate of regulating groundwater development and management in the country.

- It is constituted under the **Environment (Protection) Act of 1986**.
- CGWA issues advisories, public notices and grant No Objection Certificates (NOC) for ground water withdrawal.

(2) National Aquifer Mapping and Management Programme (NAQUIM)

- The NAQUIM is an initiative of the Ministry of Jal Shakti for mapping and managing the entire aquifer systems in the country.
- It maintains the **Hydrological Map of India**.

(3) Atal Bhujal Yojana

- It is a Central Sector Scheme, for sustainable management of groundwater resources with community participation in water-stressed blocks.

Way Forward

- **Routine survey:** There should be regular assessment of groundwater levels to ensure that adequate data is available for formulating policies and devising new techniques.
- **Assessment of land use pattern:** Studies should be carried out to assess land use and the proportion of agricultural land falling under overt-exploited units.
- **Changes in farming methods:** To improve the water table in those areas where it is being overused, on-farm water management techniques and improved irrigation methods should be adopted.
- **Reforms in power supply subsidies:** The agricultural power-pricing structure needs to be revamped as the flat rate of electricity adversely affects the use of groundwater.
- **Monitoring extraction:** There should be a policy in place to monitor the excessive exploitation of groundwater resources to ensure long-term sustainability.

29. Baby's got three parents: explaining Mitochondrial Donation Treatment

A groundbreaking IVF procedure has been used to create the first baby in the UK with genetic material from three people.

Mitochondrial disease

- Mitochondria are the **powerhouses of the cells**, responsible for **generating energy**.
- Mutations in mitochondria can lead to a variety of symptoms, including **brain damage, organ failure, and muscle wastage**.

- The diseases that arise out of such mitochondrial mutations are called **mitochondrial diseases**.
- Mitochondrial diseases are rare, affecting about **1 in 5,000 people**.
- There is **no cure** for mitochondrial diseases, but they **can be treated**.
- Mitochondrial diseases are **only passed on by the mother**.

What are the symptoms of Mitochondrial Disease?

- The symptoms of mitochondrial disease can vary widely depending on the specific mutation and the affected organs. Some common symptoms include:
 - Muscle weakness
 - Fatigue
 - Vision problems
 - Hearing loss
 - Seizures
 - Developmental delays
 - Organ failure

What is the Prevention of Mitochondrial Disease?

- There is no way to prevent mitochondrial disease, but there are steps that can be taken to reduce the risk of passing the disease on to future generations. These steps may include:
 - Genetic counseling
 - Preimplantation genetic testing (PGT)
 - **In vitro fertilization (IVF) with mitochondrial donation**

In Vitro Fertilisation (IVF) technique:

- IVF is a **process of assisted reproduction** in which an egg is fertilized by **sperm outside the body**.
- The fertilized egg (embryo) is then transferred to the woman's uterus, where it can implant and grow into a baby.
- IVF is used to **treat infertility**, which is the inability to get pregnant after 12 months of trying.
- IVF is also used to treat other conditions that can make it difficult to get pregnant, such as **blocked fallopian tubes, endometriosis, and male infertility**.

Are there any side effects of IVF?

- **Passage of maternal mitochondria with errors:** There is a small risk that a small amount of the maternal mitochondria with errors may get passed on to the child during the procedure.
- Other potential risks:
 - Premature birth
 - Low birth weight
 - Birth defects
 - Health problems in the child later in life

30. IIT-M scientists develop improved flow battery technology

Indian Institute of Technology, Madras, have recently developed a 'non-aqueous all-organic redox **flow battery**' (NORFB).

Flow Battery

- It is a type of **electrochemical cell** where **chemical energy** is provided by **2 chemical components** dissolved in **liquids** that are pumped through the system on **separate sides** of a **membrane**.
- It is also known as **redox flow battery**.
- In **flow batteries**, the storage of **energy** is in **liquid redox electrolytes**, which can be kept in **tanks** outside the cells.
 - If there is requirement to store more **energy**, then make the tanks **bigger**.
- **Ion transfer** inside the cell occurs through the **membrane** while both **liquids** circulate in their own respective space.
- **Conventional flow batteries** have **aqueous** (water-based) **electrolytes** like hydrochloric acid, sulphuric acid, and alkali metal hydroxides. **Limitations:**
 - The **water** undergoes **electrolysis** and reduce the operating **voltage limit** and **energy density** (amount of **energy** packed per unit **volume** or **gram**).
 - They **corrode battery** components.
- **Category:** full flow batteries, semi-flow batteries, and membraneless flow batteries.
- It may be used like a **fuel cell** and like a **rechargeable battery**.

