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JUNE 2023

MONTHLY CURRENT AFFAIRS

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TABLE OF CONTENTS

1. ART AND CULTURE	5
1.1 INTACH.....	5
1.2 TUNGNATH SHRINE	6
1.3 MAHARANA PRATAP JAYANTI.....	7
1.4 CHAM DANCE.....	8
1.5 SENGOL	9
1.6 THIRUKKURAL	10
2. POLITY & GOVERNANCE	12
2.1 FREEDOM OF RELIGION	12
2.1 DIVORCE.....	14
2.2 SEDITION LAW.....	16
2.3 MODEL CODE OF CONDUCT	18
2.4 ARTICLE 355.....	20
2.5 RIGHT TO WALK.....	21
2.6 WHIP.....	22
2.7 INTERNET SHUTDOWN	24
2.8 MODEL PRISONS ACT	25
2.9 FORUM SHOPPING.....	26
3. ENVIRONMENT AND ECOLOGY	28
3.1 INTERNATIONAL CLIMATE ACTION IN CIVIL AVIATION.....	28
3.2 WHO'S TIPPING THE SCALES	29
3.3 CLIMATE FINANCE PROGRAM	30
3.4 TRANSBOUNDARY COLLABORATION	31
3.5 COAL ACTION PLAN 2023 -24	32
3.6 EL NINO	34
3.7 CENTRAL ASIAN FLYWAY	36
3.8 GOA FOREST FIRES	37
3.9 WORLD BIODIVERSITY DAY 2023	39
3.10 DEEP OCEAN MISSION	40
3.11 RANTHAMBORE TIGER RESERVE (RTR).....	42
3.12 GRID	43
3.13 WILD LIFE PROTECTION (WLP) ACT, 1972	44
3.14 HOMO SAPIENS FOOTPRINT	45
3.15 ENHANCED ROCK WEATHERING	47



3.16 THRIVING: MAKING CITIES GREEN, RESILIENT, AND INCLUSIVE IN A CHANGING CLIMATE.....	48
3.17 PEOPLE'S BIODIVERSITY REGISTER	50
4. ECONOMY	52
4.1 COMMON REPORTING STANDARD.....	52
4.2 BUSINESS READY PROJECT.....	52
4.3 CURRENCY AND FINANCE	54
4.4 INDIA HAS IMPOSED MANDATORY CERTIFICATION ON PRODUCTS.....	54
4.5 INDIA AMENDS ANTI-MONEY LAUNDERING LAW	55
4.6 PUBLIC STOCKHOLDING	56
4.7 TRANSITION BONDS.....	58
4.8 PETROLEUM MINISTRY RECEIVED ENERGY TRANSITION ADVISORY COMMITTEE REPORT	59
4.9 INDIA'S FARM EXPORTS.....	60
4.10 FINANCE MINISTER CHAIRS THE 27 TH MEETING OF FSDC.....	61
4.11 EXCHANGE TRADED COMMODITY DERIVATIVES (ETCDS)	63
4.12 RESERVE BANK OF INDIA	64
4.13 GREEN ENERGY OPEN ACCESS.....	66
4.14 RBI WITHDRAWN RS 2,000 NOTES	67
5. SCIENCE AND TECHNOLOGY	69
5.1 NITI AAYOG'S.....	69
5.2 TRANS-FAT ELIMINATION.....	72
5.3 ARTIFICIAL INTELLIGENCE ACT	73
5.4 CLINICAL TRIALS.....	75
5.5 SPACE SCIENCE & TECHNOLOGY AWARENESS TRAINING (START).....	76
5.6 ANDROID MALWARE	77
5.7 ETHANOL BLENDING	79
5.8 JAMES WEBB TELESCOPE	82
5.9 WATSONX	84
5.10 BABY FROM THREE PEOPLE	84
5.11 ROBOTICS FRAMEWORK.....	85
5.12 LIGO-INDIA PROJECT.....	87
5.13 CEIR.....	88
5.14 SATURN	89
5.15 AXIOM MISSION-2.....	90
5.16 HIMALAYAN CHANDRA TELESCOPE.....	91



5.17 SUPERCOMPUTERS	91
6. SOCIAL ISSUES	93
6.1 DIMA HASAO PEACE PACT	93
6.2 NDPS	94
6.3 ORGAN DONATION	95
6.4 SEXUAL HARASSMENT	97
6.5 COVID-19	100
6.6 CHILD MARRIAGE	101
6.7 MATERNAL AND NEWBORN DEATHS	102
6.8 SDGS	104
6.9 7TH UN GLOBAL ROAD SAFETY WEEK	106
7. INTERNATIONAL RELATION	108
7.1 UNITED NATIONS PERMANENT FORUM ON INDIGENOUS ISSUES (UNFII).....	108
7.2 ECUADOR, NIGERIA, PANAMA AND INDIA	108
7.3 INDIA-UAE	109
7.4 WORLD PRESS FREEDOM INDEX 2023	110
7.5 KALADAN PROJECT	111
7.6 SHUTTLE DIPLOMACY	112
7.7 INDIA IN AFRICA AND MIDDLE EAST	113
7.8 INDIAN OCEAN CONFERENCE	114
7.9 SCO	116
7.10 PALESTINIAN	117
7.11 G7 HIROSHIMA SUMMIT	119
7.12 FIPIC SUMMIT	121
8. GOVERNMENT SCHEME.....	123
8.1 REVAMPED CGTMSE SCHEME	123
8.2 VIVAD SE VISHWAS I-RELIEF TO MSMES SCHEME	123
8.3 KRISHI MAPPER APP.....	124
8.4 SOCIAL SECURITY SCHEMES	125
8.5 THALASSEMIA BAL SEWA YOJANA.....	127
8.6 BHARAT EMART	128
8.7 SWACHH BHARAT MISSION GRAMIN	129
8.8 POSHAN BHI, PADHAI BHI	130
8.9 MISSION AMRIT SAROVAR	131
8.10 SAKSHAM.....	132
8.11 ONE STATION ONE PRODUCT	133



8.12 PARAKH.....	134
8.13 UDAN 5.1	135
9. MISCELLANEOUS	137
9.1 FUTURE OF JOBS REPORT 2023	137
9.2 THERMOBARIC BOMB	138
9.3 GALLANTRY AWARDS.....	140
9.4 HARIT SAGAR.....	142
9.5 POKHRAN-II.....	143
9.6 YUVA PRATIBHA	146
9.7 BAOBAB TREES.....	147
9.8 DATA GOVERNANCE QUALITY INDEX (DGQI).....	149
9.9 INTERNATIONAL ORGANIZATION FOR MIGRATION	150
10. YOJANA JUNE 2023: TECHADE	151
10.1 INNOVATION IN SPACE TECHNOLOGY.....	151
10.2 STARTUPS-REVOLUTIONISING INDIA'S GROWTH STORY	153
10.3 POTENTIAL OF INDIA'S EDTECH SECTOR.....	153
10.4 LEVERAGING TECHNOLOGY FOR TRANSFORMING HEALTHCARE	155
10.5 QUANTUM COMPUTING-TRANSFORMING TECHNOLOGY.....	157
10.6 AI CHATBOTS-FUTURE AND CHALLENGES.....	158
10.7 5G CYBER SECURITY CHALLENGES	160
10.8 DIGITAL PUBLISHING- EXPANDING THE HORIZON	162
10.9 USE OF TECHNOLOGY IN URBAN PLANNING	163
11. KURUKSHETRA JUNE 2023 ISSUE: RURAL CRAFTS.....	165
11.1 POTENTIAL OF RURAL CRAFTS	165
11.2 RURAL CRAFTS THROUGH RITUALISTIC & INDIGENOUS TRADITIONS.....	166
11.3 BETTING BIG ON BAMBOO	167
11.4 J&K CHANGING DYNAMICS OF HANDICRAFTS SECTOR.....	168
11.5 RURAL CRAFTS FOR LIVELIHOOD.....	169
11.6 FOSTERING RURAL CRAFTS THROUGH ONE DISTRICT ONE PRODUCT.....	170
11.7 PROMOTION AND DEVELOPMENT OF HANDLOOM AND HANDICRAFT SECTOR.....	171



1. ART AND CULTURE

1.1 INTACH

Why in News

Railway minister urged to give heritage tag to Odisha's Paralakhemundi station

Important Points

- The **Indian National Trust for Art and Cultural Heritage (INTACH)**, Odisha wrote a letter to railway minister demanding a heritage tag for Paralakhemundi railway station, one of the oldest stations of the state.
- The trust urged him not to demolish the old station building.
- The Maharajas of Paralakhemundi started the Paralakimedi Light Railway (PLR) in the year 1899-1900.
- The then Maharaja of Paralakhemundi had opened the 39km line connecting his capital Paralakhemundi with Naupada on April 1, 1900.
- The present new building coming up is on a raised platform and overshadows the existing heritage structure. It is still in a very good state and does not need much restoration work.
- A train “Mahendragiri Express” should run from Paralakhemundi and Ayodhya which will boost tourism and pilgrimage to the district.
- At least two of the original heritage locomotives of the PLR (Paralakimedi Light Railway) should be brought back and properly plinthed at the Heritage Railway station.
- The 1899 built wooden bodied Royal Carriage used by the Royalties of Paralakhemundi which is kept at the Narrow Gauge Railway Museum at Nagpur too should be brought back for display at the Station, he stated.
- There are many other artifacts relating to the PLR which are kept at the Nagpur Museum. These include, signalling equipment, electrical equipment, scales, uniforms, insignias, German silver cutlery, Royal embellishments etc. They should all be back.
- The old building of the Station Master, which is in a restorable condition should be converted into a Museum of the PLR and all the items displayed there.
- A proper art and photograph gallery should be set up. This will be a major attraction for tourists and railway aficionados worldwide.
- Many of the wayside stations of the PLR including the bridges, culverts. should be preserved as heritage structures.
- The Goods Shed at Paralakhemundi Station is a unique heritage structure which needs preservation.
- INTACH has implored that this piece of railway history should be properly preserved and highlighted.

About INTACH

- It is a non-profit charitable organisation under Societies Registration Act, 1860.
- Its mission is to conserve heritage. In 2007, UN Economic & Social Council granted INTACH special consultative status.



1.2 TUNGNATH SHRINE

Why in News

Tungnath temple built by Pandavas declared national monument

Important Points

- Tungnath, located in Rudraprayag, Uttarakhand, is not only one of the highest Shiva temples in the world but also the highest among the five Panch Kedar temples.
- Recently, it has been designated as a national monument.
- The Central Government declared Tungnath a monument of national importance in a notification dated March 27.
- The Archaeological Survey of India (ASI) confirmed that they had been working towards this recognition for a significant period.
- During the process, ASI actively sought public opinions and objections regarding the declaration of Tungnath as a national heritage.



About the Tungnath temple:

- The ancient temple which is located at an altitude of 3,690 metres (12,106 ft) above sea level is connected with the Pandavas. After defeating Kauravas in the Kurukshetra war the Pandavas wanted to atone for their sins of fratricide and Brahmanahatya or killing of Brahmins during the battle. For this they handed over the reins of the kingdom and went in search of Lord Shiva to worship him and be free of their sins.
- They reached Varanasi but the God wanting to elude them as he was deeply disturbed by the deceit and death in the war assumed Nandi's form and hid in Garhwal. The Pandavas, determined to seek His blessings moved to Garhwal and it was Bheem who saw the bull and recognised it to be Lord Shiva. The Pandavas built temples in all these five places to worship Shiva and atone for their sins.
- The temple is believed to have been built by Adi Shankaracharya, the 8th-century Hindu philosopher and reformer. The temple is a simple structure, built in the Nagara style of architecture. The main deity of the temple is a lingam, a representation of Lord Shiva. There are also shrines to Goddess Parvati and other Hindu deities.
- The temple is open to pilgrims from April to November. During the winter months, the temple is closed and the idol of Lord Shiva is moved to a nearby temple.
- Tungnath Temple is a popular pilgrimage site for Hindus. It is also a popular destination for trekkers and hikers. The temple is located in the Garhwal Himalayas, and the trek to the temple is a challenging but rewarding experience.
- The temple is located in the Tungnath mountain range, which is part of the Garhwal Himalayas.
- The trek to the temple takes about 3-4 hours from Chopta, a small village in the Garhwal Himalayas.
- The temple is open to pilgrims from April to November.



- During the winter months, the temple is closed and the idol of Lord Shiva is moved to a nearby temple.
- Tungnath Temple is a popular pilgrimage site for Hindus.
- It is also a popular destination for trekkers and hikers.

1.3 MAHARANA PRATAP JAYANTI

Why in News

Maharana Pratap Jayanti 2023 in India will be celebrated on May 22.

Important Points

- It is a festival commemorating Maharana Pratap Singh, a Mewar Rajput king.

History

- Maharana Pratap was born in Rajasthan on May 9th, 1540. Maharana Udai Singh II, the king of the Kingdom of Mewar was his father.
- Pratap was the Crown Prince as he was the eldest of 25 sons. After his father's death he ascended the throne of Mewar.
- Maharana Pratap was a Hindu Rajput King who belonged to the Sisodiya clan of Rajputs.
- He is revered and worshipped by many royal families in Rajasthan for his bravery and courage.
- The legendary king is revered as a true patriot who initiated the country's first war of independence.
- In the battle of Haldighati, he fought alongside Akbar, one of the most famous Mughal Emperors. Maharana Pratap was eventually forced to flee.
- However, he managed to kill a large number of opponents on the battlefield, gaining respect and acclaim for his bravery. Hence, every year on the third day of the Jyeshtha Shukla phase, the third month of the Hindu calendar, his birth anniversary is observed as Maharana Pratap Jayanti.
- He was severely injured in a hunting accident in January 1597. He died at the age of 56 on 29th January 1597.
- He gave his life fighting for his country, his people, and, most importantly, his honour.

Birth Anniversary

- As per the Julian calendar, Maharana Pratap was born on May 9th, 1540.
- The Julian calendar is obsolete and it has been replaced by Gregorian calendar. According to Proleptic Gregorian calendar Maharana Pratap was born on May 19th 1540.
- However, the birth anniversary of Maharana Pratap is celebrated as per Hindu calendar.
- And, according to Hindu calendar it was Trito, Jyeshtha, Shukla Paksha, 1597 Vikram Samvat when Maharana Pratap was born, which comes either in late May or early June on the Western calendar.
- Maharana Pratap Jayanti in 2023 falls on 22 May, which is a regional public holiday in the northern Indian states of Haryana, Himachal Pradesh, and Rajasthan.



Maharana Pratap Jayanti Celebrations

- Extensive special pujas, numerous cultural events and debates take place throughout the country on this day, in his memory.
- On this day people also pay a visit to his memorial statue in Udaipur.
- Vibrant parades and religious rites also take place to commemorate the king's legacy.

1.4 CHAM DANCE

Why in News

Cham Dance: A Ritual Dance by Tibetan Monks

Important Points

- Ladakh is a mystical land with a lot of unique things one of which is their folk dance named "The Cham Dance" which is a vibrant masked and costumed ritual with its roots strongly connected to Buddhism.
- Associated with Tibetan Buddhism that prospered in the Great Himalayan, it is a religious tradition performed by monks in multiple festivals and religious events.
- The rituals are performed for the greater good of humanity, destruction of bad spirits, and for moral instruction to viewers.
- The dance ritual of Cham is to date practiced in the Himalayas, especially in places where Tibetan Buddhism prospered in India- Ladakh, Dharamshala, Lahaul Valley, Spiti Valley & Sikkim, and Bhutan and Tibet.
- The dance is the highlight of Buddhist festivals and special events of the monasteries.

Origin of Cham Dance

- The origination of Cham dance is not clearly known throughout the historic or religious books but it does share its roots with Tantric mystic arts.
- Cham Dance is said to have originated in the Himalayan range and by far the date and year are kept as a treasured secret to this date.
- According to a legend, the Cham dance tradition was started by Guru Padmasambhava in the late 8th CE to show the dominance of good over evil.
- Adding to the legend, it is also believed that when the king of Tibet, Trishong Detsen called Guru Padmasambhava to get rid of evil spirits from the place where today we can see the Samye monastery.
- The revered Guru performed the dance ritual to bless the land and make it pious once again.
- The same ritual over time became the elaborate Cham Dance, a practice specific to the sect of Mahayana Buddhism.
- And now it is an integral part of Buddhism, festivals of Ladakh, and even in multiple events or rituals.

The Religious significance of Cham Dance

- Cham dance is considered to be an act of cleansing evil forces.



- Cham Dance is an elaborate masked and costumed dance performed on special occasions throughout Ladakh.
- Before the performance, Gods and deities of Buddhism are evoked.
- In fact, even the dance is a ceremony inspired by tantric traditions that were performed for the greater good of all sentient beings.
- The religious significance of the Cham Dance is in the performance itself.
- The tradition fits the monastic life as the dance is not focused on movements but on rituals of meditation, hand gestures, chants, invocation of the deities, and the effect it has on the destruction of negativity.
- Dressed up in vibrant colors with extravagant headgear and masks, the monks take up the roles of deities and demons and put up a mock battle with good prevailing over evil.

Insight about the Cham Dance

- The Cham performance also acts as moral lessons for viewers, narrating tales about their legendary deities and much more.
- The Cham Dance is more than just a ritual or a folk dance performed by Lamas or monks because it offers an insight into the culture in a different way.
- The acts and the form of the masked dancers serve to familiarize devotees with the kind of deities they are to encounter during the 49-day- ‘Bardo’, the transition period between death and rebirth in one of the six forms of existence, depending upon one’s karmic existence.

Where to see Cham Dance in India?

- Cham Dance in India is performed to date at the Buddhist monasteries mostly snuggled up in the Himalayas.
- Found in Ladakh, Sikkim, and Tibetan settlements of Himachal Pradesh, the monasteries are home to monks who practice the Cham Dance ritual at their religious festivals.
- The region known as ‘Mini Tibet’ has ancient roots in Buddhism.
- The remote “Land of Passes’ in Jammu and Kashmir has some of the most popular places to attend the masked dance ritual.

1.5 SENGOL

Why in News

PM Modi to install Sengol in new Parliament building

Important Points

- The historical Sengol, which was received by first Prime Minister Jawaharlal Nehru symbolising the transfer of power from the British to India in 1947, is set to be installed in the new Parliament building by Prime Minister Narendra Modi.
- The sacred scepter traces its origin to the Chola Empire.
- The word 'Sengol' is believed to have been derived from the Tamil word 'semmai', which refers to excellence.