Key highlights of the report:

- A new type of electrolyte is developed using '**pyrylium salts**', which are a class of **organic chemicals** and a new family of **anolyte material**.
 - With suitable **structural modifications** these chemicals allow **high-voltage operation**.
- The **electrolyte** is designed to carry more **current density** and **voltage**.

- The **anolyte material** offers **high solubility** and **reversibility** but it is **not stable**.

Significance of the research:

- It will help overcome the **limitations** of **Conventional flow batteries**.

Applications of the Flow Battery:

- Storing electricity to handle the **intermittency issue** in **solar** and **wind farms**.
- Maintaining **grid stability**.

31. Worldcoin: The Iris-scanning Cryptocurrency

Sam Altman, CEO of OpenAI, is reportedly raising \$100 million for Worldcoin, a unique cryptocurrency.

Worldcoin

- Worldcoin, co-founded by Altman and Alex Blania in 2019, aims to provide every human being on Earth with a share of its digital token.
- Worldcoin is a crypto project that seeks to establish a global identity and financial network for everyone.
- It utilizes a device called the Orb, which scans people's irises to verify their uniqueness and humanity.
- Individuals who undergo the iris scan are rewarded with Worldcoin tokens.
- The World App, developed by Worldcoin, enables users to make payments, purchases, and transfers using Worldcoin and other digital assets.
- The project plans to launch in the first half of 2023 and distribute a total of 10 billion tokens, with 80% going to users.

Functioning of Worldcoin

- Worldcoin's founders aimed to freely distribute shares of the digital token to every person on the planet.
- They envisioned it as a global distribution system for Universal Basic Income and a means to distribute profits generated by AI systems equally among people.
- To ensure fair distribution, Worldcoin utilizes biometric iris scans through the Orb device.
- The Orb scans the iris and converts it into a hash, which is impossible to recreate even if compromised.

- The iris hash and the user's public key hash are sent to Worldcoin servers, and if the person is new to the system, the hashes are added to the database and the company's blockchain.

Challenges and criticisms

- Worldcoin faces challenges regarding the accessibility of the Orb and expanding the user database.
- The project plans to incentivize sign-ups by offering coupons or access to loans.
- Concerns exist about the privacy and security of biometric data and potential misuse.
- Questions arise about the feasibility and scalability of reaching unbanked or underbanked populations.
- The value and utility of the Worldcoin token and its competitiveness with other cryptocurrencies or fiat currencies are also subject to scrutiny.

32. Analysis of Sources of Funding of Regional Parties of India, FY 2021-22

The Association for Democratic Reforms recently released the report titled "Analysis of Sources of Funding of Regional Parties of India, FY 2021-22". It sheds light on the income sources of regional political parties in the financial year 2021-22.

High Percentage of Income from Unknown Sources

According to the report, regional political parties received 76% of their income from unknown sources in 2021-22. This staggering figure, amounting to Rs 887.55 crore, demonstrates a concerning trend of undisclosed contributions and raises questions about the accountability of these parties.

Comparison with Previous Years

The report also highlights a significant rise in income from unknown sources compared to the previous year. In 2020-21, regional parties reported a total income of Rs 530.70 crore, with Rs 263.93 crore (49.73%) coming from unknown sources. This indicates a substantial increase, suggesting a lack of progress in ensuring transparency and accountability within political party finances.

Known and Unknown Sources

The report defines donations over Rs 20,000 as "known" sources since donor details are available through contribution reports submitted to the Election Commission of India (ECI). Conversely, "unknown" sources encompass income declared in annual audit reports without disclosing the specific source of income.

Examples of Unknown Sources

Unknown sources of income for political parties include donations through electoral bonds, sales of coupons, relief funds, miscellaneous income, voluntary contributions, and contributions from meetings or morchas. These sources lack transparency as details of the donors and the nature of contributions remain undisclosed.

Dominance of Electoral Bonds

The report highlights that 93.26% (Rs 827.76 crore) of the income from unknown sources can be attributed to electoral bonds. This raises concerns about the influence of undisclosed funds on the political landscape and the need for greater transparency in campaign financing.