History of 'Sengol'

- The importance of the 'Sengol' sceptre emerged when Lord Mountbatten, the then Viceroy of British India, asked Nehru about a symbolic transfer of power.
- Nehru sought the advice of C Rajagopalachari, the last Governor-General of India and who hailed from Thorapalli in Tamil Nadu's Krishnagiri district (then the Madras Presidency).
- Rajaji, as he was popularly called, suggested the use of the 'Sengol'; he was inspired by the the Chola dynasty, where a similar ceremony was held to transfer power between kings.
- In addition to the presentation of the sceptre, an order called 'aanai' in Tamil - which bestowed on the new ruler the responsibility to govern with unwavering adherence to the principles of 'dharma' - was also handed down to the new king.

The 'Sengol' for independent India

- Rajaji enlisted the support of a religious body in Tamil Nadu's Tanjore district to craft the 'Sengol'. Chennai-based jewellers Vummidi Bangaru Chetty created the object.
- On August 14, 1947, a momentous occasion unfolded as three priests from the Tanjore religious body carried the 'Sengol', presiding over proceedings with great reverence.
- They then handed the 'Sengol' to Nehru, thereby marking the transfer of power.
- The 'Sengol' is five feet long and features the majestic figure of Nandi, the divine bull, on top as a representation of 'nyaya', or the embodiment of justice and fairness.

1.6 THIRUKKURAL

Why in News

PM Releases Tok Pisin Translation of Book 'Thirukkural' In Papua New Guinea

Important Points

- Indian Prime Minister along with his Papua New Guinea counterpart recently released the Tamil classic 'Thirukkural' in the Tok Pisin language.

Thirukkural

- Tirukkural (Tamil: “Sacred Couplets”) also called Kural, is a classic Tamil text written by Thiruvalluvar, believed to have lived sometime between the 2nd century BCE and the 5th century CE.
- It has had an immense influence on Tamil culture and life.
- It is a collection of 1,330 couplets (kural) that offer timeless wisdom on various aspects of life, including ethics, governance, love, and spirituality.

Structure and Themes:

- Thirukkural is divided into three main sections or books: Aram (Virtue), Porul (Wealth), and Inbam (Love).
- Each section covers a wide range of topics and imparts moral, ethical, and practical guidance to the readers.



- The couplets are composed in a concise and poetic form, making them easily memorable and quotable.

Aram:

- It discusses virtues such as righteousness, truth, gratitude, and compassion.
- It emphasizes the importance of leading a righteous life and upholding moral values in all circumstances.

Porul:

- It provides insights into worldly affairs, including governance, economy, and friendship.
- It offers wisdom on topics like wealth management, administration, and the value of good company.

Inbam:

- It delves into the complexities of human emotions, love, and family life.

Tok Pisin

- Tok Pisin is the lingua franca of the entire country of Papua New Guinea, known by an estimated three quarters of the country's inhabitants. It is, in fact, the most widely used language of the urban areas.
- Tok Pisin, originally a pidgin language, evolved into a Creole language.
- The constitution of Papua New Guinea recognizes Tok Pisin as one of the national languages of the country.
- Although English is more widely used for government business, much of the debate in Parliament is in Tok Pisin.

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2. POLITY & GOVERNANCE

2.1 FREEDOM OF RELIGION

Why in News

TN government told the Supreme Court that the Constitution of India gives people a right to “spread their religion peacefully” and “change their beliefs”.

Important Points

- Recently, the Tamil Nadu (TN) Government has stated that the Article 25 (Freedom of Religion) of the Indian Constitution guarantees every citizen the right to propagate his religion, while replying to a petition in the Supreme Court (SC).
- TN government says that “every citizen has the opportunity to practice and spread his religion peacefully”.
- There is nothing illegal about missionaries spreading Christianity unless they employ unlawful means to do so, the Tamil Nadu government has told the Supreme Court, stressing that the Constitution of India gives people a right to “spread their religion peacefully” and “change their beliefs”.
- Maintaining that “anti-conversion laws are prone to misuse against minorities”, the Dravida Munnetra Kazhagam (DMK)-led government submitted in the top court that citizens of the country should be allowed freely to choose their religion and it would not be appropriate for the government to put spokes to their personal belief and privacy.

What is the Case About?

- The petitioner sought an NIA (National Investigation Agency)/CBI (Central Bureau of Investigation) investigation into the “root cause” of the death of a 17-year-old girl in Tamil Nadu amidst a swirl of accusations that she had been forced to convert to Christianity. The petition argued that forcible or deceitful conversion was a violation of fundamental rights.
- The Tamil Nadu government, in an affidavit filed recently, remained emphatic that no incident of forceful conversion has been reported in the southern state in last many years, as it opposed the prayers made by PIL petitioner-advocate Ashwini Upadhyay to order a CBI probe into the alleged cases of forcible conversions and direct the law commission of India to prepare a draft on anti-conversion law.
- The Anti-conversion laws are prone to misuse against minorities and there is no data on convictions under the various anti-conversion laws of the states.
- It is most respectfully submitted that the citizens are at liberty to choose the religion they want to follow,” stated the affidavit, criticising Upadhyay for trying to target Christian missionaries by filing what the state called a “religiously motivated petition”.
- The state accepted the legal proposition that the Constitution does not give a fundamental right to any person to turn another man into one’s own religion.
- But it gives a right to any person to propagate his religion. Likewise, the Constitution does not prevent any person from getting converted to the religion of his choice.



- The citizens of the country should be allowed freely to choose their religion and it would not be appropriate for the Government to put spokes to their personal belief and privacy.

Constitutional Provision on Freedom of Religion

- Article 25 of the Constitution of India guarantees every citizen the right to propagate his religion.
- Therefore, the acts of missionaries spreading Christianity by itself cannot be seen as something against law.
- But if their act of spreading their religion is against public order, morality and health and to the other provisions of Part III of the Constitution (relating to fundamental rights), it has to be viewed seriously.
- As far as Tamil Nadu is concerned, there has been no incidents of forceful conversion reported in the past many years.
- Citing Articles 21 and 25 of the Constitution, the Tamil Nadu government said that “every citizen has the opportunity to practice and spread his religion peacefully” and the right to have faith in a particular religion is an inviolable right that the state is obligated to protect.

Secularism:

- The 42nd Constitutional amendment in 1976 added the word ‘secular’ to the preamble of the Constitution. India being a secular state, is a no state religion which means that it follows no particular religion.
- In Ahmedabad St. Xavier’s College v. State of Gujarat (1975), the SC held that Secularism neither means anti-god nor pro-god. It just ensures that no one is differentiated on the basis of religion eliminating the concept of God in matters of the state.

About the anti-conversion laws

- Anticonversion laws refer to laws that are designed to prevent or prohibit the conversion of one religion to another.
- These laws may be used to prevent individuals from leaving a particular religion or to prevent religious groups from proselytizing or recruiting members from other religious groups.
- 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).

Issues associated with anti-conversion laws

- **Freedom of religion:** Anticonversion laws can be seen as a violation of the right to freedom of religion, which is protected by international human rights laws. These laws



can restrict an individual's ability to choose their own religion and can be used to suppress minority religions.

- **Discrimination:** Anticonversion laws can be used to discriminate against certain religious groups, particularly minority religions. In some cases, these laws have been used to target and persecute minority religious groups.
- **Coercion and manipulation:** Some people argue that anticonversion laws are necessary to prevent coercion and manipulation in religious conversion. However, others believe that these laws are often used as a pretext to suppress minority religions and restrict the right to freedom of religion.
- **Social and cultural divisions:** Anticonversion laws can contribute to social and cultural divisions within a community or society, particularly if they are used to protect the dominant religion.
- **Conflict with other laws:** Anticonversion laws can sometimes conflict with other laws, such as laws that protect freedom of expression or the right to freedom of association.
- **Effectiveness:** There is debate over the effectiveness of anticonversion laws in achieving their intended goals. Some people argue that these laws are not effective in preventing religious conversion, while others believe that they are necessary to protect the cultural and social cohesion of a community or society.

2.1 DIVORCE

Why in News

Supreme Court rules it can directly grant divorce to couples under Article 142

Important Points

- A five-judge Constitution Bench of the Supreme Court ruled that it can exercise its plenary power to do “complete justice” under Article 142(1) of the Constitution to dissolve a marriage on the ground that it had broken down irretrievably, without referring the parties to a family court where they must wait 6-18 months for a decree of divorce by mutual consent.
- The Bench led by Justice S K Kaul held that the court could, in the exercise of this power, waive the mandatory six-month waiting period for divorce under The Hindu Marriage Act (HMA), 1955, and allow the dissolution of the marriage on grounds of irretrievable breakdown even if one of the parties was not willing. (Shilpa Sailesh vs Varun Sreenivasan case).

Current procedure for divorce under the Hindu Marriage Act

- Section 13B of the HMA provides for “divorce by mutual consent”.
- Both parties to the marriage must together file a petition to the district court “on the ground that they have been living separately for a period of one year or more, that they have not been able to live together and that they have mutually agreed that the marriage should be dissolved”.
- Under Section 13B (2) of the Act, the parties must move a second motion before the court “not earlier than six months after the date of the presentation of the [first] petition



and not later than eighteen months after the said date, if the petition is not withdrawn in the meantime”.

- The mandatory six-month wait is intended to give the parties time to withdraw their plea.
- Thereafter, “the court shall, on being satisfied, after hearing the parties and after making such inquiry as it thinks fit that the averments in the petition are true, pass a decree of divorce declaring the marriage to be dissolved with effect from the date of the decree”.
- A petition for divorce by mutual consent can be moved only after a year of the marriage.
- However, Section 14 of the HMA allows a divorce petition sooner in case of “exceptional hardship to the petitioner or of exceptional depravity on the part of the respondent”.
- A waiver of the six-month waiting period under Section 13B (2) can be sought in an exemption application filed before the family court.

Amit Kumar vs Suman Beniwal Case

- In its 2021 ruling in Amit Kumar vs Suman Beniwal, the SC said, Where there is a chance of reconciliation, however slight, the cooling period of six months from the date of filing of the divorce petition should be enforced.
- However, if there is no possibility of reconciliation, it would be meaningless to prolong the agony of the parties to the marriage.
- The process of obtaining a decree of divorce is often time-consuming and lengthy owing to a large number of similar cases pending before family courts.

Article 142 of the Constitution

- Under Subsection 1 of Article 142, the Supreme Court “may pass such decree or make such order as is necessary for doing complete justice in any cause or matter and any decree so passed or order so made shall be enforceable throughout the territory of India”.
- While the power available under Article 142 is sweeping, the SC has defined its scope and extent through its judgments. The majority opinion in Prem Chand Garg (1962) laid down that “an order to do complete justice must not only be consistent with the fundamental rights guaranteed by the Constitution, but it cannot even be inconsistent with the substantive provisions of the relevant statutory laws”.
- The fundamental general conditions of public policy refer to the fundamental rights, secularism, federalism, and other basic features of the Constitution; specific public policy was defined by the court to mean “some express pre-eminent prohibition in any substantive law, and not stipulations and requirements to a particular statutory scheme”.

What factors can courts consider while deciding if a marriage has irretrievably broken down?

- During the pendency of the case last year, the court said that it would determine what rules should be followed while dissolving marriages directly under Article 142 of the Constitution.
- The first and most “obvious” condition is that the court should be fully convinced and satisfied that the marriage is “totally unworkable, emotionally dead and beyond salvation and, therefore, dissolution of marriage is the right solution and the only way forward”.



The court laid down the following factors:

- o The period of time that the parties had cohabited after marriage;
- o When the parties had last cohabited;
- o Nature of allegations made by the parties against each other and their family members;
- o Orders passed in the legal proceedings from time to time;
- o Cumulative impact on the personal relationship;
- o Whether, and how many attempts were made to settle the disputes by a court or through mediation, and when the last attempt was made.
- The court also noted that the period of separation should be sufficiently long, and “anything above six years or more will be a relevant factor”.
- It emphasised the need to evaluate the factors according to the economic and social status of the parties, including their educational qualifications; whether they have any children; their age; and whether the spouse and children are dependents.

2.2 SEDITION LAW

Why in News

Consultations on relook at sedition law at advanced stage, Centre tells SC

Important Points

- The Centre told the Supreme Court Monday that consultations for “re-examining” IPC Section 124A, which deals with sedition, are at a “substantially advanced stage”, following which proceedings on petitions challenging the provision were adjourned to the second week of August 2022.
- Responding to the petitions challenging the sedition law, the Centre had in May 2022 told the apex court that it is “fully cognizant of the various views” on the subject and “has decided to re-examine and re-consider the provisions of Section 124A”.
- It urged the bench to defer the hearing on petitions challenging the constitutional validity of the law until such exercise is carried out “before an appropriate forum”.
- It also urged the court to defer the hearing until the time the exercise is completed.
- There is a requirement to balance both sets of considerations, which is a difficult exercise.
- The case of the petitioners is that this provision of law dates back to 1898, and pre-dates the Constitution itself, and is being misused.

History

- Laws were enacted in 17th century England when lawmakers believed that only good opinions of the government should survive, as bad opinions were detrimental to the government and monarchy.
- The law was originally drafted in 1837 by Thomas Macaulay, the British historian-politician, but was inexplicably omitted when the IPC was enacted in 1860.
- Section 124A was inserted to IPC in 1870 by an amendment introduced by Sir James Stephen when it felt the need for a specific section to deal with the offence.



- In 1890, sedition was included as an offence under section 124A IPC through the Special Act XVII.
- The law has been in controversy since the beginning as it was also used to suppress dissent and imprison freedom fighters. Freedom movement leaders including Mahatma Gandhi, Jawaharlal Nehru and Bal Gangadhar Tilak were booked under the law.
- Today the Sedition is a crime under Section 124A of the IPC

About Sedition Law

- IPC's Section 124A defines sedition as: "Whoever, by words, either spoken or written, or by signs, or by visible representation, or otherwise, brings or attempts to bring into hatred or contempt, or excites or attempts to excite disaffection towards, the government established by law in India, shall be punished with imprisonment which may extend to three years, to which a fine may be added, or with fine."
- In simple words, what this means is anyone who attempts to create hatred, contempt, or disaffection towards the government can be punished under the sedition law.
- The original constitution that was adopted in 1950 did not recognise the sedition law and gave the right to free speech complete protection under fundamental rights. But the first amendment brought in 1951 introduced restrictions that validated the sedition law.

Kedar Nath case

- In a historic judgment in the **Kedar Nath case** on January 20, 1962, the SC upheld the constitutional validity of sedition law but also attempted to restrict scope for its misuse.
- The order said that mere criticism of the government cannot be labelled sedition unless the words are intended to disturb public peace by violence. Kedar Nath Singh was a member of the Forward Communist Party.
- At a rally in Bihar in 1953, Singh had essentially said this: "The dogs of the CID are loitering around. We will strike and throw out these Congress goondas".
- After former PM Indira Gandhi's assassination in 1984, two persons had raised slogans of "Khalistan Zindabad" and "Raj Karega Khalsa".
- The SC in 1995 dismissed the sedition charge saying that "raising some slogans only a couple of times by the two lonesome appellants, which neither evoked any response nor any reaction from anyone in public, cannot attract the provisions of Section 124A."

People charged with sedition

- A 21-year-old Bengaluru-based environment activist, Disha Ravi, was arrested by the Delhi Police on February 14, 2021 for allegedly creating a "toolkit" on the farmers' protests against farm laws.
- In 2016, a group of students from Jawaharlal Nehru University (JNU) had held a poetry session to mark the third anniversary of the hanging of 2001 Parliament attack case convict Afzal Guru. The Delhi Police later charged the students with sedition.



2.3 MODEL CODE OF CONDUCT

Why in News

ECI issues advisory to all Star Campaigners, in view of plummeting level of campaign discourse in the Karnataka Legislative Assembly

Important Points

- The Commission's attention has recently been brought to the instances of inappropriate vocabulary and language used during the on-going campaign by persons, in particular, by those invested with the statutory status of star campaigner.
- Such instances have occasioned various complaints, cross complaints and have also attracted negative media attention.
- Taking note of the above, in an advisory issued to all Political Parties for strict compliance, the Commission noted that National Parties and Star Campaigners enjoy extra enablements within the R.P. Act.
- The advisory states "It is imperative for all parties and stakeholders to remain within the confines of the Model Code of Conduct and the legal framework in their utterances while campaigning so as to maintain the dignity of the political discourse and not to vitiate the campaign and the election atmosphere.
- They are thus expected to contribute in maintaining and raising the level of discourse to "issue" based debate, provide pan India perspective, depth to the local discourse and to reassure all sections of electors to participate fully and fearlessly in a free and fair election."
- In the advisory, ECI has invited the attention of the political parties to the provisions of Model Code of Conduct and other statutory provisions which hold the field and fix the framework of the expected campaign discourse.
- ECI notes that as per the MCC provisions, use of provocative and inflammatory statements, use of intemperate and abusive language transgressing the limits of decency and attacks on the personal character and conduct of political rivals vitiate the level playing field.
- The spirit of the MCC is not just avoidance of a direct violation, it also prohibits attempts to vitiate the electoral space through suggestive or indirect statements or innuendoe.

What is Model Code of Conduct?

- The MCC is a set of guidelines issued by the ECI to regulate political parties and candidates prior to elections.
- It helps EC in keeping with the mandate it has been given under Article 324 of the Constitution, which gives it the power to supervise and conduct free and fairelections to the Parliament and State Legislatures.
- The MCC is operational from the date on which the election schedule is announced until the date of the result announcement.



The Model Code of Conduct has a long list of rules laid down in the ECI website to be followed by everyone. Here are ten important norms to give you a clear understanding of how the poll panel ensures a smooth and fair electorate process.

1. No party or a candidate shall carry out any activity which may aggravate existing differences or create mutual hatred or cause tension between different castes and communities, religious or linguistic.
2. The political parties and their candidates should confine their criticism of rivals to the politics, programmes, past record and work. No candidate or political party is allowed to make personal remarks or any other statement not connected with the public activities of the leaders or workers.
3. The political parties and candidates or other leaders have been strictly prohibited from seeking votes on caste or communal lines. The religious places of worship should not be used as a forum for election propaganda.
4. The Election Commission has made it clear that all parties and candidates should avoid corrupt practices like bribing voters, intimidation of voters, impersonation of voters, canvassing within 100 metres of polling stations, holding public meetings during the period of 48 hours ending with the hour fixed for the close of polls etc.
5. The poll panel prohibits demonstrations or picketing before the houses of individuals by way of protesting against their opinions or activities. Besides this, no political party or candidate is allowed to let his or her followers to make use of any individual's land, building without permission for erecting flags, banners, notices and writing slogan.
6. The political party or candidate must inform the local police authorities of the venue and time for any proposed meeting well in advance for security arrangements to be put in place. Proper permission should be sought for loudspeakers or any other facility as prescribed by the local authority.
7. While proper advance intimation should be given to local police authorities about an organised procession, the election commission's model code of conduct has laid down rules to be kept in mind during such campaigns. The organisers should take steps in advance to ensure there is no block or hindrance to traffic. The political parties or the candidates must exercise control to the maximum extent. Carrying articles which could be misused or carrying effigies of opposition parties and leaders are not allowed
8. On the day of polling, all political parties and candidates should cooperate with officers on election duty to ensure peaceful and orderly polling. They should refrain from serving or distributing liquor on polling day and during 48 hours before it.
9. Except the voters, no one without a valid pass from the ECI is allowed to enter the polling booths.
10. The ruling party at the Centre or states should ensure that it does not engage in practices to indicate using official position for the purposes of election campaign. The ministers should not combine their official visit with election campaigns and must not use official machinery or personnel for campaigning.
11. The public places like the grounds, helipads in connection with elections should not be monopolised by the ruling party. Other parties and candidates should be allowed the use of such places and facilities on the same conditions and terms which they are used by the ruling party.