Other Known Sources of Income

Apart from unknown sources, political parties also derive income from known sources. Known donors, whose contributions exceed Rs 20,000, accounted for 12.48% of the total income. Additionally, parties receive income from membership fees, bank interest, sale of publications, party levy, and other transparent revenue streams.

Limited Compliance and Analysis

While the analysis considered 54 regional parties initially, only 28 parties filed both their Annual Audit and Contribution reports. This highlights the need for improved compliance and reporting mechanisms to ensure a comprehensive understanding of political party finances

33. Tripping trade

The goods exports from India witnessed a steep fall in April 2023.

Details:

- The goods export in April 2023 declined to \$34.6 billion (lowest since October 2022). This is the third successive decline in exports.
- Moreover, imports decreased by almost 14%, which is a 15-month low of under \$50 billion.
 - Petroleum exports reduced by 17.5%.
 - Jewellery shipment slipped to a 30% low.

- The reason behind the fall in exports for the second half of the financial year 2022-23 is the slowdown in the global economy.

Associated Concerns:

- It should be noted that the Foreign Trade Policy targets a two trillion-dollar export in seven years.
- It is suggested by the experts that the healthy growth of 14.7% and total export of approximately \$776 billion cannot be replicated in 2023-24.
- The decline in imports indicates that the domestic demand is dwindling.
- Furthermore, the decline in exports of petroleum, gems, and jewellery impacts the exports of value-added end products.
- An official suggests that the prospect of any immediate respite likely from faltering global demand is very low.
 - The WTO forecasted an increase in global trade growth for the year 2023 due to China's opening up of the economy. However, Chinese growth is underwhelming.
 - The service export is also expected to experience the recent trade turmoil.

Way Ahead:

- India should review its overall trade stance and reliance on a few large markets.
- It should look for greater integration with global value chains and multilateral trading arrangements.

34. Cabinet nod for 1.08 lakh crore kharif Fertilizer Subsidy

- The Union Cabinet has approved a fertilizer subsidy of ₹1.08 lakh crore for the ongoing kharif or monsoon season.
- ₹38,000 crore will be allocated for Nitrogen, phosphatic and potassic (NPK) fertilizers, while ₹70,000 crore will go towards the urea subsidy.

Fertilizer consumption and subsidies

- The country's total consumption of urea is approximately 325 to 350 lakh metric tonnes (LMT).
- Other fertilizers sold in the country include 100 to 125 LMT of DAP, 100 to 125 LMT of NPK, and 50 to 60 LMT of Muriate of Potash (MoP).
- The fertilizer subsidy per hectare of land is about ₹8,909, and each farmer receives a subsidy of ₹21,223.

1. **DAP:** The actual price of a bag of DAP is ₹4,000, but farmers receive it at a subsidized rate of ₹1,350 per bag, with a subsidy of ₹2,461 per bag.
2. **NPK:** This subsidy is ₹1,639 per bag, and the MoP subsidy amounts to ₹734 per bag.
3. **Urea:** The Centre spends ₹2,196 per bag of urea.

Fertilizer Subsidy in India

- Subsidy as a concept **originated during the Green Revolution** of the 1970s-80s.
- Fertiliser subsidy is **purchasing by the farmer at a price below MRP** (Maximum Retail Price), that is, below the usual demand-and-supply-rate, or regular production and import cost.
- The rate of subsidy is based on the **average price** of imported fertilizer in the **last six months**.

How is the subsidy paid and who gets it?

- The **subsidy goes to fertiliser companies**, although its ultimate beneficiary is the farmer who pays MRPs less than the market-determined rates.
- From **March 2018**, a new so-called **direct benefit transfer (DBT) system was introduced**, wherein subsidy payment to the companies would happen only after actual sales to farmers by retailers.
- With the DBT system, each retailer – there is over 2.3 lakh of them across India – now has a point-of-sale (PoS) machine linked to the Department of Fertilizers' **e-Urvarak DBT portal**.

How does this system work?

- A popular example of how this system works is that of the neem-coated urea fertiliser.
- Its MRP is fixed by the government at Rs. 5922.22 per tonne.
- The average cost of domestic production is at Rs 17,000 per tonne. The difference is footed by the centre in the form of subsidy.

What about non-urea fertilizers?