2.4 ARTICLE 355

Why in News

- Centre invokes Article 355 in Manipur to ensure state security

Important Points

- The central government has taken charge of security in Manipur by promulgating Article 355, after the state was marred by unrest and violence in the past few days.
- The provision, which states that it is the duty of the Union to protect every state against external aggression and internal disturbance, has been invoked to restore peace and order in the state.
- As part of the measures, the Imphal-Churachandpur road has been secured by police and security personnel, in order to prevent any further violence or disturbances.

What is Article 355?

- Article 355 is a part of emergency provisions contained in Part XVIII of the Constitution of India, from Article 352 to 360.
- It empowers the central government to take all necessary steps to protect a state against internal disturbances and external aggression.
- 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.

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.

Reason for Imposition of Article 355 in Manipur

- The move comes after Manipur witnessed clashes in several parts of the state during a protest march by all Tribal Students' Union, Manipur against the Meitei community's demand for inclusion in the Scheduled Tribe list.
- The clashes resulted in several injuries and deaths, leading to the imposition of curfew and the deployment of central paramilitary forces.
- Many people have been injured and two have died due to bullet injuries during clashes in Manipur's hill districts.
- The violence broke out during a solidarity march by the All Tribal Students' Union (ATSUM) in protest against the Meitei community's demand for inclusion in the Scheduled Tribe (ST) list.



- Five of the injured were admitted to the hospital with bullet injuries, two of whom later died.
- The situation remains tense despite the imposition of curfew and the deployment of additional paramilitary forces.
- The army, along with the state police, intervened to control the communal tension following clashes in Churachandpur district.

2.5 RIGHT TO WALK

Why in News

Punjab has become the first state in India to implement the 'right to walk'.

Important Points

- Amid consistent rise in deaths of pedestrians and cyclists, Punjab has taken the lead among the states and UTs to implement the 'right to walk' by making it mandatory for all road-owning agencies, including the NHAI, to provide footpath and cycle tracks in all future expansion of roads and construction of new ones.
- The state government has issued these directions following two court orders after PILs were filed at Punjab and Haryana HC and another in the Supreme Court.
- In future all expansions of existing roads and construction of new roads, a mandatory provision of cycle tracks and footpaths should be made by all road owning departments and agencies.
- Pedestrian walkways and cycle tracks must be built everywhere. However, we must also audit the existing tracks and examine their lacunae.
- For instance, such tracks are regularly invaded by motorbikes.
- That apart, pedestrian-only tracks often have huge gaps, which makes walking a dangerous exercise.
- In other words, the right to walk must be converted into a proper mission with every angle taken care of to make it a success.
- NHAI and urban development departments have been instructed to prepare an action plan to construct footpaths and cycle tracks with a time frame and budget provision.

Issues with pedestrians

- Government data show that the number of pedestrians killed in road crashes has increased from 25,858 in 2019 to 29,124 in 2021, indicating that road infrastructures don't cater to the safety of pedestrians.
- The road accident report of 2022 has not yet been published.
- The Supreme Court, in an interim order last year, had asked states to ensure the safety of pedestrians, cyclists by providing them separate, seamless and safe pedestrian lanes and cycle tracks.

Right to Walk under Constitution of India

- "Right to Walk under Article 21" by ensuring safe facilities for pedestrians.
- Article 21 of Constitution of India: Protection of Life and Personal Liberty



- Article 21 states that “No person shall be deprived of his life or personal liberty except according to a procedure established by law.” Thus, article 21 secures two rights:
 1. Right to life, and
 2. Right to personal liberty.
- The Government of India Act, 1935 provided for the establishment of Article 21 of the Indian Constitution.
- It declares that no person shall be deprived of his life or personal liberty except according to the procedure established by law.
- Article 21 comes under the Part III of the Indian constitution and is one of the fundamental rights guaranteed to all citizens of India.
- Article 21 is a fundamental right and is included in Part-III of Indian Constitution.
- This right is available to all citizens as well as non-citizens alike.
- Supreme Court has described this right as the “heart of fundamental rights”
- According to Justice Bhagwati, Article 21 “embodies a constitutional value of supreme importance in a democratic society.”
- Article 21 secures two rights: The right to life and the Right to personal liberty.
- Article 21 cannot be suspended during an emergency.

2.6 WHIP

Why in News

Power to Appoint Whip Rests With Political Party, SC Holds In Shiv Sena Case.

Important Points

- The Constitution Bench in Shiv Sena case criticised the Speaker of the Maharashtra Legislative Assembly for recognising the whip nominated by the Eknath Shinde-led group as the Chief Whip of the Shiv Sena.

SC Observation

- The Court declared that the Speaker's decision to acknowledge Mr. Eknath Shinde as the Leader of the Shiv Sena Legislature Party was unlawful because the Speaker did not verify if the decision had the support of the political party.
- According to the Court, the power to appoint a whip and a leader rests with the "political party" and not the "legislature party," as stated in the Tenth Schedule of the Constitution.
- The rebel group, led by Shinde, argued that they were the "legislature party" since they had the majority of MLAs, giving them the right to appoint the party whip and group leader.
- The Court concluded that the direction to vote or abstain from voting must come from the political party and not the legislature party.
- The Court emphasised that the Tenth Schedule would become nugatory if the term "political party" were interpreted as the "legislature party."
- The Court declared that allowing the legislative wing to act independently from the political party contradicts the constitutional system of governance.



- MLAs cannot disconnect themselves from the political party under which they were fielded and won the elections based on the party's campaign and strengths.
- The Bench noted that there were conflicting resolutions within the Shiv Sena Legislature Party, leading to the appointment of different whips and leaders.
- The Speaker's decision to recognise a faction of the party without verifying if it represented the will of the political party was deemed illegal.
- The Court held that the Speaker must recognise the whip and leader authorised by the political party, based on the party constitution, after conducting an inquiry.
- It also emphasised that the Speaker should decide on pending disqualification petitions in a reasonable timeframe.
- The Court concluded that the Election Commission's recognition of the Shinde group as the official Shiv Sena would only have prospective effect and would not impact earlier initiated disqualification proceedings.
- Regarding the Governor's decision to call for a floor test and the subsequent resignation of Uddhav Thackeray, the Court stated that although the Governor and the Speaker made errors, it could not reinstate the Thackeray government since Thackeray had voluntarily resigned.
- Therefore, the Court upheld the Governor's decision to invite Eknath Shinde to form the government with the support of the BJP.

Tenth Schedule

- Tenth Schedule to the Constitution was added by the Fifty-second Amendment Act 1985.
- The purpose of this amendment was to prevent political defections motivated by the lure of office or other similar considerations from jeopardizing the foundations of our democracy.
- The proposed remedy was to remove from office any member of either House of Parliament or the State Legislature who was found to have defected.

Grounds for disqualification:

- If an elected member gives up his membership of a political party voluntarily.
- If he votes or abstains from voting in the House, contrary to any direction issued by his political party.
- If any member who is independently elected joins any party.
- If any nominated member joins any political party after the end of 6 months.
- The decision on disqualification questions on the ground of defection is referred to the Speaker or the Chairman of the House, and his/her decision is final.
- All proceedings in relation to disqualification under this Schedule are considered to be proceedings in Parliament or the Legislature of a state as is the case.

Whip in India

- The office of 'whip', is mentioned neither in the Constitution of India nor in the Rules of the House nor in a Parliamentary Statute. It is based on the conventions of the parliamentary government.



- A whip is a written order that political party issue to its members for being present for an important vote, or that they vote only in a particular way.
- A political party has the constitutional authority to issue a whip to its legislators under the Tenth Schedule (anti-defection law).
- The whip is essential to the effective and efficient operation of business on the House floor.

2.7 INTERNET SHUTDOWN

Why in News

Supreme Court Issues Notice On Application Seeking Compliance With Guidelines Laid Down In Anuradha Bhasin's Case.

Important Points

- A petition was filed by Anuradha Bhasin, which challenged the curbs on the internet, media, and other prohibitions imposed in the Kashmir region following the abrogation of the special status of J&K.

Constitutional Provisions Related to internet shutdown:

- The freedom of speech and expression and freedom of trade and commerce through the medium of internet are constitutionally protected rights under Articles 19(1)(a) and Articles 19(1)(g), respectively.
- The restriction on fundamental rights should be in accordance with the mandate under Article 19(2) and Article 19(6) of the constitution and in consonance with the test of proportionality.
- Expression through the internet has gained relevance and is one of the major means of information diffusion.
- The judgment covered other issues, including determination of prerequisites for internet shutdown; impermissibility of indefinite suspension of internet; period review of internet suspension.

SC Court Observations in the following case:

- Internet suspension orders must be published to enable legal challenge before courts.
- Internet suspension orders are not issued under Section 144 of the Criminal Procedure Code (CrPC) because the position has changed since the notification of the Telecom Suspension Rules 2017.
- An order suspending internet services indefinitely is impermissible under the Temporary Suspension of Telecom Services (Public Emergency or Public Service) Rules, 2017.
- Any order suspending internet issued under the Suspension Rules, must adhere to the principle of proportionality and must not extend beyond necessary duration.
- A review committee must review the internet suspension order within 5 days of its issuance, with a periodic review within every 7 days thereafter.
- Any order suspending internet under the Suspension Rules is subject to judicial review.



2.8 MODEL PRISONS ACT

Why in News

Home Ministry prepares Model Prisons Act 2023 to replace British-era law.

Important Points

- The Ministry of Home Affairs (MHA) has prepared the ‘Model Prisons Act 2023’ that will replace a British-era law to overhaul the prison administration that will focus on the reformation and rehabilitation of inmates.
- Among salient features of the model Act are provisions of punishment for prisoners and jail staff for use of prohibited items such as mobile phones in jails, establishment and management of high security jails, open jail (open and semi-open), and provisions for protecting society from criminal activities of hardened criminals and habitual offenders.
- It also contains provisions for providing legal aid to prisoners, parole, furlough and premature release to incentivise good conduct.
- Prisons in the country and ‘persons detained therein’ are a State subject and the existing law in this context, the Prisons Act of 1894 is a pre-independence era Act and is almost 130-years-old.
- Two other related laws — The Prisoners Act, 1900 and The Transfer of Prisoners Act, 1950 are also decades-old.
- The model Act might serve as a “guiding document” for the States, and for adoption in their jurisdiction.
- Prisons in the country and ‘persons detained therein’ are a State subject and the existing law in this context, the Prisons Act of 1894 is a pre-independence era Act and is almost 130-years-old, it said.
- Two other related laws — The Prisoners Act, 1900 and The Transfer of Prisoners Act, 1950 are also decades-old. The model Act, the Ministry said, might serve as a “guiding document” for the States, and for adoption in their jurisdiction.

‘Several lacunae’

- It found that there were “several lacunae” in the existing Prisons Act and there was “conspicuous omission” of the correctional focus in the existing Act.
- The Ministry, hence, directed the Bureau of Police Research and Development (BPR&D), a Union government think tank on policing subjects, to review the laws and prepare a new draft.
- The existing Act mainly focuses on keeping the criminals in custody and enforcement of discipline and order in prisons. There is no provision for reform and rehabilitation of prisoners in the existing Act.

Model Prisons Act, 2023 Objective

- The MHA said a comprehensive ‘Model Prisons Act, 2023’ was finalised with the objective of holistically providing guidance and addressing the gaps in the existing Prisons Act, including the use of technology in prison management, making provisions for grant of parole, furlough, remission to prisoners to encourage good conduct, special



provision for women/transgender inmates, physical and mental well-being of prisoners and focus on the reformation and rehabilitation of inmates.

- Along with the Prisons Act, 1894, the Prisoners Act, 1900 and the Transfer of Prisoners Act, 1950 have also been reviewed by the MHA and relevant provisions of these Acts have been “assimilated” in the ‘Model Prisons Act, 2023’.
- Governments and union territory administrations can benefit from the Model Prisons Act, 2023 by adopting it in their jurisdictions, with such modifications which they may consider necessary, and repeal the existing three Acts in their jurisdictions.

Focus areas

- Some of the focus areas of the model Act provide for security assessment and segregation of prisoners, individual sentence planning; grievance redressal, prison development board, attitudinal change towards prisoners and provision of separate accommodation for women prisoners, transgender, etc.
- The model Act also talks about provision for use of technology in prison administration with a view to bring transparency in prison administration, provision for video-conferencing with courts, scientific and technological interventions in prisons, etc.
- It said that in the last few decades, an altogether “new perspective” has evolved about prisons and prison inmates, globally. Prisons today are not looked as places of retributive deterrence but are considered as reformatory and correctional institutions where the prisoners are transformed and rehabilitated back into society as law abiding citizens.

2.9 FORUM SHOPPING

Why in News

CJI Chandrachud condemns ‘forum shopping’

Important Points

What is practice of forum shopping?

- When litigants or lawyers attempt to deliberately move their case to a particular judge or Court where they think the judgment could be more favourable, they are said to be “forum shopping.”
- Webster’s dictionary defines forum shopping as the “practice of choosing the court in which to bring an action from among those courts that could properly exercise jurisdiction based on a determination of which court is likely to provide the most favorable outcome.”
- Lawyers think about which is the right forum to approach as part of their litigation strategy. For example, one could directly approach the Supreme Court via a public interest litigation case instead of the concerned High Court because the issue could get more eyeballs.
- However, an obvious effort to circumvent the process or avoid a particular judge is frowned upon.
- Judges have cited the injustice caused to the other party in the case and overburdening some courts over others and interfering with judicial process.



Forum shopping in Other countries

- Even the US and UK courts have criticised the practice of forum shopping as something to be avoided or prohibited. However, most common law countries use the “forum non-conveniens” principle to prevent forum shopping, which gives the court discretionary powers to refuse to exercise its jurisdiction over a matter where another court, or forum, may more conveniently hear a case.
- Using this power, the court can dismiss a case in the interests of justice and the parties while allocating it to the appropriate bench.

Chetak Construction Ltd. vs. Om Prakash’ Case

- The Supreme Court in its 1988 ruling in ‘Chetak Construction Ltd. vs. Om Prakash’ said, “A litigant cannot be permitted choice of the forum,” and that every attempt at forum shopping “must be crushed with a heavy hand.”

What is the Supreme Court’s view on this practice?

- SC Bench of Justice S. Abdul Nazeer and Justice Krishna Murari in the case of ‘Vijay Kumar Ghai vs. State of W.B.’ termed forum shopping as a “disreputable practise by the courts” that “has no sanction and paramountcy in law”.
- The court observed that despite condemning the practice, one of the respondents had filed three complaints, two in Delhi and one in Calcutta.
- Observing the timeline of the complaints filed, the court said that it indicated “the malafide intention” of the respondent, which was to harass the petitioners and “pressurise them into shelling out the investment.”
- In the 2022 ruling, the court reiterated that forum shopping has been condemned by courts while referring to its 2017 ruling in ‘Union of India & Ors. vs. Cipla Ltd.’, which laid down a “functional test” to be adopted for forum shopping.
- What has to be seen is whether there is any functional similarity in the proceedings between one court and another or whether there is some sort of subterfuge on the part of a litigant. It is this functional test that will determine whether a litigant is indulging in forum shopping or not,” the court said.
- The court remarked, “Forum shopping is essentially a practice of choosing the Court in which to bring an action from among those Courts that could properly exercise jurisdiction based on a determination of which Court is likely to provide a most favourable outcome.”

Bench hunting

- “Bench hunting” refers to petitioners managing to get their cases heard by a particular judge or court to ensure a favourable order, the court added.
- Relying on the 2017 SC ruling in ‘Kamini Jaiswal vs. Union of India’, the court said that “unscrupulous elements” are always on the hunt to find a court or forum of their choice but are not permitted to do so by law.



3. ENVIRONMENT AND ECOLOGY

3.1 INTERNATIONAL CLIMATE ACTION IN CIVIL AVIATION

Why in News

India To Join International Climate Action In Civil Aviation From 2027

Important Points

- India will start participating in the International Civil Aviation Organisation's (ICAO) Carbon Offsetting and Reduction Scheme for International Aviation (CORSA) and the Long-Term Aspirational Goals (LTAG) in 2027.
- This was announced at a meeting of the Parliament's Consultative Committee of the Ministry of Civil Aviation held in New Delhi.
- The meeting was chaired by the Minister of Civil Aviation Jyotiraditya Scindia.
- The ICAO has been tasked to reduce carbon emissions from international civil aviation as one of its focus areas.
- In order to mitigate carbon emissions from aviation and its impact on climate change, the global body has adopted several key aspirational goals.
- Among them are a two per cent annual fuel efficiency improvement through 2050, carbon neutral growth and net zero by 2050.
- The ICAO has clubbed them under CORSA and LTAG.
- The former is to be implemented in three phases.
- As the rationale for joining the ICAO's climate action measures from 2027.
- This will enable airlines of developing countries like India to get time to grow more so that they do not face any adverse financial consequences due to CORSA.
- Financial implications due to offsetting have to be borne by individual airlines, depending upon their international operations. CORSA is applicable only to flights originating from one country to another.
- India committed to net zero by 2070 at the 26th Conference of Parties (COP26) to the United Nations Framework Convention on Climate Change.

About the CORSA:

- It is a global market-based measure to offset international aviation CO₂ emissions in order to stabilize the levels of such emissions.
- Offsetting of CO₂ emissions will be achieved through the acquisition and cancellation of emissions units from the global carbon market by airplane operators.
- It is applicable only to flights originating from one country to another.
- It does not apply to domestic aviation.
- It will be implemented in 3 phases.
- Participation is voluntary only in the first two phases for (2021-2026).
- India will not participate in the voluntary phases of CORSA.



- In 2018, ICAO has adopted Standards and Recommended Practices (SARPs) to implement CORSIA.

Initiatives by the Indian government in this direction:

- Other initiatives by the aviation sector includes policies like National Policy on Bio Fuels 2018 and the Bio-Aviation Turbine Fuel Programme.
- National Policy on Bio Fuels 2018 aims to realize the goal of de-carbonization of aviation sector.
- Bio-ATF Programme aims to promote the use of clean fuel in aviation.
- India has joined ICAO's Assistance Capacity Building & Training for Sustainable Aviation Fuels (SAF) Programme will provide opportunities for States to develop their full potential in SAF development and deployment.
- The Bureau of Indian Standard has issued Indian Standard for Bio-Jet ATF in 2019.

3.2 WHO'S TIPPING THE SCALES

Why in News

Recently, a report has been released by the International Panel of Experts on Sustainable Food Systems (IPES) titled "Who's tipping the scales".

Important Points

Highlights of the Report:

- There has been a growing presence of firms in governance and spaces, staking claims to be legitimate actors.
- Over recent decades, corporations have succeeded in convincing governments that they must be central in any discussion on the future of food systems.
- The role of private corporations in food governance and decision-making has been normalized by public-private partnerships and multi-stakeholder roundtables while public governance initiatives have become heavily dependent on private funding.
- The UN Food Systems Summit, 2021 was described as a watershed moment in highlighting the importance of corporate influence in public health governance.
- Civil society organizations, food scholars, and social movements have expressed concern that the increased involvement of corporations in food governance could lead to a weakening of the public good and impact the rights of people and communities.
- Corporations have influenced global food governance in visible and invisible ways.
- Corporate influence could be seen in global food systems platforms such as the Global Alliance for Improved Nutrition, the Food and Land Use Coalition, and the Scaling Up Nutrition Movement.
- The Covid-19 pandemic, coupled with Russia's invasion of Ukraine and Food Inflation, aggravated the issue of corporate involvement.
- The CGIAR (Consultative Group on International Agricultural Research) relied-on funding from private firms and private philanthropic institutions connected to the food industry.



- The Bill and Melinda Gates Foundation which was the CGIAR's 2nd largest donor in 2020 contributed around USD 100 million, which was far more than what was contributed by individual governments including that of the USA.
- The FAO was also found to have closely collaborated with corporations through industry partnerships throughout its history.

About International Panel of Experts on Sustainable Food Systems

- It is a diverse and independent panel of experts guided by new ways of thinking about research, sustainability, and food systems.
- Since 2015, IPES-Food has uniquely shaped the debate on global food systems reform, through policy-oriented research and direct engagement with policy processes.
- With 23 experts from 16 countries across 5 continents, the panel brings together groundbreaking thinkers on global food systems - including a World Food Prize laureate, a holder of the Légion d'Honneur, a Balzan Prizewinner, and two recipients of the Right Livelihood Award.
- With a track record of co-constructing solutions with a wide range of food system actors, IPES-Food takes a democratic approach to knowledge that values cutting-edge science while recognizing the importance of experiential, indigenous & traditional knowledge.
- IPES-Food does not accept funding from governments or corporations, allowing the panel to deliver independent analysis that addresses the most pressing questions.

3.3 CLIMATE FINANCE PROGRAM

Why in News

Recently ADB Announces Climate Finance Program: The Innovative Finance Facility For Climate In Asia And The Pacific

Important Points

- The Asian Development Bank (ADB) announced a funding guarantee facility to help the region reduce greenhouse gas emissions and build infrastructure resilient to the impact of climate change.
- The new funding plan is the first mechanism of its kind to be developed by a development bank and reflects the pressure such lenders face from shareholders to innovate in order to tackle a climate crisis that has hit Asia hard.
- Named the Innovative Finance Facility for Climate in Asia and the Pacific (IF-CAP), the plan is the first leveraged guarantee mechanism for climate finance adopted by a multilateral development bank, the ADB said.
- IF-CAP will contribute to meeting the ADB's goal to use \$100 billion from its own resources to combat climate change for 2019-2030.
- Under the programme, Denmark, Japan, South Korea, Sweden, the United Kingdom and the United States will guarantee some of the lender's loans and shoulder losses in case its borrowers default on their debt.
- It will free up capital the ADB needs to hold for credit risk, and allow it to increase lending to climate-related projects in Asia.



- Asia is among the regions most vulnerable to the impact of climate change. More than 40% of climate-related disasters occurred in Asia and the Pacific since the start of the century, the ADB said.
- Its funding announcement precedes a meeting of Asian finance leaders in Incheon, South Korea, which is likely to debate how the region should address the economic impact of market turbulence.
- Called the Innovative Finance Facility for Climate in Asia and the Pacific (If-Cap), the programme’s initial partners include Denmark, Japan, South Korea, Sweden, the UK, and the US.
- They are in discussions with ADB to provide grants for project preparation, along with guarantees for parts of the bank’s sovereign loan portfolios.
- The reduced risk exposure created by the guarantees will allow the bank to free up capital to accelerate new loans for climate projects, said ADB.
- The bank added that for every \$1 that is guaranteed, up to \$5 of new climate loans could be generated.
- “With a model of ‘\$1 in, \$5 out’, the initial ambition of US\$3 billion in guarantees could create up to US\$15 billion in new loans for much-needed climate projects across Asia and the Pacific,” bank said.

Asian Development Bank (ADB)

- Established in 1966 after a resolution was passed at first Ministerial Conference on Asian Economic Cooperation held by United Nations Economic Commission for Asia and Far East in 1963.
- Objective: Fostering economic growth, cooperation and eradicating extreme poverty in region of Asia by providing loans, technical assistance, grants and equity investment.
- Membership: 68 members.
- Highest policy-making body is Board of Governors, which comprises one representative from each of 68 member nations.
- Five largest shareholders are Japan and United States, followed by People’s Republic of China, India, and Australia.

3.4 TRANSBOUNDARY COLLABORATION

Why in News

Bangladesh, India Need Trans-Boundary Collaboration for Tiger Conservation

Important Points

- The Bangladesh environment minister while supporting the creation of the International Big Cats Alliance (IBCA) for protection and conservation of seven big cats, stressed on the need for strengthening the Trans boundary collaboration.
- Bangladesh Minister at International Conference on Tiger Conservation at Mysuru, organised as part of 50 years of Project Tiger, presented Bangladesh’s vision to double the number of wild tigers by achieving zero poaching targets with the active participation of the local community.



- Bangladesh is implementing the National Tiger Recovery Program (2022 to 2034) and the second-generation Bangladesh Tiger Action Plan (2018-2027) which includes tiger survey; genetic study; SMART patrolling and monitoring Sundarbans with drones.
- Capacity building programs for frontline staff of the Forest Department as well as the local community to ensure protection & conservation of Sundarbans and Bengal tigers is carried out.
- Bangladesh and India signed a protocol for strengthening collaboration for the Conservation of the Royal Bengal Tiger in the Sundarbans in 2011.
- Wildlife Crime Control Unit has been established under the Forest Department to combat illegal wildlife trade and to strengthen the capacity of wildlife education, research and training.
- The Bangladesh government is engaging the local community in tiger conservation activities by forming a Village Tiger Response Team, Co-management Committee and Community Petrol Group to mitigate tiger-human conflicts.

Three kinds of TBC Areas (TBCAs) include

- Transboundary Protected Area (TPA), geographical space that consists of protected areas.
- TBC Landscape and/or Seascape, an ecologically connected area that sustains ecological processes and crosses one or more international boundaries.
- Transboundary Migration Conservation Areas, wildlife habitats in two or more countries that are necessary to sustain populations of migratory species.

India shares such TBCAs with Nepal and Bhutan viz Kanchenjunga Conservation Area, in northeast corner of Nepal near the border with India and Tibet.

- Terai Arc Landscape (TAL) spread across Indian states of Uttarakhand, Uttar Pradesh, Bihar, and low-lying hills of Nepal.
- Sacred Himalayan Landscape whose 74% area falls in Nepal, 25% falls in Sikkim of India, and remaining falls in Bhutan.
- Transboundary Manas Conservation Area (TraMCA) across Eastern Himalayas that connect Bhutan with North East India.

3.5 COAL ACTION PLAN 2023 -24

Why in News

Coal Ministry Action Plan 2023 -24 Targets 1012 Million Tonne Coal Production

Important Points

- The Ministry of Coal has conceptualized an Action Plan for the FY 2023-24 with the goal of achieving Aatmanirbhar Bharat by enhancing the production, efficiency, sustainability, new technologies etc. in the coal sector.
- It is an ambitious, well-crafted roadmap that covers a variety of areas stated below -



1. Coal Analytics:

- **Coal Production** - The Ministry has finalized the total coal production target of 1012 MT for FY 2023-24.
- **Outsourcing of Mines**- The Ministry has taken various steps to increase coal production and efficiency like Mining Developers cum Operators (MDO) for the operationalization of CIL Mines/Blocks and production in discontinued/abandoned mines on the revenue sharing basis.
- **Coking Coal Strategy** – With a focus on Aatmanirbhar Bharat, the Ministry of Coal has formulated a coking coal strategy to enhance coking coal availability in the country to reduce imports.
- **Quality of Coal** - The Ministry of Coal and the coal companies have taken various measures to achieve the objective of supply of quality coal to all consumers. For undertaking the job of sampling and analysis of coal samples at loading end, third party sampling agencies have been empanelled for both power and non-power coal consumers.

2. Private Investment:

- **CAPEX and Asset Monetization** - CAPEX target for FY 2023-24 is Rs 21030 Crores (CIL: Rs.16,500 Cr, NLCIL: Rs. 2,880 Cr and SCCL: Rs. 1650 Cr) overall projected target of Assets Monetization plan for FY 2023-24 is Rs. 50,118.61 Crores
- **Commercial Mining** - During FY 2022-23, the Ministry signed agreements for a total of 23 coal mines having cumulative PRC of 33.224 MTPA and these mines are expected to generate an annual revenue of Rs 4,700.80 Crores calculated at PRC (Peak Rated Capacity). These Mines are expected to provide both direct and indirect employment to 44,906 people. Considering good response received for 6th round of commercial auctions, it is expected that 25 coal mines will be allocated during FY 2023-24 for commercial mining.

3. Infrastructure Projects

- **PM Gatishakti National Master Plan** – In consultation with Ministry of Railways, Ministry of Coal is closely monitoring the new railway line projects that are critical for coal evacuation and is undertaking Mapping of Coal Sector on NMP and use of Dashboards on NMP.
- **Coal Evacuation- FMC & Railway Lines** – Ministry of Coal has adopted a Coal Logistics Policy/Plan for effective and environmental friendly transport of coal, as logistics is a crucial component of the coal supply chain.

4. Safety in Mines

- The Ministry of Coal reaffirms its commitment to the best safety standards and utmost priority to the safety in Coal Mines including disaster management, safety management & response drills, use of PPE etc.
- **Scientific closure of Mines** – To restore the ecological balance in the mined-out areas, mine closure activities will begin this year at a significant number of CIL and



SCCL mines as per the guidelines issued by Ministry of Coal in October, 2022 (Scientific Closure of Closed/Abandoned/Discontinued Mines before Year 2009)

5. Technology Push to Coal:

- Technology roadmap in the Coal sector - Ministry is going to circulate the Monitoring framework for coal companies towards Implementation of Technology Roadmap in digitalisation & integration of sub-systems, use of new technology (Drone, Remote sensing), blast free coal mining to promote efficiency, safety and environment.
- Coal to Chemical – With an objective towards clean coal technology, Ministry of Coal has taken various initiatives like Coal to Hydrogen, Coal & Lignite gasification, CBM/CMM etc.
- Diversification of Coal India Limited (CIL) – As part of Diversification initiatives of the Ministry, Coal India Limited is being diversified for sustainable future business operations like New Business Areas (Aluminium, Power, Solar wafer, Solar Power & Renewable), Expansion of Core business (1 BT) etc.,

6. Sustainability in Coal Sector:

- Ministry of Coal envisages promoting sustainable development model in which coal production goes hand in hand with environmental protection, resource conservation, caring for society and measures to protect our forests and biodiversity. Greening Initiatives, Development of Eco-parks/Mine Tourism, Gainful Utilization of Mine Water/Overburden (OB) and Energy Efficient Measures are some of the major identified sustainable activities identified by Ministry of Coal.

Coal Analytics:

- India has the fifth largest coal reserves in the world and stands second in coal production after China.
- One of the largest importer of coal (mainly from Indonesia, South Africa and Australia).
- Coal accounts for almost 50% share in total installed electricity generation capacity in India.

Classification of Coal

- **Anthracite (best quality):** Carries 80-95% of carbon content. Found in small quantity in J&K.
- **Bituminous:** Carries 60-80% of carbon content and low level of moisture. Found largely in Central and Eastern India.
- **Lignite:** Carries 40-55% of carbon content. Found in Rajasthan, Assam, Tamil Nadu.

3.6 EL NINO

Why in News

WMO issued on expected rainfall patterns globally during El Nino years.



Important Points

- The world should prepare for the development of El Nino, which is associated with severe droughts in parts of southern Asia, Indonesia, and Australia as well as extreme rain, the World Meteorological Organisation (WMO).
- A map WMO issued on expected rainfall patterns globally during El Nino years showed most parts of north, northeast, northwest, and central India experiencing dry periods during the June to September monsoon season.
- It shows largely wet months during the October to December northeast monsoon season in the peninsular region.
- The monsoon season, which begins on June 1, is crucial to India's agriculture, one of the mainstays of its economy.
- It brings about 70% of India's annual rainfall. Monsoon spurs farm produce and improves rural spending. Monsoon rains are a lifeline for about 60% of the country's net cultivated area, which has no irrigation.
- The monsoon impacts inflation, jobs, and industrial demand. Good farm output keeps a lid on food inflation.
- Ample harvests raise rural incomes and help inject demand into the economy.
- WMO said that El Nino conditions are known to shift rainfall patterns across the world.
- Although they vary somewhat from one El Nino to another, the strongest shifts remain fairly consistent in the regions and seasons.
- WMO is referring to climatology or the study of atmospheric conditions over a longer time period.
- Normally, El Nino is good for the northeast monsoon but bad for the southwest monsoon but there is no one-to-one relationship.
- IMD last month forecasted a "normal" monsoon at 96% (with an error margin of +/- 5%) of the long-period average (LPA). The LPA for the monsoon season between June to September is 87 cm calculated for the period of 1971 to 2020.
- El Niño might bring respite from the drought in the Horn of Africa and other La Niña-related impacts but could also trigger more extreme weather and climate events.
- This highlights the need for the UN Early Warnings for All initiative to keep people safe.
- WMO said the likelihood of El Niño developing this monsoon season is increasing. It added this would have the opposite impact on weather and climate patterns in many regions of the world to the long-running La Niña and likely fuel higher global temperatures.
- La Niña has now ended after persisting for three years. The tropical Pacific is currently in an ENSO-neutral state (neither El Niño nor La Niña).
- There is a 60% chance for a transition from ENSO-neutral to El Niño during May-July 2023, and this will increase to about 70% in June to August and 80% between July and September," said WMO.
- At this stage, there is no indication of the strength or duration of El Niño.
- 2016 was the warmest year on record because of the double whammy of a very powerful El Niño event and global warming.



- The effect on global temperatures usually plays out in the year after its development and so will likely be most apparent in 2024.
- Indian Institute of Tropical Meteorology climate said pre-monsoon temperatures over Indian landmass can be one among several of the factors affecting the monsoon onset dynamics.
- El Nino can enhance the tropospheric temperature gradient by increasing the temperatures over Eurasia and thereby weaken the monsoon winds.
- Even though land surface temperatures cool with rains, the [latent] heat is released to the troposphere/ atmosphere over the land. So, land surface temperatures alone do not drive the monsoon.

3.7 CENTRAL ASIAN FLYWAY

Why in News

Meeting of Range Countries to strengthen conservation efforts for migratory birds and their habitats in the Central Asian Flyway (CAF)

Important Points

- Range countries of the Central Asian Flyway (CAF) have collaborated to strengthen conservation efforts for migratory birds and their habitats.
- The Ministry of Environment, Forest and Climate Change in collaboration with the United Nations Environment Programme/Convention on Migratory Species (UNEP/CMS) organised the meeting from May 2 to May 4, 2023, in New Delhi.
- The meeting was attended by representatives from 11 countries, including Armenia, Bangladesh, Kazakhstan, Kyrgyzstan, Kuwait, Mongolia, Oman, Saudi Arabia, Tajikistan, and Uzbekistan, along with Secretariats of CMS, AEW, and Raptors MOU, and representatives of Chief Wildlife Wardens of States, scientific institutions in India, international and national non-governmental organizations, and subject experts.
- The delegates deliberated on an institutional framework for the Central Asian Flyway, discussed priority areas for implementation, and agreed on a draft roadmap for updating the CMS CAF Action Plan.
- According to the Ministry of Environment, Forest and Climate Change, the discussions also led to the modalities of an institutional framework mechanism to develop a coordinated approach to the conservation of migratory birds and their habitats.
- The formalisation of the Central Asian Flyway initiative was seen as a significant step towards the conservation of migratory birds and their habitats.
- Union Minister of State for Environment, Forest and Climate Change inaugurated the event emphasized the need to adopt a sustainable lifestyle for the co-existence of all life forms, including migratory birds.

About ACF

- Central Asian Flyway (CAF) covers a large area of Eurasia between the Arctic and Indian Oceans.
- This flyway comprises several important migration routes of birds.



- Including India, there are 30 countries under the Central Asian Flyway.
- At the 13th meeting of the Conference of Parties (CoP) to the Convention on Migratory Species (CMS), held at Gandhinagar in February, 2020, a resolution (UNEP/CMS/Resolution 12.11 (Rev.COP13) and Decision 13.46 were adopted inter-alia providing for establishing, by COP14, under the umbrella of CMS an institutional framework, under the leadership of India with the aim to agree on conservation action for migratory birds.
- With a view to fulfill its commitment, India is organizing two day online meeting on 6th -7th October 2021 with CAF Range Countries, anchored in Wildlife Institute of India.
- Approximately one in five of the world's 11,000 bird species migrate, some covering enormous distances.
- Conserving migratory birds requires cooperation and coordination along the entire flyway between countries and across national boundaries.

3.8 GOA FOREST FIRES

Why in News

Earlier a Central government's submission to Parliament stated that a prolonged dry spell, unprecedented high temperatures, and low humidity caused sporadic fire incidents in the state.

Important Points

- A forest department probe into the bushfires that impacted an area of about 4 sq km in Goa in the first half of March is learnt to have concluded that the fires were largely triggered by natural causes, confirming the central government's submission to Parliament last month that a "prolonged dry spell, unprecedented high temperatures, and low humidity" caused "sporadic" fire incidents in the state.
- Helicopters of the Navy and Air Force flew multiple sorties to douse fires on inaccessible hilltops in the Mhadei Wildlife Sanctuary.
- Opposition parties and environmentalists have alleged the fires were "man-made", deliberately lit by vested interests.
- Even the state Forest Minister had said in March that the fires were "man-made".
- The opposition renewed its demand for a high-level investigation after a new fire was reported in South Goa earlier this month.

What did the forest department inquiry find?