- The non-urea fertiliser is **decontrolled or fixed by the companies**.
- The non- urea fertilizers are further divided into two parts, DAP (Diammonium Phosphate) and MOP (Muriate of Phosphate).
- The **government pays a flat per tonne subsidy** to maintain the nutrition content of the soil, and ensure other fertilizers are economical to use.

Issues with such subsidies

- **Low NUE:** Indian soil has low Nitrogen use efficiency, which is the main constituent of Urea.
- **Groundwater pollution:** Consequently, excess usage contaminates groundwater.
- **Overuse beyond prescription:** The bulk of urea applied to the soil is lost as NH₃ (Ammonia) and Nitrogen Oxides. The WHO has prescribed limits been breached by Punjab, Haryana and Rajasthan.
- **Health hazards:** For human beings, “blue baby syndrome” is a common side ailment caused by Nitrate contaminated water.

35. DoT develops Facial Recognition Tool ‘ASTR’

The Department of Telecommunications (DoT) has developed an artificial-intelligence-based facial recognition tool called Artificial Intelligence and Facial Recognition powered Solution for Telecom SIM Subscriber Verification (ASTR).

ASTR

- ASTR is designed to check subscriber databases of telecom operators to identify multiple connections associated with the same person.
- The goal of ASTR is to detect and block fraudulent mobile connections, thereby reducing cyber frauds.

Development of ASTR

- In 2012, DoT issued an order requiring telecom operators to share their subscriber database, including users’ pictures, with the department.
- These images serve as the core database for facial recognition using ASTR.
- The ASTR project was conceptualized and designed by the DoT’s unit in Haryana between April 2021 and July 2021.
- A pilot project was conducted in Haryana’s Mewat region to test the feasibility of ASTR, where a significant number of fraudulent SIMs were detected.

How ASTR works?

- ASTR uses **convolutional neural network (CNN)** models to encode human faces in subscribers’ images, accounting for various factors like face tilt, angle, image opaqueness, and dark color.
- A face comparison is performed for each face against all faces in the database, grouping similar faces under one directory.
- ASTR considers two faces to be identical if they match to a minimum extent of 97.5%.

- It can detect all SIMs associated with a suspected face within 10 seconds from a database of 1 crore (10 million) images.
- After matching faces, ASTR's algorithm utilizes "fuzzy logic" to find approximate matches for subscriber names, considering variations, typographical errors, and related results.

Impact and Results

- In the first phase, ASTR analyzed over 87 crore (870 million) mobile connections and detected more than 40 lakh (4 million) cases of people using a single photograph to obtain multiple connections.
- After verification, over 36 lakh (3.6 million) connections were discontinued by telecom operators.
- The list of fraudulent connections is also shared with banks, payment wallets, and social media platforms to disengage these numbers from their respective platforms.
- WhatsApp collaborated with the government to disable accounts created using such numbers, and similar efforts are being made with other social media platforms.

36. Methanol poisoning

Recently around 20 people died after consuming spurious liquor in Villupuram and Chengalpattu districts of Tamil Nadu.

What is the difference between liquor and spurious liquor?

- **Liquor** - It is an alcoholic beverage made by distillation rather than by fermentation.
- The alcohol content varies from the 5% or so (beer) to 12% or so (wine) to 40% or so (distilled spirits) by volume.
- The alcohol used is almost always **ethanol (C₂H₅OH)**, a psychoactive drug that, in low doses, reduces the level of neurotransmission in the body, leading to intoxicating effects.

Beverage	Alcohol content
Beer	5% or so
Wine	12% or so
Distilled spirits	40% or so

- **Spurious alcohol** - It is an illicit liquor made up by improper distillation.
- It is a liquid mixture containing **methanol (CH₃OH)** as well **ethanol**.

What is methanol and how is it regulated?

- **Methanol** - It is a colorless, fairly volatile, flammable liquid with a faintly sweet pungent odor like that of ethyl alcohol.
- It is primarily used as an industrial solvent and as antifreeze.
- Methanol is also used as an alternative motor fuel and as an ingredient in paint and varnish removers.
- **Regulations** - The Food Safety and Standards (Alcoholic Beverages) Regulations 2018 stipulate the maximum permissible quantity of methanol in different liquors.

Liquor	Maximum permissible quantity of methanol (grams per 100 litre)
Coconut fenny	Absent
Country liquor	50
Pot-distilled spirits	300

- Schedule I of the Manufacture, Storage and Import of Hazardous Chemical Rules 1989 includes methanol.
- The Indian Standard IS 517 applies to how the quality of methanol is to be ascertained.
- Ministry of Chemicals and Fertilizers has notified Quality Control Order for the **mandatory certification** for methanol that shall come into force on the 3rd August, 2023.

The human body contains minute quantities of methanol (**4.5 ppm** in the breath of healthy individuals) as a result of eating some fruits.

For an adult, **more than 0.1 ml** of pure methanol per kilogram of body-weight is dangerous.

What is methanol poisoning?

- **Methanol poisoning** - The deadliness of spurious liquor arises from methanol due to its conversion into **formic acid**.
- The accumulation of formic acid over time leads to a baneful condition called metabolic acidosis.
- Acidosis can lead to acidemia when the blood's pH drops below its normal value of 7.35.
- Methanol-poisoning can cause blindness, cerebral edema, haemorrhage, and death.

- **Treatment** - There are 2 immediate ways to treat methanol poisoning.
 - To administer ethanol of a pharmaceutical grade by healthcare workers
 - To administer an antidote called fomepizole (that is present in WHO's list of essential medicines)

37. RBI regulations on Green Deposits

The Reserve Bank of India (RBI) has introduced a regulatory framework to govern the acceptance of green deposits by banks, ensuring transparency and accountability in their investments.

Green Deposits

- Green deposits are financial products offered by banks that are similar to regular deposits, but the money received is specifically earmarked for environmentally friendly projects.
- These deposits support projects aimed at combating climate change, such as renewable energy initiatives, while avoiding investments in activities that harm the environment, like fossil fuel projects.
- They are part of a broader range of financial products, including green bonds and green shares that enable investors to contribute to environmentally sustainable projects.

Regulatory framework for accepting Green Deposits

- The RBI's framework mandates that banks establish a set of rules or policies, approved by their respective Boards, to guide the investment of green deposits.
- These rules must be made public on the banks' websites, ensuring transparency and enabling customers to make informed decisions.
- Banks are required to disclose information on the amount of green deposits received, how these funds are allocated to different green projects, and the environmental impact of such investments.
- To verify the banks' claims and the sustainability credentials of the projects, a third-party is appointed to conduct independent verification.

Sectors eligible for green deposits

- The RBI has identified a list of sectors classified as sustainable, which are eligible to receive green deposits.
- These sectors include renewable energy, waste management, clean transportation, energy efficiency, and afforestation.

- Banks are prohibited from investing green deposits in sectors considered detrimental to the environment, such as fossil fuels, nuclear power, tobacco, gambling, palm oil, and hydropower generation.

Addressing greenwashing

- Greenwashing refers to the practice of making misleading claims about the positive environmental impact of an activity or investment.
- The RBI's regulatory framework aims to prevent greenwashing in the banking sector by ensuring that the actual impact of green deposits is accurately represented.
- By requiring transparency, disclosure, and third-party verification, the framework aims to protect customers from deceptive practices and ensure genuine environmental benefits.

Impact and controversies

- Depositors who prioritize environmental concerns may find satisfaction in investing their money in environmentally sustainable products like green deposits.
- However, some critics argue that green investment products may primarily serve to make investors feel good without generating significant environmental benefits.
- Additionally, the range of projects available for investment through green deposits may be limited, posing challenges in achieving broad environmental impact.

Key challenge: Assessing environmental sustainability

- Evaluating the true environmental sustainability of a project can be challenging in a complex world with interconnected systems and second-order effects that are difficult to anticipate.
- It is essential to consider the indirect consequences and long-term effects of actions to determine if a project genuinely contributes to environmental sustainability.
- Uncertainty surrounding the actual environmental impact of green projects highlights the need for rigorous evaluation and ongoing monitoring to ensure the desired outcomes are achieved.

38. SCO members adopt India's proposal for digital public infra

The Shanghai Cooperation Organisation (SCO) has recently adopted India's proposal to support the development and adoption of the country's **digital public infrastructure (DPI)**.

Major Highlights of the proposal:

- The proposal includes **platforms** such as **Aadhaar**, **United Payments Interface (UPI)**, and **DigiLocker**.
- It is a significant step towards a more **digitally connected** and **inclusive** future for the region.