- According to the inquiry report, 74 fire incidents — 32 of which affected three wildlife sanctuaries — were reported in the first fortnight of March 2023.
- A total of 418 hectares of private land, reserve forests, comunidade land, and protected areas were affected, including more than 320 hectares of forest land.
- The report suggests that a conducive environment and extreme weather conditions — deficient rainfall in the preceding season, unusually high temperatures, low moisture and humidity — led to the fires.



- Even so, 34 FIRs, mostly against unknown persons, have been registered under the Indian Forest Act, 1927, the Wild Life (Protection) Act, 1972, the Goa, Daman and Diu Preservation of Trees Act, 1984, and relevant provisions of the Indian Penal Code, the report says.

What is the connection between weather and fires?

- Very little rain in Goa since October last year, along with heat-wave-like conditions and low humidity, created conditions that were ripe for forest fires.
- Once the carpet of dry leaves on the hilltops caught fire, the flames were fanned and spread by high winds.
- Officials said of late, incidents of forest fires in Goa during the summer have been more in the years following those of poor monsoon rain. A similar pattern has been seen in Karnataka as well, the officials said.
- The officials acknowledged that some fires near cashew plantations may have been caused by owners lighting fires. However, this was not a widespread practice, they said.
- Of the more than 70 forest fires reported in March, only 4-5 cases have been reported in which people may have deliberately lit fires.

Does Goa have a history of forest fires

- Minor surface fires that burn undergrowth and dead organic matter on the forest floor are common due to the slash-and-burn techniques used by villagers to clear grazing land for cattle.
- Cashew farmers often start minor constrained fires to clear weeds and reduce undergrowth. There have been instances where fires have been traced back to the stray beedi or cigarette.
- Goa does not experience crown fires (caused by friction of trees) which mostly occur abroad. Surface fires are common in moist deciduous forests of Goa.

Why are environmentalists worried?

- They fear that vested interests may have lit fires to reduce forest density and clear land for real estate development.

Rising incidents of forest fires in India

- Managing Forest Fires in a Changing Climate (Council of Energy, Environment and Water)
- An April 2022 study, it has noted a tenfold increase in forest fires over the past two decades.
- More than 62% of Indian states are prone to high-intensity forest fires.
- Andhra Pradesh, Odisha, Maharashtra, Madhya Pradesh, Chhattisgarh, Uttarakhand, Telangana, and the Northeastern states are most prone to forest fires, the study found.
- Mizoram has seen the highest incidence of forest fires over the last two decades, and 95% of its districts are forest fire hotspots.



ISFR 2021

- The ISFR 2021 estimates that more than 36% of the country's forest cover is prone to frequent forest fires, 6% is 'very highly' fire-prone, and almost 4% is 'extremely' prone.
- The forest fire season normally extends from November to June, and the majority of fires are caused by man-made factors, the report says.
- A report by the Ministry of Environment, Forest and Climate Change for 2020-21
- It identified western Maharashtra, southern Chhattisgarh, parts of Telangana and Andhra Pradesh, and central Odisha as becoming 'extremely prone' to forest fires.
- An FSI study based on the spatial analysis of forest fires points during the period 2004-21 has found that nearly 10.66% area under forests in India is 'extremely' to 'very highly' fire-prone.

What is the importance of forests?

- Forests are crucial to life; they sustain biodiversity and provide endless incalculable products and important ecosystem resources such as storage of carbon, flood & landslide control, clean supply of water, medicines, and crops.

Data related to forests

- The global forest comprises 4.06 billion hectares of the area which is equivalent to 31% of the total land
- Approximately 6 billion people across the world depend on these forests, including 300 million people living within them.
- Between the years 2000 to 2010, a decline of the forest area by about 5.2 million hectares per year (0.1% of the total forest area) has been discerned.

Forest fire in India

- India occupies just only 5% of the global geographical area, 1.8% of the overall forest area and it supports 16% of the total human population.
- Out of the 647 districts in India, nearly 380-445 districts encountered fires every year from 2003 to 2016.

3.9 WORLD BIODIVERSITY DAY 2023

Why in News

Are we on track to meet targets under global framework.

Important Points

- The International Day for Biological Diversity, celebrated on May 22 each year, is a reminder of the promise made in Montreal.
- The theme of the international day this year (2023) is appropriately From agreement to action: Build back biodiversity.
- It's just five months since the Kunming Montreal Global Biodiversity Framework (GBF) was agreed upon and understandably, not much has been done.
- The framework has a total of four goals with 23 targets which have to be met by 2030.
- However, there is a need to ensure the framework does not end up like Aichi Biodiversity Targets set up in 2011.



- These targets, which were similar to the targets set under the GBF, were to be met by 2020, but the world collectively failed to meet any of these.
- With around one million animal and plant species threatened with extinction, immediate action is imperative.
- Just seven years are available to meet the targets set under GBF. Issues with implementation are already visible.
- At the 15th Conference of Parties (COP15) in 2022, it was decided that investment is important for meeting the targets of GBF.
- It was decided that developed countries would provide \$20 billion in international finance to developing nations by 2025 and \$30 billion by 2030.
- While G7 provided specific numbers for funding for climate change in a recent statement, a similar number for biodiversity was missing.
- Members states also agreed to realign their National Biodiversity Strategy and Action Plan to the GBF. However, only Spain has submitted the realigned NBSAP this year.
- The new plans have to be submitted to CBD secretariat before COP16 in 2024 in Türkiye.
- At present, the secretariat is providing support to the countries to develop the new plans. India is in the process of preparing this plan.
- The target for protecting 30 per cent of land and water was among the most controversial. According to many, this step would infringe upon the rights of the indigenous people. Some 16.64 per cent of land and inland water ecosystems and 7.74 per cent of coastal waters and the ocean were protected, according to the Protected Planet Report published in May 2021. More than 40 per cent of this has occurred since 2010.
- The world would need to scramble to be able to meet the GBF target of 30 per cent by 2030. India already has 27 per cent of its land area under protection and would easily meet the target, according to the Ministry of Environment, Forest and Climate Change.
- To create awareness about the targets and goals of the GBF, CBD organised a campaign with a list of 22 Actions that respond to the 23 targets.
- The campaign ran for 22 days, with each day representing one of the 22 actions/targets.
- At the next meeting of the Conference of the Parties in 2024 in Türkiye, the world will take stock of the targets and commitments that have been set.

3.10 DEEP OCEAN MISSION

Why in News

The Union Minister of State (Independent Charge) Earth Sciences recently chaired the first-ever high-level Steering Committee meeting of Deep Ocean Mission.

Important Points

Deep Ocean Mission - Core component of Blue Economy

- Deep Ocean Mission is a high-level multi-ministerial, multi-disciplinary programme for better understanding the deep sea living and non-living resources of the Indian Ocean, according to the Ministry of Earth Science.



- The mission aims to promote deep-sea research, sustainable use of marine resources, and the development of technologies for deep-sea exploration.
- Highlighting the role the Deep Ocean Mission will be playing in India's Blue Economy, the Minister said, "Blue Economy will be a major contributor to India's overall economy, and the Deep Ocean Mission announced by Prime Minister will be the core component of it."
- Further, it seeks to leverage the country's technological capabilities and scientific expertise to explore and utilise the resources in the deep sea in a sustainable manner.
- During the meeting, the Minister informed that the design and development of subsystems of the manned submersible to carry three humans have been completed and integration is in progress.
- Exploration of strategic minerals like cobalt, nickel, copper, and manganese are expected to pave the way for future commercial exploitation of these resources.
- The Mission Steering Committee (MSC) reviewed the progress of the mission's various components and will provide broad policy direction to the mission and exercise the main programme and governance for the deep ocean sector.
- In addition, it will also advise the other committee on policy and implementation strategies.

Multiple advantages to the economy

- India's blue economy is made up of the entire resource system in the ocean and economic infrastructure in marine, maritime, and onshore coastal zones within the country's legal jurisdiction.
- With a vast coastline and rich marine resources in sectors such as fisheries, aquaculture, port infrastructure, and marine biotechnology, among others, India can boost economic activity, attract investments, and create jobs, especially in coastal communities.
- Additionally, ports are crucial gateways for international trade, and India's extensive coastline positions it strategically for maritime connectivity. Approximately 95 percent of India's trade by volume transits by sea.
- Exploring various aspects of the ocean, like marine biodiversity, and developing sustainable technologies and solutions will be beneficial in generating knowledge for sustainable ocean management.
- Overall, the blue economy is necessary to unlock the sustainable use of ocean resources simultaneously achieving the goal of inclusive economic growth.

The Mission consists of six major components:

- Development of Technologies for Deep Sea Mining and Manned Submersible and Underwater Robotics;
- Development of Ocean Climate Change Advisory Services;
- Technological innovations for exploration and conservation of deep-sea biodiversity;
- Deep Ocean Survey and Exploration;
- Energy and freshwater from the Ocean;
- Advanced Marine Station for Ocean Biology.



3.11 RANTHAMBORE TIGER RESERVE (RTR)

Why in News

Recently NCTA approves relocation of tigresses from Ranthambore

Important Points

- The National Tiger Conservation Authority (NTCA) has approved shifting three tigresses from Ranthambore Tiger Reserve (RTR) to two other state reserves.
- The news comes a day after the only tigress MT-4 in Mukundra Hills Tiger Reserve (MHTR) died of illness.
- Confirming the development, the technical committee of the NTCA has approved the state's request for shifting three tigresses.
- One tigress will be shifted to MHTR in Kota and two to Ramgarh Vishdhari Tiger Reserve in Bundi.
- The request was made to maintain the one plus two (one male, two female) rule.
- The tigresses are being identified and soon will be shifted after completing all the procedures.
- The MHTR is left with only one big cat (MT-5), as the nine-year-old pregnant tigress MT-4 died of illness.
- The tigress had fully formed cubs still unborn in her womb.
- It was the first case of prolapse of the rectum with a tiger in the country.
- The tigress was shifted to MHTR in 2019, and a tiger T-110 was shifted in 2022 from RTR.
- In 2018, the tiger relocation plan was altered due to pressure built by the previous government.
- The tigers from RTR were relocated to the Darrah range of MHTR instead of Seljar against the NTCAs approval. However, after five tigers, including three cubs, died and one male tiger MT-1 disappeared mysteriously, the state again sought permission from NTCA to pair the lone surviving tigress MT-4.
- Ramgarh Vishdhari Tiger Reserve, which the Centre approved in 2021, has one male and one female big cat, and two tigresses in phases will be shifted.
- The population of big cats at RTR is increasing, and they need more space/ territory or else they would either fight or migrate.

About National Tiger Conservation Authority (NTCA):

- It is a statutory body under the Ministry of Environment, Forest, and Climate Change (MoEFCC).
- It was established in 2006 under Wildlife (Protection) Act 1972.

Objectives:

- Providing statutory authority to Project Tiger so that compliance of its directives becomes legal.
- Fostering accountability of Center-State in management of Tiger Reserves by providing a basis for MoU with States within the federal structure.



- Providing for an oversight by Parliament.
- Addressing livelihood interests of local people in areas surrounding Tiger Reserves.

About Ranthambore Tiger Reserve (RTR):

- It is located in Rajasthan.
- It is located at the junction of the Aravali and Vindhya hill ranges.
- Its flagship species is Panthera Tigris Tigris- the Indian or the Bengal tiger.
- The Rivers Chambal in the South and the Banas River in the North bound the tiger reserve.
- Ranthambore Fort, World Heritage Site, is located within RTR.
- It alternates between a dry deciduous jungle and an open grassy meadow dotted by numerous lakes and rivers.
- Vegetation: Dry-deciduous forest.

3.12 GRID

Why in News

Recently Global Report on Internal Displacement 2023 (GRID-2023) published

Important Points

- It is released by the Norwegian Refugee Council’s Internal Displacement Monitoring Centre (IDMC).
- Internal displacement refers to people forced to move inside their own borders and the Internal Displacement Monitoring Centre's report didn’t take into account those who left for different countries.
- The number of internally displaced people (IDPs) around the world reached 71 million as of the end of 2022, according to the recently published Global Report on Internal Replacement 2023.
- IDMC is an International NGO established in 1998 by the Norwegian Refugee Council in Geneva. It is focused on monitoring and providing information and analysis on the world's internally displaced persons.
- Internal displacement refers to people forced to move inside their own borders and the report did not consider those who left for different countries.
- The 2023 edition sheds light on the significant increase in the number of people displaced by disasters in 2022 and the complex relationships between disasters, conflict and violence, food security and ID.

Highlights of the 2023 Report

- The number of internally displaced people (IDPs) around the world reached 71.1 million as of the end of 2022, an increase of 20 per cent from the previous year.
- Conflict and violence triggered 28.3 million internal displacements worldwide.
- The conflict in Ukraine triggered nearly 17 million displacements.



- 32.6 million people were displaced due to disasters, an increase of 40 per cent from 2021 largely the result of the effects of La Niña which continued or a third consecutive year.
- Of the total disaster displacement, 98 per cent were triggered by weather-related events like floods and storms.
- India recorded the fourth largest disaster displacement, with 2.5 million displacements.
- Pakistan had the highest number of disaster displacements in the world in 2022, at 8.16 million.
- Philippines was ranked second with 5.44 million displacements
- China ranked third with 3.63 million and Nigeria ranked 5th with 2.4 million.

3.13 WILD LIFE PROTECTION (WLP) ACT, 1972

Why in News

Notification of Rules framed under Section 49N and 49-O of the Wild Life (Protection) Act, 1972 (as amended in 2022)

Important Points

- The Wild Life (Protection) Act, 1972 (53 of 1972), provides the legal framework for the protection of various species of wild animals, management of their habitat and also for the regulation and control of trade in the products derived from various parts of wild animals.
- The Act was last amended in 2022.
- The Wild life (Protection) Amendment Act, 2022 has come into force since 1st April 2023.
- As per the Section 49 N of the Act, person engaged in breeding in captivity or artificially propagating any scheduled specimen listed in Appendix I of Schedule IV are required to make an application for a licence within a period of ninety days of the commencement of the Wild Life (Protection) Amendment Act, 2022.
- The Ministry of Environment, Forest and Climate Change has notified the Rules under Section 49 N vide Gazette Notification dated 24th April 2023.
- All persons engaged in breeding in captivity or artificially propagating any scheduled specimen listed in Appendix I of Schedule IV of the Act are requested to make an application for licence as per the Rules framed under Section 49 N of the Wild Life (Protection) Act, 1972 in the prescribed form on or before 29th June, 2023.

Wild Life (Protection) Act, 1972

- The Wild Life (Protection) Act, of 1972 provides a legal framework for the protection of various species of wild animals and plants, management of their habitats, regulation, and control of trade in wild animals, plants, and products made from them
- The act also lists schedules of plants and animals that are afforded varying degrees of protection and monitoring by the government.
- India's entry to the CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora) was made easier by the Wildlife Act.



- Earlier, Jammu and Kashmir was not covered by the Wildlife Protection Act of 1972. The Indian Wildlife Protection Act now applies to J&K as a result of the reorganisation act.

Constitutional framework on wildlife protection

- The Constitutional framework for the protection of wildlife, forest, and environment are present under Article 21 of the Constitution of India.
- The right to life includes the right of living in a clean and healthy environment.
- Article 48A of the Directive Principle of State Policy puts a non-binding obligation on the state to protect and conserve the environment and to safeguard forest and wildlife.
- Article 51A(g), too, puts a non-binding obligation on the citizens to protect the forest, wildlife, rivers, and animals of the country.
- These obligations have been fulfilled by both the central and the state governments by adding the term 'forest' under Entry 17A and protection of wildlife and birds to Entry 17B of the Concurrent List by 42nd Constitutional (Amendment) Act, 1976.

3.14 HOMO SAPIENS FOOTPRINT

Why in News

World's oldest Homo sapiens footprint identified on South Africa's Cape south coast.

Important Points

- Just over two decades ago, as the new millennium began, it seemed that tracks left by our ancient human ancestors dating back more than about 50,000 years were excessively rare.
- Only four sites had been reported in the whole of Africa at that time.
- Two were from East Africa: Laetoli in Tanzania and Koobi Fora in Kenya; two were from South Africa (Nahoon and Langebaan).
- In fact the Nahoon site, reported in 1966, was the first hominin tracksite ever to be described.
- In 2023 the situation is very different. It appears that people were not looking hard enough or were not looking in the right places.
- Today the African tally for dated hominin ichnosites (a term that includes both tracks and other traces) older than 50,000 years stands at 14.
- These can conveniently be divided into an East African cluster (five sites) and a South African cluster from the Cape coast (nine sites).
- There are a further ten sites elsewhere in the world including the UK and the Arabian Peninsula.
- Given that relatively few skeletal hominin remains have been found on the Cape coast, the traces left by our human ancestors as they moved about ancient landscapes are a useful way to complement and enhance our understanding of ancient hominins in Africa.



- The most recent sites dates back about 71,000 years. The oldest, which dates back 153,000 years, is one of the more remarkable finds recorded in this study: it is the oldest footprint thus far attributed to our species, Homo sapiens.
- The new dates corroborate the archaeological record.
- Along with other evidence from the area and time period, including the development of sophisticated stone tools, art, jewellery and harvesting of shellfish, it confirms that the Cape south coast was an area in which early anatomically modern humans survived, evolved and thrived, before spreading out of Africa to other continents.

Very different sites

- There are significant differences between the East African and South African tracksite clusters.
- The East African sites are much older: Laetoli, the oldest, is 3.66 million years old and the youngest is 0.7 million years old. The tracks were not made by Homo sapiens, but by earlier species such as australopithecines, Homo heidelbergensis and Homo erectus.
- For the most part, the surfaces on which the East African tracks occur have had to be laboriously and meticulously excavated and exposed.
- The South African sites on the Cape coast, by contrast, are substantially younger. All have been attributed to Homo sapiens.
- And the tracks tend to be fully exposed when they're discovered, in rocks known as aeolianites, which are the cemented versions of ancient dunes.
- Excavation is therefore not usually considered – and because of the sites' exposure to the elements and the relatively coarse nature of dune sand, they aren't usually as well preserved as the East African sites.
- They are also vulnerable to erosion, so we often have to work fast to record and analyse them before they are destroyed by the ocean and the wind.

An illuminating method

- A key challenge when studying the palaeo-record – trackways, fossils, or any other kind of ancient sediment – is determining how old the materials are.
- Without this it is difficult to evaluate the wider significance of a find, or to interpret the climatic changes that create the geological record.
- In the case of the Cape south coast aeolianites, the dating method of choice is often optically stimulated luminescence.
- This method of dating shows how long ago a grain of sand was exposed to sunlight; in other words, how long that section of sediment has been buried.
- Given how the tracks in this study were formed – impressions made on wet sand, followed by burial with new blowing sand – it is a good method as we can be reasonably confident that the dating “clock” started at about the same time the trackway was created.
- The Cape south coast is a great place to apply optically stimulated luminescence.
- Firstly, the sediments are rich in quartz grains, which produce lots of luminescence.



- Secondly, the abundant sunshine, wide beaches and ready wind transport of sand to form coastal dunes mean any pre-existing luminescence signals are fully removed prior to the burial event of interest, making for reliable age estimates.
- This method has underpinned much of the dating of previous finds in the area.
- The overall date range of our findings for the hominin ichnosites - about 153,000 to 71,000 years in age – is consistent with ages in previously reported studies from similar geological deposits in the region.
- The 153,000 year old track was found in the Garden Route National Park, west of the coastal town of Knysna on the Cape south coast.
- The two previously dated South African sites, Nahoon and Langebaan, have yielded ages of about 124,000 years and 117,000 years respectively.

3.15 ENHANCED ROCK WEATHERING

Why in News

‘Enhanced rock weathering’ can help combat climate change.

Important Points

- The natural rock weathering process, while effective in breaking down carbon and storing it within rocks over thousands of years, may not provide the immediate solution to combat climate change.
- With the urgency of the situation, waiting millions of years might not be feasible as our planet continues to accumulate greenhouse gases without significant mitigation efforts.

Enhanced Rock Weathering Solution

- One potential solution is “enhanced rock weathering” which aims to accelerate the natural process.
- This technique involves grinding a substantial quantity of rocks into fine powder to maximize their surface area, which is then spread over the ground.
- By increasing the rate of weathering, the enhanced process holds the potential to capture and store carbon more rapidly.
- Scientists affiliated with the United Nations have warned that simply reducing greenhouse gas emissions will not suffice to prevent perilous levels of global warming.
- They emphasised the need to actively remove carbon dioxide from the atmosphere.

How does ‘enhanced rock weathering’ help remove CO₂?

- Over millions of years, carbon dioxide in the atmosphere has been combining with rainwater, forming carbonic acid.
- This natural process occurs when the acid falls on mountains, forests, and grasslands.
- As a result, the carbon dioxide interacts with rocks and soil, undergoing mineralisation and secure storage in the form of carbonate.
- Enhanced rock weathering takes advantage of this phenomenon by utilizing finely crushed rock particles.



- This increases the contact area between rainwater and rock, consequently enhancing the weathering process and facilitating greater carbon removal.

UNDO

- UNDO, a pioneering company, aims to expedite the process of rock weathering by applying crushed basalt rock onto farmland.
- The company focuses on reducing the timescale required for the process, condensing it from millions of years to mere decades.
- Once the reaction between carbon dioxide and the weathered rock takes place, the resulting greenhouse gas is sequestered and securely stored for thousands of years.

How does the process help crop and soil?

- Enhanced weathering, achieved through the application of nutrient-rich rocks to soil, offers multiple benefits.
- It not only facilitates carbon dioxide storage but also improves crop yields by providing essential nutrients like phosphorus and potassium.
- Furthermore, it enhances soil fertility, nutrient availability, and reduces the dependence on fertilizers.
- The process also aids in ocean restoration by reducing ocean acidification through the release of bicarbonate ions. Additionally, weathering products increase soil water retention, assisting plants during drought conditions.

3.16 THRIVING: MAKING CITIES GREEN, RESILIENT, AND INCLUSIVE IN A CHANGING CLIMATE

Why in News

The World Bank report stressed the urgent need for cities to adopt integrated green urban planning strategies that address interconnected challenges, including investment in green space and sustainable infrastructure.

Important Points

- The role of cities in addressing the global climate challenge is crucial, according to a recent World Bank report. The paper provided a compass for local and national policymakers to make cities greener, more resilient and more inclusive.
- The report titled Thriving: Making Cities Green, Resilient, and Inclusive in a Changing Climate said the world's population increasingly lives in cities as a result of rapid urbanisation.
- With data from over 10,000 cities, the March 2023 paper looked into how green, resilient and inclusive cities are today. It also examines the two-way interplay between cities and climate change.
- The number of people living in cities increased from 1.19 billion to 4.46 billion between 1970 and 2021 and was responsible for approximately 70 per cent of global greenhouse gas emissions.



- On a per capita basis, cities in high and upper-middle-income countries have the highest fossil carbon dioxide (CO₂) emissions and those in low-income countries have lowest.
- North American cities are the largest per capita emitters, while cities in Sub-Saharan Africa remain the lowest per capita emitters on average.
- Medium and large cities in middle-income countries mainly have relatively high carbon emissions and pollution levels, together with less green space.
- Cities in lower-income countries account for only 14% of global urban CO₂ emissions, according to the report. However, they will face the most severe climate-related hazards — floods, heat stress, tropical cyclones, sea-level rise, water stress and wildfires.
- The ones in low- and middle-income countries are less green in terms of air pollution.
- Air pollution from key urban sectors presents a greater challenge for larger cities in countries at all income levels.
- Lack of inclusiveness contributes to cities' lack of resilience in low- and lower-middle-income countries.
- The report stressed the urgent need for cities to adopt integrated green urban planning strategies that address interconnected challenges, including investment in green space and sustainable infrastructure.
- As the urban population is expected to grow by 2.5 billion by 2050, urban water resources and infrastructure will face additional strain, making the protection and restoration of ecosystems, such as forests, vital for urban resilience and water security.
- In sub-Saharan Africa alone, the urban population is projected to grow by 950 million, reaching 1.26 billion by 2050.
- Choosing a different development path, involving more compact and connected urban development rather than the current fragmented, disconnected and dispersed patterns of urbanisation in low-income countries, is essential for both climate and poverty reduction.
- Lower-income cities are already experiencing heightened exposure to various climate hazards such as floods, heat stress, cyclones, sea-level rise, water stress and wildfires.
- Furthermore, when cities expand rapidly to receive climate and other refugees, new settlements are often informal and established on the outskirts of cities with limited access to services.
- The report offers guidance to policymakers on how to help their cities become greener, more resilient and more inclusive — in other words, on how to help their cities thrive in a changing climate.
- It provided a set of recommendations, including information dissemination, incentives, insurance coverage, integration and investments.
- These recommendations can help cities reduce their emissions, enhance their resilience to climate shocks and become more inclusive to keep the poorest populations from feeling the impacts of climate most acutely.



3.17 PEOPLE'S BIODIVERSITY REGISTER

Why in News

India aims to have People's Biodiversity Register in every village, verification campaign launched in Goa.

Important Points

- The National Campaign for Updation and Verification of People's Biodiversity Register (PBR) was launched in Goa marking a significant step towards the documentation and preservation of India's rich biological diversity.
- Goa government expressed his pride in Goa being chosen as the site for launching this national campaign.
- Government acknowledged the remarkable efforts of the people of Goa in preserving biodiversity and emphasized the role of local communities in achieving success in this sector.
- The successes of Goa in this sector are the successes of the enthusiasm of the people at the ground. Government can only support local communities in their endeavour to preserve biodiversity, and therefore, every success belongs to the community.
- An exhibition showcasing unique products from each Biodiversity Management Committee was inaugurated during the event.
- The occasion also witnessed the distribution of special awards for the Best Biodiversity Management Committee in North and South Goa, the Green Journalist Award, and individual contributions to preserving biodiversity.

About People's Biodiversity Register

- The People's Biodiversity Register serves as a comprehensive record of various aspects of biodiversity, including the conservation of habitats, preservation of land races, folk varieties and cultivars, domesticated stocks and breeds of animals, micro-organisms, and the accumulation of knowledge related to the area's biological diversity.
- As per the Biological Diversity Act 2002, Biodiversity Management Committees (BMC) are created for "promoting conservation, sustainable use and documentation of biological diversity" by local bodies across the country.
- BMCs have been constituted by the local bodies in the States and Union Territories and are entrusted with preparation of the People's Biodiversity Registers (PBRs), in consultation with local communities.
- So far, 2,67,608 PBRs have been prepared by Biodiversity Management Committees in different states.
- There is a plan to set up PBR in every village across the country under Mission LiFE (lifestyle for environment) which is conceived to conserve the planet earth through mindful utilisation of natural resources and various other actions at individual and community levels in the country.



Biodiversity Management Committees

- As per the Biological Diversity Act 2002, BMCs are created for “promoting conservation, sustainable use and documentation of biological diversity” by local bodies across the country.
- BMCs have been constituted by the local bodies in the States and Union Territories and are entrusted with preparation of the PBRs in consultation with local communities.

Mission LiFE (Lifestyle for Environment)

- Led by India, mission LiFE is a global plan of action that aims to save the planet from the disastrous consequences of climate change.
- **Vision:** This mission envisions replacing the prevalent ‘use-and-dispose’ economy with a circular economy.
- **Objective:** To promote an environmentally conscious lifestyle that focuses on ‘mindful and deliberate utilisation’ instead of ‘mindless and wasteful consumption’.

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4. ECONOMY

4.1 COMMON REPORTING STANDARD

Why in News

India wants to expand the scope of common reporting standard at the G20 to include non-financial assets such as real estate properties through automatic exchange of information (AEOI) among OECD countries.

Important Points

- Presently, the OECD's Automatic Exchange of Information (AEOI) framework provides for sharing of financial account details among signatory countries with an aim to check tax evasion.
- In August 2022, the OECD also approved the Crypto-Asset Reporting Framework (CARF) which provides for the reporting of tax information on transactions in crypto assets in a standardised manner, with a view to automatically exchanging such information.
- Under the AEOI framework, signatory countries follow a CRS and obtain information from their financial institutions and automatically exchange that information with other jurisdictions on an annual basis.
- India currently has AEOI with 108 jurisdictions for receiving financial information and with 79 jurisdictions for sending information automatically.

About Common Reporting Standard (CRS)

- It was developed in response to the G20 request and approved by the OECD Council on 15 July 2014.
- It calls on jurisdictions to obtain information from their financial institutions and automatically exchange that information with other jurisdictions on an annual basis.
- It sets out the financial account information to be exchanged, the financial institutions required to report, the different types of accounts and taxpayers covered, as well as common due diligence procedures to be followed by financial institutions.

4.2 BUSINESS READY PROJECT

Why in News

Recently World Bank Group Launches Business Ready Project.

Important Points

- The World Bank Group has begun work to assess the business and investment climate in up to 180 economies under its flagship Business Ready project—a key instrument of its new strategy to facilitate private investment, generate employment, and improve productivity to help countries accelerate development in inclusive and sustainable ways.



- Business Ready improves upon and replaces the World Bank Group's earlier Doing Business project.
- It reflects a more balanced and transparent approach toward evaluating a country's business and investment climate—one that has been shaped by recommendations from experts from within and outside the World Bank Group, including governments, the private sector, and civil society organizations.
- The first annual Business Ready report, covering 54 economies, will be published in the Spring of 2024.
- The World Bank Group published two key documents: the Business Ready Manual and Guide, specifying the detailed protocols and safeguards it has put in place to ensure the integrity of the assessments; and the Business Ready Methodology Handbook, detailing the project's indicators and scoring methodology.
- Data collection on the business environment of the initial 54 economies is being done through extensive consultations with regulatory experts and nationally representative World Bank Enterprise Surveys, collected by competitively selected survey companies.
- The World Bank Group has long been a leader in spurring business-regulatory reforms across the world.
- Its assessments of the business-enabling environment worldwide helped spur nearly 4,000 regulatory reforms in developing and developed economies over the past two decades.
- They also significantly advanced academic research in this area, resulting in 4,000 peer-reviewed research papers and at least 10,000 working papers.
- Countries, moreover, often use these assessments to shape their development strategies.

Topics Covered

- Business Ready focuses on 10 topics covering the lifecycle of a firm in the course of starting, operating, or closing or reorganizing its activities: Business Entry, Business Location, Utility Services, Labor, Financial Services, International Trade, Taxation, Dispute Resolution, Market Competition, and Business Insolvency.
- Over the next three years, the project will grow to cover about 180 economies worldwide annually, starting with 54 economies in 2023-24, 120 economies in 2024-25, and reaching 180 economies in 2025-26.
- The project's objective is reflected in its name—to make each country's economic environment ready for a dynamic private sector.
- The name highlights the fact that economies exist in different stages of readiness, and that governments play a key role in creating a business environment that is conducive for sustainable development.
- Transparency will be a key feature of Business Ready's safeguards for data integrity.
- All information collected by the project—raw granular data, scores, as well as the calculations used to obtain the scores—will be made publicly available on the project website.
- Moreover, all results presented in the reports will be replicable using straightforward toolkits available on the website.



4.3 CURRENCY AND FINANCE

Why in News

RBI releases report on 'Currency and Finance' for the year 2022-23

Important Points

- RBI has released a report on Currency and Finance (RCF) for the year 2022-23. The report's theme is "Towards a Greener Cleaner India".
- The highlights of the report include India's estimated green financing requirement of at least 2.5% of GDP annually till 2030.
- Further, India is ranked the best among G-20 countries as per the Climate Change Performance Index, 2023.
- Also, the report examines major dimensions of climate change to assess future challenges to sustainable high growth in India.
- India's net-zero target year is 2070.
- The report addresses four key aspects of climate change, encompassing its exceptional size and rapidity, macroeconomic impacts, financial stability implications, and strategies to reduce climate risks.
- The report covers four major dimensions of climate change to assess future challenges to sustainable high growth in India viz.,
 - Unprecedented scale and pace of climate change;
 - Macroeconomic effects
 - Implications for financial stability
 - Policy options to mitigate climate risks.
- For India to further achieve its net zero target by 2070, the RBI said, the country would require an accelerated reduction in the energy intensity of GDP by around 5 percent annually and a significant improvement in its energy mix in favour of renewables to around 80 percent by 2070-71.

4.4 INDIA HAS IMPOSED MANDATORY CERTIFICATION ON PRODUCTS

Why in News

India has issued 115 QCOs so far, and orders on as many as 675 products across 14 ministries are under consideration.

Important Points

- Imports of Chinese goods could dwindle, posing problems for Indian industry, amid a surge in quality control orders (QCO) by the Indian government and compounded by uncertainty over when Chinese officials will open their manufacturing facilities for inspection following the recent covid-19 wave.
- Inspections by the Bureau of Indian Standards (BIS) have become crucial, with India imposing mandatory certification on many products for which QCOs have been issued.
- The announcements of hundreds of QCOs now require customs officials to block products not compliant with Indian standards.



- QCOs are being applied to products ranging from air-conditioners and refrigerators to footwear, wheel rims, chemicals, and protective clothing for industrial workers.
- The import delays may prove significant as China is India's primary source for a wide range of products, including pharmaceutical ingredients, chemicals, machinery, auto parts, and medical supplies.
- The total imports from China increased to \$98.51 billion during the financial year ended March against \$94.57 billion in the previous fiscal, as per official numbers released by the commerce and industry ministry.
- India is not blocking imports from China. The issue is that because of travel restrictions in China, inspections are not taking place.
- Chinese officials are yet to indicate the reopening of facilities for inspections.
- India have resumed inspection of all the countries whose embassies have written to us indicating their facilities are open for inspection.
- BIS can't give certifications without inspection.

4.5 INDIA AMENDS ANTI-MONEY LAUNDERING LAW

Why in News

Chartered accountants, company secretaries now under ambit of money laundering law

Important Points

- Notifying changes to the Prevention of Money Laundering Act, the Finance Ministry has brought in practicing chartered accountants, company secretaries, and cost and works accountants carrying out financial transactions on behalf of their clients into the ambit of the money laundering law.
- Lawyers and legal professionals, however, seem to have been kept out in the new definition of entities covered under the PMLA.
- An activity will be recognised under the PMLA if these professionals carry out financial transactions on behalf of their client such as buying and selling of any immovable property; managing of client money, securities or other assets; management of bank, savings or securities accounts; organisation of contributions for the creation, operation or management of companies; creation, operation or management of companies, limited liability partnerships or trusts, and buying and selling of business entities.
- The amendments are expected to aid investigative agencies further in their probe against dubious transactions involving shell companies and money laundering, experts said.

PML (Maintenance of Records) Amendment Rules, 2023

- Earlier in March, 2023, the Prevention of Money Laundering (Maintenance of Records) Amendment Rules, 2023 were introduced by the Department of Revenue under the Ministry of Finance.
- These rules widened the ambit of reporting entities under money laundering provisions to incorporate more disclosures for non-governmental organisations and defined politically exposed persons (PEPs) under the PMLA in line with the recommendations of the FATF.



- The new rules require reporting entities like financial institutions, banking companies, or intermediaries to disclose beneficial owners in addition to the current KYC requirements through documents like registration certificates and PAN (Permanent Account Number).

Background

- The recent changes to the PMLA, 2002 were made in response to the Chinese apps scam, where some accounting professionals assisted in setting up shell companies for these apps.
- These professionals used their office address to register these shell companies and even became directors, with some having access to their bank accounts.
- Some of these Chinese apps offered instant loans, which many individuals found tempting. Unfortunately, personal data of the loan recipients was compromised and shared with other apps, including gaming apps.
- To prevent such scams, accountants are now required to perform due diligence on their clients' ownership, financial status, and source of funds, as well as document the transaction's purpose.
- The Indian government has taken legal action against some of the professionals involved and referred them to the Institute of Chartered Accountants of India for disciplinary action.

Which financial activities carried out by accounting professionals in India are covered by the PMLA?

- Buying and selling any immovable property.
- Managing client money, securities, or other assets.
- Management of bank, savings, or securities accounts.
- Organization of contributions for the creation, operation, or management of companies.
- Creation, operation, or management of companies, limited liability partnerships or trusts, and buying and selling of business entities.

4.6 PUBLIC STOCKHOLDING

Why in News

India Seeks Permanent Solution To Food Stockholding At Trade Body Meet

Important Points

What is Public stockholding?

- Public stockholding (PSH) is a type of policy instrument that the government uses to meet the food security of a country. Public stockholding programs are carried out by some countries to meet the needs of the people who spend their lives below the poverty line and are constantly facing food shortages.

India at WTO



- India has called for finding a permanent solution to the issue of public stockholding for food security in the ministerial-level meeting of the World Trade Organisation (WTO) in February 2024.
- It has dismissed arguments for alternative food security solutions beyond PSH (public stock holding) and SSM (special safeguard mechanism) and believes that market access and export restriction are not worth the effort.
- India has also pitched for the need to recalculate the external reference prices to reflect the impact of inflation and other economic factors on food stock prices.
- The issue was discussed during a special session of the WTO's Committee on Agriculture.
- India declared that it has no intention of revising the existing proposal for public stockholding for food security purposes and suggested that it is the only way forward.
- India called for a permanent solution for PSH at MC13 (13th ministerial conference).
- The 13th World Trade Organization (WTO) Ministerial Conference (MC13) will take place in the week of February 26, 2024 in Abu Dhabi, United Arab Emirates.
- MC is the highest decision making body of the 164-member multi-lateral body
- In the meeting, China, India, Sri Lanka, South Africa, and Egypt joined the call for initiating text-based negotiations on PSH.
- They highlighted the importance of PSH being applied to all developing countries, particularly least developed countries (LDCs) and net-food importing developing countries (NFIDCs), to help address the severe food security problem.
- India criticized non-proponents for their stubbornness and unwillingness to move from old positions when negotiations begin to discuss details.
- As part of a permanent solution, India has asked for things like amendments in the formula to calculate the food subsidy cap and inclusion of programmes implemented after 2013 under the ambit of 'Peace Clause'.
- As an interim measure, the WTO members at the Bali ministerial meeting in December 2013 had agreed to put in place a mechanism popularly called Peace Clause and committed to negotiating an agreement for a permanent solution.