About the digital public infrastructure:

- DPIs are a set of **shared digital building blocks** powered by **interoperable** open standards or **specifications**.
- It helps mediate the flow of **people**, **money** and **information**.
 - The flow of **people** through a **digital ID System**.
 - The flow of **money** through a **real-time fast payment system**.
 - The flow of **personal information** through a consent-based **data sharing system** to actualise the benefits of **DPIs** and empower the **citizen to control** data.
- India, through **India Stack** became the **first** country to develop all **three** foundational DPIs.
 - **Digital identity** through Aadhar; real-time fast payment through UPI and a platform to safely share **personal data- Account Aggregator** built on the Data Empowerment Protection Architecture or DEPA.
- These layers interface with each other to create an **ecosystem** that facilitates **seamless public service delivery** and allows businesses to design **novel solutions** using **DPI layers**.
- DPIs should **not** succumb to **monopolisation**, **authoritarianism** and **digital colonisation**.

39. Bhopal's Voluntary Local Review: A Step towards Localizing SDG's in India

- Bhopal, the capital city of Madhya Pradesh, has achieved a significant milestone by becoming the first city in India to join the global movement on localizing the Sustainable Development Goals (SDGs). The city's Voluntary Local Review (VLR), released recently, highlights Bhopal's commitment to

implementing the SDGs at the local level. This move demonstrates India's commendable efforts in adopting and localizing the SDGs, with various states and union territories already taking steps in this direction

Bhopal's Voluntary Local Review (VLR)

- Bhopal's Voluntary Local Review (VLR) is a comprehensive report released by the city of Bhopal, India, to showcase its progress and initiatives in implementing the Sustainable Development Goals (SDGs) at the local level.
- It provides a detailed analysis of Bhopal's development projects and their alignment with the SDGs across the three pillars of 'people,' 'planet,' and 'prosperity.'
- The report maps these projects to specific SDGs and presents an assessment of the city's progress, achievements, and challenges in each area.

Features of Bhopal's VLR

- **Collaboration:** The VLR is a result of collaboration between the Bhopal Municipal Corporation, UN-Habitat, and a collective of over 23 local stakeholders. This collaborative approach ensures a comprehensive and inclusive representation of Bhopal's sustainable development efforts.
- **Mapping of Developmental Projects:** Bhopal's VLR maps 56 developmental projects to the SDGs across the three pillars of 'people,' 'planet,' and 'prosperity.' This mapping provides a clear understanding of how the city's initiatives align with the specific goals and targets of the SDGs.
- **Focus on Priority Areas:** The VLR identifies priority areas for Bhopal, with a particular emphasis on building basic infrastructure and resilience. This highlights the city's strategic approach in addressing crucial issues and directing efforts towards areas that require immediate attention.
- **Quantitative Assessment:** Bhopal's VLR includes an in-depth quantitative assessment of city-level indicators under SDG 11 (Sustainable cities and communities). This assessment evaluates the city's performance in areas such as solid waste management practices, public transportation, and per capita availability of open spaces.
- **Identification of Challenges:** The VLR acknowledges the challenges faced by Bhopal in achieving certain SDG targets. It highlights areas where the city needs to work harder, such as adequate shelter provision, air pollution control, city planning capacity, and equitable distribution and accessibility of open spaces. This identification of challenges allows for targeted efforts to address these specific issues.
- **Leadership and Stakeholder Engagement:** The VLR emphasizes the leadership role of Mayor and efforts in engaging the city's residents throughout the VLR process. This demonstrates the importance of

stakeholder participation and inclusivity in driving sustainable development initiatives.

- **Localized Approach:** Bhopal's VLR recognizes the unique local context and capacity constraints faced by Indian cities. It acknowledges that a comprehensive VLR covering all SDGs may be challenging for cities with limited resources and data availability. Therefore, the VLR allows for flexibility, enabling cities to choose specific SDGs for a detailed review and adapt national indicators to reflect the city's local realities.