Peace Clause

- Under the Peace Clause, WTO members agreed to refrain from challenging any breach in the prescribed ceiling by a developing nation at the dispute settlement forum of the WTO.
- This clause will stay till a permanent solution is found to the food stockpiling issue.
- Under global trade norms, a WTO member country's food subsidy bill should not breach the limit of 10% of the value of production based on the reference price of 1986-88.
- Subsidies over and above the prescribed ceiling are seen as trade distorting. The limit is fixed at 10 per cent of the value of food production for developing countries like India.
- India has earlier informed the World Trade Organisation that it has used the peace clause to provide excess support measures to rice farmers for marketing year 2020-21, in order to meet the domestic food security needs of its poor population.



- India also asked for SSM, which aims at protecting poor and marginal farmers from any surge in imports or a steep decline in prices.
- The Geneva-based 164 member multi-lateral body deals with global exports and import-related norms. Besides, it adjudicates trade disputes between the member countries.
- The WTO's agriculture negotiations encompass various topics, including domestic support, market access, export competition, export restrictions, cotton, public stockholding for food security purposes, special safeguard mechanism, and the cross-cutting issue of transparency.
- At the 12th ministerial conference in Geneva, despite making progress on the food security front, members were unable to arrive at an agreement on the agriculture reform work plan.

4.7 TRANSITION BONDS

Why in News

Recently, SEBI mandated additional requirements for issuance and listing of transition bonds to facilitate transparency and informed decision-making.

Important Points

- To facilitate transparency and informed decision-making among the investors, markets regulator SEBI on Friday mandated additional requirements for the issuance and listing of transition bonds.
- The move is also aimed at ensuring that the funds raised through transition bonds are not being misallocated, the Securities and Exchange Board of India (SEBI) said in a circular.

What is Transition bond?

- Transition bond is one of the sub-categories of 'green debt security'.
- These bonds are generally used for raising funds for transitioning to a more sustainable form of operations in line with India's intended nationally determined contributions.
- In its circular, SEBI said that an issuer wishing to issue transition bonds will have to make additional disclosures in the offer document for public issues or private placements of such transition bonds.

Differentiate transition bonds from other categories of green debt security

- To differentiate transition bonds from other categories of green debt security, the issuer of transition bonds will have to use a denotation 'GB-T'.
- Such denotation would be disclosed in the offer documents on the cover page and in the type of instrument field in the term sheet.
- The transition plan should contain the details of interim targets, along with an indicative timeline for achieving the targets. The interim targets should also reflect the indicative figure regarding how much emissions the issuer is envisaging to reduce.
- Among others, the transition plan should have information about the brief of the project implementation strategy and details regarding the usage of technology for the project



implementation and mechanism to oversee the utilisation of the funds raised through transition bonds and the implementation of the transition plan.

- Issuers can also form a committee to oversee the implementation and ensure the timely completion of the defined targets. With regards to disclosure in the centralised database for corporate bonds, Sebi said that an issuer will have to disclose the denotation in the centralised database for corporate bonds by filling in the denotation --GB-T.
- The depositories will update this denotation as a prefix in the “instrument details” field in the centralised database for corporate bonds.

4.8 PETROLEUM MINISTRY RECEIVED ENERGY TRANSITION ADVISORY COMMITTEE REPORT

Why in News

Recently the Energy Transition Advisory Committee (ETAC) has submitted a report on “The Green Shift: The Low Carbon Transition of India’s Oil and Gas Sector”.

Important Points

- The Energy Transition Advisory Committee (ETAC) was constituted under the Ministry of Petroleum and Natural Gas (MoP&NG). The objective of this committee is to prepare the way for energy transition for public sector oil and gas undertakings in the country.

Need for Energy Transition

- India is the third largest CO₂ emitter globally. Also, these emissions are projected to increase 5-fold to about 13.6 gigatons per year. At the same time, the transition to clean energy will reduce emissions.
- The production and supply of energy (particularly oil and gas) is monopolized by a few countries and India is dependent on imports to meet most of its energy requirements.
- In the year 2019, India was ranked 7th among the countries most affected by climate change in the world.

Recommendations

- The share of grid-distributed electricity in energy consumption should be increased from the present 18 per cent to 40 per cent by the year 2035.
- Research on new feedstock should be encouraged to ensure a continuous supply of biofuels.
- Diesel-powered four-wheelers should be banned in all cities with a population of more than one million by the year 2027.
- There is a need to research the alternatives for blending in LPG.
- In the next 15 years, the share of railways in freight traffic at the national level should be increased from the present 23 percent to 50 percent.
- From the year 2024, only city delivery vehicles should be registered for electric vehicles.



4.9 INDIA'S FARM EXPORTS

Why in News

Both agricultural exports from and imports into India have scaled new highs in the fiscal year that ended March 31, 2023.

Important Points

- Government data show the value of farm exports in April-December (9 months) 2022, at USD 39 billion.
- This is 7.9% higher than the USD 36.2 billion for the corresponding period of the previous year.
- At this rate, the record USD 50.2 billion exports achieved in 2021-22 look set to be surpassed.
- Key Factors behind the increase in Exports –
- The two big contributors to India's agri-export growth have been rice and sugar.
- India in 2021-22 shipped out an all-time-high 21.21 million tonnes (mt) of rice valued at USD 9.66 billion.
- Sugar exports hit a record value of USD 4.60 billion in 2021-22, as against USD 2.79 billion, USD 1.97 billion, USD 1.36 billion, and USD 810.90 million in the preceding four fiscals.
- This fiscal has seen a further surge of 43.6%, from USD 2.78 billion in April-December 2021 to USD 3.99 billion in April-December 2022.
- The exports of rice and sugar are well on course to touch, if not top, \$11 billion and \$6 billion respectively in 2022-23.

About Farm Imports:

- Similar to exports, the imports are also growing.
- The imports of agri produce stood at USD 27.8 bn in Apr-Dec 2022.
- This is a growth of 15.4% over the USD 24.1 bn for Apr-Dec 2021.
- As a result, there has been a further shrinking of the surplus on the farm trade account

The growth in imports has come mainly from three commodities

- The first is vegetable oils, whose imports shot up from USD 11.09 bn in 2020-21 to USD 18.99 bn in 2021-22. Imports meet roughly 60% of India's vegetable oil requirements.
- The other three commodities are cotton, cashew and spices.

Key Factors behind the increase in Imports

- India's cotton production has declined from 398 lakh bales in 2013-14 to a 12-year low of 307.05 lakh bales in 2021-22.
- The effects of not allowing new genetic modification (GM) technologies after the first-generation Bt cotton are showing, and impacting exports as well.
- A proactive approach is required in edible oils as well, where planting of GM hybrid mustard has been permitted with great reluctance.



Government Initiatives

- Promotion of exports of agricultural products is a continuous process.
- To promote agricultural exports, the Government has taken several steps at State/District levels.
- Agriculture Export Policy 2018 : In order to boost farm exports, the Government introduced a comprehensive Agriculture Export Policy in 2018, with the following objectives
 - o To diversify our export basket, destinations and boost high-value and value-added agricultural exports including focus on perishables.
 - o To promote novel, indigenous, organic, ethnic, traditional and non-traditional agri products exports.
 - o To provide an institutional mechanism for pursuing market access, tackling barriers and deal with sanitary and phytosanitary issues.
 - o To strive to double India's share in world agri exports by integrating with global value chain at the earliest.
 - o To enable farmers to get benefit of export opportunities in overseas market.
- The Agricultural & Processed Food Products Export Development Authority (APEDA) is constantly engaged in export promotion activities for agricultural & processed food products and has played an important role. APEDA implements the 'Agriculture & Processed Food Products Export Promotion Scheme'.
- Various developmental activities are undertaken and assistance to exporters is provided under different components of the scheme viz. Infrastructure Development, Market Development and Quality Development.

4.10 FINANCE MINISTER CHAIRS THE 27TH MEETING OF FSDC.

Why in News

Union Finance Minister chairs the 27th Meeting of Financial Stability and Development Council (FSDC)

Important Points

- Union Finance Minister chaired the 27th meeting of the Financial Stability and Development Council (FSDC) in New Delhi. This was the first meeting held after the announcement of the Budget 2023-24.
- The council discussed the policy and legislative reform measures needed to develop the financial sector further and increase financial access for the people.
- During the meeting of the Council, it was discussed that the policy and legislative reform measures required to further develop the financial sector may be formulated and implemented expeditiously to not only increase the financial access of the people, but also increase their overall economic well-being.

Union Finance Minister advised that:

Regulators advised to ensure financial sector stability:

- During the meeting, the Union Finance Minister emphasized that ensuring financial sector stability is a shared responsibility of regulators. She advised the regulators to



maintain a constant vigil and take timely action to mitigate any vulnerability and strengthen financial stability. The regulators were also advised to reduce the compliance burden further and ensure a streamlined and efficient regulatory environment. The Union Finance Minister will review the progress achieved in this regard with each regulator in June 2023.

Regulators urged to ensure cyber-security preparedness:

- Finance Minister also urged the regulators to ensure the cyber-security preparedness of the information technology systems to reduce the risk of cyber-attacks, protect sensitive financial data, and maintain overall system integrity. This will safeguard the stability and resilience of the Indian financial ecosystem.

Special drive to facilitate settlement of unclaimed deposits and claims:

- The regulators were also asked to conduct a special drive to facilitate the settlement of unclaimed deposits and claims in the financial sector across all segments, such as banking deposits, shares and dividends, mutual funds, insurance, etc.

Implementation of Budget announcements discussed:

- The Council discussed the action taken report on the budget announcements made since 2019. The regulators were advised to adopt a focused approach to implement the announcements made in the Budget 2023-24, and timelines were decided for the same.

Deliberations on various financial topics:

- Apart from the above, the Council also deliberated on various topics, such as Early Warning Indicators for the economy and our preparedness to deal with them, Reducing Compliance Burden on the regulated entities in the financial sector by Improving Regulatory Quality, Debt Levels of Corporates and Households in India, Simplification and Streamlining of KYC Framework to meet the needs of Digital India, Seamless Experience for Retail Investors in Government Securities, Bimakrit Bharat – Unique Value Proposition to take insurance to last mile, and support required in terms of resolving inter-regulatory issues for GIFT IFSC to play a strategic role in Atmanirbhar Bharat.

FSDC Sub-Committee activities and past decisions

- The Council also took note of the activities undertaken by the FSDC Sub-Committee chaired by the RBI Governor and the action taken by members on the past decisions of the FSDC.
- The Financial Stability and Development Council (FSDC) is an apex-level body in India that was set up in 2010 to strengthen and institutionalize the mechanism for maintaining financial stability, enhancing financial sector development, and inter-regulatory coordination.



About the FSDC:

- **Composition:** The FSDC is chaired by the Union Finance Minister and comprises of heads of financial sector regulators, namely the Reserve Bank of India (RBI), Securities and Exchange Board of India (SEBI), Insurance Regulatory and Development Authority of India (IRDAI), Pension Fund Regulatory and Development Authority (PFRDA), and the Ministry of Finance.
- **Objectives:** The primary objective of the FSDC is to strengthen and institutionalize the mechanism for maintaining financial stability, enhancing financial sector development, and inter-regulatory coordination.

Functions: The FSDC has been given the following functions:

- To monitor macro-prudential supervision of the economy, including the functioning of large financial conglomerates.
- To assess the functioning of the financial sector and identify potential risks to financial stability.
- To recommend regulatory reforms to strengthen the financial sector and enhance its efficiency.
- To coordinate the functioning of regulators and resolve inter-regulatory issues, if any.
- To address systemic risks in the financial sector.
- **Meetings:** The FSDC meets periodically to discuss various issues related to financial stability and development. The meetings are attended by the heads of financial sector regulators and other officials from the Ministry of Finance.
- **Sub-committees:** The FSDC has set up sub-committees to focus on specific issues. Currently, there are three sub-committees, namely the sub-committee on financial markets, the sub-committee on financial institutions, and the sub-committee on financial inclusion and literacy.
- **Achievements:** The FSDC has played a crucial role in maintaining financial stability during times of crisis. For example, during the global financial crisis of 2008, the FSDC coordinated the efforts of the regulators and ensured that the Indian financial system remained stable.

4.11 EXCHANGE TRADED COMMODITY DERIVATIVES (ETCDS)

Why in News

Direct market access to FPIs in commodity trade gets Sebi nod.

Important Points

- The Securities and Exchange Board of India allowed the stock exchanges to extend the direct market access (DMA) facility to FPIs for participation in exchange traded commodity derivatives (ETCDS), subject to conditions.
- The regulator made the decision after receiving inputs from its commodity derivatives advisory committee.
- The new provision would come into force with immediate effect



- The regulator had already allowed institutional investors such as Category III alternative investment funds (AIFs), portfolio management services and mutual funds to participate in the ETCDs market.
- DMA facilitates clients of a broker to directly access the exchange trading system through the broker's infrastructure to place or execute orders without manual intervention by the broker.
- DMA enables clients to have advantages such as direct control over orders, faster execution of orders, reduced risk of errors associated with manual order entry, maintaining confidentiality, lower impact costs for large orders and implementing better hedging and arbitrage strategies.
- his permission is subject to certain conditions that require brokers to follow procedure for application for DMA, operational specifications, client authorisation, broker-client agreement and risk management, among others.
- FPIs wanting to participate in ETCDs will be subject to risk management measures as applicable.
- It has raised concerns among some market participants, who fear that the increased participation of FPIs could lead to increased volatility and speculation in the market.
- Concerns: There are concerns about the ability of regulators to monitor the activities of FPIs in the commodity derivatives market, given the complexity of the market and the large number of participants.
- FPIs who are individuals, family offices and corporates are allowed a position limit of 20% of the client-level position limit in a particular commodity derivative contract.
- The stock exchanges and clearing corporations may specify additional safeguards and conditions, as deemed fit, to manage risk and ensure orderly trading in ETCDs.

Timeline

- In August, Sebi allowed FPIs to participate in cash-settled non-agricultural commodity derivative contracts and indices comprising such non-agricultural commodities. The move was aimed at increasing depth and liquidity in commodity derivative markets.
- In October 2018, Sebi had permitted eligible foreign entities (EFEs) having actual exposure to the Indian commodity markets to participate in the commodity derivative segment of recognised stock exchanges for primarily hedging their exposure.
- Sebi said it had decided to discontinue this route considering non-participation by such EFEs in ETCDs in the past three years.

4.12 RESERVE BANK OF INDIA

Why in News

Reserve Bank of India in collaboration with the GFIN invites firms to participate in Greenwashing TechSprint

Important Points

- The Reserve Bank of India will be among 13 international regulators taking part in the Global Financial Innovation Network (GFIN)'s first ever Greenwashing TechSprint.



- GFIN is a group of over 80 international organisations committed to supporting financial innovation in the interest of consumers and it is currently chaired by the Financial Conduct Authority.
- RBI as a participating member is inviting firms from India to participate in this Greenwashing TechSprint.
- The number of investment products marketed as ‘green’ or making wider sustainability claims is growing. Exaggerated, misleading or unsubstantiated claims about Environmental, Social and Governance (ESG) credentials damage confidence in these products and the RBI wants to ensure that consumers and firms can trust that products have the sustainability characteristics they claim to have.
- RBI will therefore be participating in a virtual TechSprint, hosted on the FCA’s Digital Sandbox, to bring together international regulators, firms, and innovators to address sustainable finance as a collective priority. The TechSprint will be to develop a tool or solution that can help regulators and the market effectively tackle the risks of greenwashing in financial services.
- RBI is inviting all India based firms who are interested in participating in the TechSprint to apply. The application window is open and will close on 21st May 2023.
- Firms will get the opportunity to work with regulatory experts, a variety of stakeholders and professionals from across the globe.
- Additionally, to support the application process, the GFIN will be providing an information pack for firms interested in participating on the Tech Sprint.
- Firms that are successful in their applications will proceed through to on-boarding which will take place on 1st and 2nd June.
- This will provide firms with training on the Digital Sandbox and an in-depth overview of the Tech Sprint process.
- The Tech Sprint will launch on 5th June and will run for 3 months, ending with a showcase day in September 2023.
- Firms interested in applying to the GFIN Greenwashing TechSprint can review the list of participating regulators via the GFIN website.

About GFIN

- The GFIN is the international network of financial regulators and related organisations committed to supporting financial innovation in the best interests of consumers.
- The Global Financial Innovation Network (GFIN) was formally launched in January 2019 by an international group of financial regulators and related organisations.
- The GFIN is a network of over 70 organisations committed to supporting financial innovation in the interests of consumers. It seeks to provide a more efficient way for innovative firms to interact with regulators, helping them navigate between countries as they look to scale new ideas.
- This includes the ability to apply to join a pilot for firms wishing to test innovative products, services or business models across more than one jurisdiction.



- The GFIN also aims to create a new framework for co-operation between financial services regulators on innovation related topics, sharing different experiences and approaches.

4.13 GREEN ENERGY OPEN ACCESS

Why in News

Ministry of power asked industry leaders to take advantage of green Energy open access rules (goar) 2022

Important Points

- Government had notified Electricity (Promoting Renewable Energy Through Green Energy Open Access) Rules, 2022 for promoting generation, purchase and consumption of green energy.
- Open Access (OA) means non-discriminatory access to electricity transmission and distribution system provided to eligible consumers, generators and state distribution companies (DISCOMs).