The Importance of Localizing Sustainable Development Goals (SDGs)

- **Contextualization:** Localizing the SDGs allows cities, regions, and communities to adapt the global goals to their specific local contexts. Each locality has unique challenges, priorities, and resources. By localizing the SDGs, governments, organizations, and stakeholders can tailor strategies and interventions to address the specific needs of their communities, making them more relevant and effective.
- **Proximity to the People:** Local governments and communities are closest to the people they serve. They have a better understanding of the local needs, aspirations, and realities of their residents. By localizing the SDGs, decision-making processes become more participatory and inclusive, ensuring that the voices and perspectives of the local population are taken into account.
- **Holistic Approach:** The SDGs address a broad range of interconnected social, economic, and environmental challenges. Localizing the goals allows for a holistic approach to sustainable development, considering the interdependencies and synergies between different sectors and issues. It encourages integrated and comprehensive strategies that tackle multiple challenges simultaneously, leading to more sustainable and equitable outcomes.
- **Collaboration and Partnership:** Localizing the SDGs fosters collaboration and partnership among various stakeholders at the local level. Governments, civil society organizations, businesses, academia, and citizens can come together to work towards common goals, leveraging their respective strengths, expertise, and resources. This multi-stakeholder approach promotes collective action, knowledge-sharing, and innovation, leading to more effective and sustainable solutions.
- **Innovation and Experimentation:** Localizing the SDGs encourages innovation and experimentation. Local governments and communities can explore new approaches, policies, and practices to address complex challenges. They can pilot innovative solutions, learn from successes and failures, and share their experiences with other localities, contributing to a global knowledge exchange and learning process.

- **Monitoring and Accountability:** Localizing the SDGs facilitates monitoring and accountability mechanisms at the local level. By setting local targets, indicators, and progress tracking systems, governments and stakeholders can monitor the implementation of the goals and measure their impact on the ground. This localized monitoring promotes transparency, accountability, and data-driven decision-making, ensuring that progress towards sustainable development is effectively measured and evaluated.
- **Global Impact:** While the SDGs are a global agenda, their achievement ultimately depends on action at the local level. Localizing the goals is essential for aggregating local actions and initiatives to create significant impact at the global scale. When cities, regions, and communities across the world localize the SDGs, they contribute to the collective effort of achieving sustainable development globally.

40. RBI to pull out 2000 notes from active circulation

- The Reserve Bank of India (RBI) has decided to withdraw ₹2000 denomination banknotes from circulation as part of its “Clean Note Policy.”
- The withdrawal is similar to a previous withdrawal of notes in 2013-2014 (and not the demonetization).

Legal Tender Status of ₹2,000 Banknotes

- ₹2000 banknotes will continue to maintain their legal tender status.
- People can use ₹2000 banknotes for transactions and accept them as payment.
- However, the RBI encourages depositing or exchanging the notes by September 30, 2023.

About the ₹2000 Notes

- The ₹2000 denomination banknote was introduced in November 2016 under Section 24(1) of RBI Act, 1934.
- It primarily aimed to meet the currency requirement of the economy in an expeditious manner after withdrawal of the legal tender status of all ₹500 and ₹1000 banknotes in circulation at that time.

Reasons for withdrawal

- **Demonetization purpose served:** Printing of ₹2000 notes was stopped in 2018-19 as other denominations became available in adequate quantities.
- **Clean Note Policy:** This aims to provide good-quality currency notes with enhanced security features and withdraw soiled notes from circulation.

- **Ending timespan:** Majority of the ₹2000 notes were issued prior to March 2017 and have reached their estimated lifespan of 4-5 years.
- **Disappeared from circulation:** This denomination is not commonly used for transactions, and there is sufficient stock of banknotes in other denominations to meet public requirements.

Withdrawal process

- People can deposit ₹2,000 notes into their bank accounts or exchange them for banknotes of other denominations at any bank branch.
- The usual deposit process without restrictions and subject to applicable statutory provisions applies.
- Banks have been directed to provide deposit and exchange facilities for ₹2,000 notes until September 30, 2023.
- The facility for exchange up to ₹20,000 at a time will be available at banks and RBI's Regional Offices from May 23, 2023.
- Banks are instructed to stop issuing ₹2,000 notes immediately.

Impact and financial analysis

- Deposit accretion of banks may improve in the short term, similar to the demonetization period.
- Improved deposit rates may reduce pressure on interest rate hikes and lead to moderation in short-term interest rates.

Key issues

- Individuals can seek multiple exchanges in packets of ₹20,000, but this may attract attention from enforcement agencies and the Income-tax Department.
- Large sums of money in ₹2,000 notes may be difficult to exchange.
- It is likely to witness chaos and long queues in bank branches.