Salient Features of Green Energy Open Access Rules

The salient features and benefits to common consumers from 'Green Energy Open Access' are as follows:

- a. These rules are notified for promoting generation, purchase and consumption of green energy including the energy from Waste-to-Energy plants.
- b. The Green Open Access is allowed to any consumer and the limit of Open Access Transaction has been reduced from 1 MW to 100 kW for green energy, to enable small consumers also to purchase renewable power through open access.
- c. Consumers are entitled to demand supply of Green Power from Discoms. Discoms would be obligated to procure and supply green power to eligible consumers.
- d. These Rules have streamlined the overall approval process for granting open access. Time bound processing by bringing uniformity and transparency in the application as well as approval of open access through a national portal has been mandated. Approval for Green Open Access is to be granted in 15 days or else it will be deemed to have been granted.
- e. Commercial and Industrial consumers are allowed to purchase green power on voluntarily basis.
- f. Provide certainty on open access charges to be levied on Green Energy Open Access Consumers which includes transmission charges, wheeling charges, cross subsidy surcharge, standby charges wherever applicable, banking charge and other fees and charges such as Load Despatch Centre fees and scheduling charges, deviation settlement charges as per the relevant regulations of the Commission.
- g. Cap on increasing of cross-subsidy surcharge as well as the removal of additional surcharge, incentivize the consumers to go green.
- h. There shall be a uniform Renewable Purchase Obligation (RPO), on all obligated entities in area of a distribution licensees. Green Hydrogen/Green Ammonia has also been included for fulfillment of its RPO.



- i. Consumers will be given Green Certificates if they consume green power and will also be facilitated.
 - As per the Electricity Act 2003, the tariff is determined by the Appropriate Commission.
 - Accordingly, the tariff for the green energy shall be determined by Appropriate Commission and shall comprise of the average pooled power purchase cost of the renewable energy, cross-subsidy charges, if any, and service charges covering the prudent cost of the distribution licensee for providing green energy to the consumers.

4.14 RBI WITHDRAWN RS 2,000 NOTES

Why in News

Recently Reserve Bank of India (RBI) has decided to withdraw the Rs 2000 denomination banknotes from circulation.

Important Points

- The central bank has advised the public to deposit Rs 2000 banknotes, which were introduced after Rs 500 and Rs 1000 notes were withdrawn during the demonetisation exercise six years ago, into their bank accounts and /or exchange them into banknotes of other denominations at any bank branch.

Why has the RBI withdrawn Rs 2000 notes?

- The Rs 2000 note was introduced in November 2016 under Section 24(1) of The RBI Act, 1934, primarily with the objective of meeting the currency requirement of the economy expeditiously after legal tender status of Rs 500 and Rs 1000 notes was withdrawn.
- With the fulfilment of that objective, and once notes of other denominations were available in adequate quantities, the printing of Rs 2000 notes was stopped in 2018-19.
- The RBI issued the majority of the Rs 2000 denomination notes prior to March 2017; these notes are now at the end of their estimated lifespan of 4-5 years.
- This denomination is no longer commonly used for transactions; besides, there is adequate stock of banknotes in other denominations to meet currency requirements.
- In pursuance of the 'Clean Note Policy' of the Reserve Bank of India, it has been decided to withdraw the Rs 2000 denomination banknotes from circulation.

And what is the Clean Note Policy?

- The Clean Note Policy seeks to give the public good-quality currency notes and coins with better security features, while soiled notes are withdrawn out of circulation.
- The RBI had earlier decided to withdraw from circulation all banknotes issued prior to 2005 as they have fewer security features as compared to banknotes printed after 2005.
- However, the notes issued before 2005 continue to be legal tender.
- They have only been withdrawn from circulation in conformity with standard international practice of not having notes of multiple series in circulation at the same time.

So will the Rs 2000 banknotes continue to be legal tender?

- The Rs 2000 banknote will continue to maintain its legal tender status.



- Members of the public can continue to use Rs 2000 banknotes for their transactions and also receive them in payment. However, RBI are encouraged to deposit and/ or exchange these banknotes on or before September 30, 2023.

What will happen after September 30?

- The RBI has not clarified the status of these notes after September 30.
- However, it has said that its instructions on Rs 2000 notes will be effective until that date.

What should you do with the Rs 2000 notes you have?

- The RBI has advised people to “approach bank branches for deposit and/ or exchange” of these banknotes.
- The facility for deposit into accounts and exchange for Rs 2000 banknotes will be available at all banks until September 30, 2023.
- The facility for exchange will also be available until September 30 at 19 RBI Regional Offices that have Issue Departments.

Is there a limit on how much money you can exchange or deposit?

- One can exchange Rs 2000 banknotes up to a limit of Rs 20,000 at a time.
- One don't have to go your own bank — a non-account holder of bank also can exchange Rs 2000 banknotes up to a limit of Rs 20,000 at a time at any bank branch.
- The exchange of Rs 2000 banknotes can also be made through business correspondents up to a limit of Rs 4000 per day for an account holder.
- Deposits into bank accounts can be made without restrictions subject to compliance with extant Know Your Customer (KYC) norms and other applicable statutory / regulatory requirements.

When can you start exchanging the Rs 2000 notes?

- To give time to banks to prepare, RBI has asked people to approach branches or ROs of RBI from May 23 to exchange their notes.

What happens if someone has a very large number of Rs 2000 notes?

- Technically, a person can seek multiple exchanges in packets of Rs 20,000 at a time.
- However, this is expected to attract the attention of enforcement agencies and the Income-tax Department.
- Those holding large sums of money in Rs 2000 notes are likely to find it difficult to exchange their money.

What is the value of Rs 2000 notes in circulation currently?

- About 89% of the Rs 2000 denomination banknotes were issued prior to March 2017, and are at the end of their estimated 4-5-year lifespan.
- The total value of these banknotes in circulation has declined from Rs 6.73 lakh crore at its peak as on March 31, 2018 (37.3% of notes in circulation) to Rs 3.62 lakh crore, constituting only 10.8% of notes in circulation on March 31, 2023.



5. SCIENCE AND TECHNOLOGY

5.1 NITI AAYOG'S

Why in News

NITI Aayog's Compendium on Best Practices in Social Sector 2023

Important Points

- “Best practices in social sector: A compendium, 2023” has been prepared under the guidance and support of National Institution for Transforming India (NITI Aayog), Government of India and United Nations Development Programme (UNDP).
- The preparation of the compendium entailed extensive data collection from across 28 States and 8 Union Territories in India.
- The social sector plays a key role in the overall progress of a society. It encompasses several important components of society – healthcare, Education, drinking water & sanitation, environment, food security, women & child development, livelihoods, social security, skill development, etc.
- The role of the social sector becomes all the more critical in a progressing country like India to provide equitable opportunities for the marginalised sections of the society to be part of the growth story.

Direct benefits, enhancing income among the main drivers for initiatives in Agriculture

- About 2/3rd of the population of India is dependent on agriculture and this sector contributes to around 19% of the GDP.
- It is not only a key component of the social fabric of the country but also to the economy through backward and forward linkages.
- While dependency on agriculture for livelihood is significantly high, it is riddled with several issues that contribute to financial distress.
- Outdated technology, the presence of middlemen, lack of infrastructure, etc. are among the challenges plaguing the sector.
- The initiatives highlighted in the compendium look at addressing a few of these issues.

There are 7 case studies mentioned in the compendium for this sector. Here is a snapshot of a few of them.

- Developing value chain for Large Cardamom production in Nagaland: Commercial crops generate a higher revenue than conventional crops.
- However, the lack of a crop-specific value chain limits farmers to explore this option.
- Phek Organic Large Cardamom Producer Company, a farmer's producer company (FPC) with the support of the Department of Horticulture, encouraged the production and developed the value chain for Organic Large Cardamom in the State.



- Through partnerships between farmers & organic businesses, the revenue generated during 2018-2021 was around Rs. 6.7 crores, with a progressive year-on-year increase.
- The value chain also created scope for by-products of cardamom fibre.
- Crop Cluster development programme in Haryana: This programme initiated by the Horticulture Department of Haryana, aims to provide an on-farm facility to farmers for proper aggregation of the produce, grading/ sorting, transportation, and processing of surplus produce during the glut period.
- A study of two such clusters reveals an increase in the direct income of the farmers through improved market access. Major challenges remain with the professional expertise required for effective market linkages, for which the government has stepped in with its support.
- A similar initiative is also launched in Odisha, with a focus on the production of millets and creating a value chain for the produce.
- Rice-Fish Farming in Assam: Fisheries department of Assam implemented a pilot of rice-fish farming in 431 hectares of water bodies in 11 districts.
- This system facilitates a mutualistic symbiosis, where-in fish excreta provides nutrients for the paddy and fish control the pests by feeding on insects eggs & larvae, plankton, etc.
- This has created an off-season for the farmers and helped in increasing their income without an increase in expenses.
- Another initiative is Dr. YSR Rythu Bharosa Kendralu by the government of Andhra Pradesh which provides a one-stop solution for farmers.
- It works in four verticals – supply of pre-tested quality inputs, capacity building & knowledge dissemination, farmer advisories & call centre, and procurement operations.

Initiatives in Education & Skill Development through Technology and Outreach

- The quality of human resources is critical to the progress of any society.
- This is achieved through education and skill development.
- The emphasis is evident in the compendium with 11 of the 75 best practices belonging to the education sector and another 5 categorised under skill development.
- Efforts for a larger outreach for inclusion of marginalised sections under the fold of formal education and skill development is one of the important aspects addressed in a few of these initiatives.
- Scholarship schemes for children of the Tea community in Assam: Children in tribal regions are among the marginalised sections of the society that are deprived of fundamental rights like education, which in turn hampers their future prospects. One such community is tribal community in Assam which engage in the cultivation of tea.
- The Directorate of Tea Tribes' Welfare of Assam launched a set of scholarship schemes to provide scholarships to students from class 9, to facilitate opportunities for encouraging children from the tea community to continue their higher studies, such as MBBS, B.Tech, Ph.D., and other job-oriented courses.
- Another initiative in Assam is the School Adoption Initiative in the Darrang district of Assam.



- Here, each school is adopted by a school teacher to improve the learning outcomes which have been performing poorly in the education dimension.

Few of the initiatives have adopted technology to facilitate- better monitoring, improving quality, outreach, etc. for education and Skill development.

- Vidya Samiksha Kendra (VSK), by the Government of Gujarat, is an online, real-time mechanism to monitor the learning progress of every student across all schools and grades, with the aim to improve grade-appropriate learning outcomes. This initiative received Prime Minister's Award for Excellence in Public Administration, in 2021 and is also deemed a global good practice by the World Bank.
- Abhyudaya initiative in the district of Dhubri, Assam uses cutting-edge virtual technology to introduce fun-filled ways of learning and better conceptual understanding among students. The district of Dhubri is on the banks of the river Brahmaputra and has many riverine islands. This has contributed to an improvement in learning outcomes with the average scoring percentage increasing from 43% to 65%.

Various best practices related to skill development were focussed on a larger outreach of marginalised and downtrodden sections of society.

- Prayatna, is a livelihood and enterprise training program for transgenders in Delhi-NCR.
- A pilot initiative to enable handloom weavers and local artisans in Sahaspur, Uttarakhand was undertaken to enable market-oriented skills, quality standardization, value addition, branding, better marketing linkages, etc.

Best practices for environment sustainability

- Safeguarding and preserving the environment are among the key Sustainable Development Goals. The compendium mentions various best practices that have contributed to this effort.
- Electric Vehicle Policy and introduction of Electrical buses by the Government of Delhi, to reduce emissions from the transport sector and improve air quality.
- Material Recovery Facility (MRF) initiated in Udupi, Karnataka. The programme collects dry waste from homes, which prevents unscientific waste management. The further activity involves identifying materials from this waste and providing them as raw materials for the cement industry.
- Palle Prakruthu Vanam is an initiative by the Telangana government to create dense mini-forests in rural areas.

Interventions for social welfare and women empowerment

- Digital Inspection of Child Care Institutes: In collaboration with Aangan NGO, Punjab's Department of Social Security and Women & Child Development carries out a digital inspection of its child care institutes through SafCa App. The discrepancies identified during the inspections are colour coded. This allows a better understanding on the functioning of the institutes and allows for improvement.



- **Dhimsa Radio:** Dhimsa is a Community Radio initiative in Odisha, that facilitates information dissemination to the rural masses. Local language and local youth are being used through this platform to spread government messages to the community.

5.2 TRANS-FAT ELIMINATION

Why in News

WHO Launches Trans-Fat Elimination Validation Program for Countries

Important Points

About Trans-Fat Elimination Validation Programme

- It is an initiative by the World Health Organization (WHO) to recognize countries that have eliminated industrially produced trans-fat from their national food supplies.
- The program aims to promote the elimination of trans-fat globally and to protect the heart health of people.
- The first annual meeting of the Trans-Fat Elimination Technical Advisory Group will evaluate the applications submitted by countries for the WHO Validation Certificate.
- To qualify for the certificate, countries must demonstrate that a best-practice trans-fat policy has been implemented and that adequate monitoring and enforcement systems are in place.
- At present, there are 44 countries currently having best-practice policies in effect, covering 37% of the world population.
- An additional six countries have passed best-practice policies that will come into effect soon, extending protections to 44% of the world population.
- By enacting and implementing best-practice policies now, countries can qualify during a future cycle to receive recognition from WHO.
- Trans fat in our foods is one of the main risk factors for noncommunicable disease, with increased intake causing coronary heart disease events and deaths.
- In 2018, WHO called for the global elimination of industrially produced trans fat by 2023 and released the REPLACE action framework to support countries in implementing best practice policies.
- Member States signed on to meet this ambitious target as part of the WHO's 13th General Programme of Work 2019-2023 and the Triple Billion Targets.
- WHO's new Validation Programme will publicly recognize and reward the hard work of countries that have successfully eliminated this toxic compound.
- With less than one year left to reach the 2023 elimination goal, we hope it will also encourage new countries to enact policies and accelerate action toward the global target.
- To qualify for validation, countries must demonstrate that a best-practice trans fat policy has been implemented and that adequate monitoring and enforcement systems are in place.
- WHO encourages countries without best-practice policies to take action. This is the first call for countries to apply to receive the WHO validation certificate for trans fat elimination.



- There will be future application opportunities for countries who have not yet implemented best-practice trans fat elimination policies.
- By enacting and implementing best-practice policies now, countries can qualify during a future cycle to receive this recognition from WHO. WHO calls on all countries to take life-saving action by eliminating industrially produced TFA.
- WHO encourages countries with best practice policies that will come into effect in 2023 to submit statements of interest: Egypt, Mexico, Philippines, Ukraine.

REPLACE

- The REPLACE action package provides a strategic approach to eliminating industrially-produced trans fat from national food supplies, with the goal of global elimination by 2023.
- Increased intake of trans fat (>1% of total energy intake) is associated with increased risk of coronary heart disease mortality and events. Trans fat intake is responsible for approximately 500,000 premature deaths from coronary heart disease each year around the world.
- The package comprises an overarching technical document that provides a rationale and framework for this integrated approach to trans fat elimination, along with six modules and additional web resources to facilitate implementation.

The six areas of action include:

- Review dietary sources of industrially-produced trans fat and the landscape for required policy change.
- Promote the replacement of industrially-produced trans fat with healthier fats and oils.
- Legislate or enact regulatory actions to eliminate industrially-produced trans fat.
- Assess and monitor trans fat content in the food supply and changes in trans fat consumption in the population.
- Create awareness of the negative health impact of trans fat among policy-makers, producers, suppliers, and the public.
- Enforce compliance with policies and regulations.

5.3 ARTIFICIAL INTELLIGENCE ACT

Why in News

European Union's ambitious Artificial Intelligence Act.

Important Points

- Members of the European Parliament reached a preliminary deal this week on a new draft of the European Union's ambitious Artificial Intelligence Act, first drafted two years ago.

What is the AI Act?

- First proposed in 2021, the AI Act would set out rules governing any product and service that uses an artificial intelligence system.



- Based on the four ranks of AI (between minimal to unacceptable), riskier applications will face tougher rules, require more transparency and accuracy.
- Policing tools which aim to predetermine where crimes will happen and by whom, are expected to be banned. Remote facial recognition technology will also be banned with the exception of countering and preventing a specific terrorist threat.
- The aim is “to avoid a controlled society based on AI,”
- Once approved, the EU says the law would comprise “the world’s first rules on artificial intelligence.”
- The agreement between the two parliamentary committees is merely the first step in a long and grueling bureaucratic process which could take years before it becomes a law across the EU’s 27-member bloc.

Scope of the Act

- The Act is expansive and will govern anyone who provides a product or a service that uses AI.
- The Act will cover systems that can generate output such as content, predictions, recommendations, or decisions influencing environments.
- Apart from uses of AI by companies, it will also look at AI used in public sector and law enforcement.
- It will work in tandem with other laws such as the General Data Protection Regulation (GDPR).
- Those using AI systems which interact with humans, are used for surveillance purposes, or can be used to generate "deepfake" content face strong transparency obligations.

What's considered 'High Risk'?

- A number of AI tools may be considered high risk, such as those used in critical infrastructure, law enforcement, or education. They are one level below "unacceptable," and therefore are not banned outright.
- Instead, those using high-risk AIs will likely be obliged to complete rigorous risk assessments, log their activities, and make data available to authorities to scrutinise. That would be likely to increase compliance costs for companies.
- Many of the "high risk" categories where AI use will be strictly controlled would be areas such as law enforcement, migration, infrastructure, product safety and administration of justice.

What is a 'GPAIS'?

- A GPAIS (General Purpose AI System) is a category proposed by lawmakers to account for AI tools with more than one application, such as generative AI models like ChatGPT.
- Lawmakers are currently debating whether all forms of GPAIS will be designated high risk, and what that would mean for technology companies looking to adopt AI into their products. The draft does not clarify what obligations AI system manufacturers would be subject to.



If a Company breaks the rules

- The proposals say those found in breach of the AI Act face fines of up to 30 million euros or 6% of global profits, whichever is higher.
- For a company like Microsoft (MSFT.O), which is backing ChatGPT creator OpenAI, it could mean a fine of over \$10 billion if found violating the rules.

Time frame for AI act

- The Act is being discussed by parliamentarians, and after they reach common ground, there will be a trilogue between representatives of the European Parliament, the Council of the European Union and the European Commission.
- After the terms are finalised, there would be a grace period of around two years to allow affected parties to comply with the regulations.

5.4 CLINICAL TRIALS

Why in News

India is emerging as a favourable destination to conduct clinical trials, reveals report

Important Points

- A joint report by PwC India & US-India Chamber of Commerce (USAIC) has revealed that India is emerging as a favourable destination to conduct clinical trials.
- The report was released at the USAIC BioPharma & Healthcare Summit held virtually.
- Clinical trial activity in India has been increasing steadily since 2014 due to several key regulatory reforms aimed towards global harmonisation, enabling open access to clinical trials in India.
- The country's diverse population, combined with its rapidly advancing healthcare infrastructure, provides a fertile ground for clinical trials to flourish.
- This is an opportunity for top biopharma companies to develop a long-term strategy that focuses on the key enablers of innovation and strategic partnerships in India.
- According to the report, Biopharma can benefit from the critical enablers of innovation in the private healthcare system in India and leverage the rapidly expanding healthcare infrastructure in the country.

Key takeaways from the report:

- The private sector is a well-suited channel for the top biopharma to conduct more efficient clinical trials with easier and faster access to investigators and patients.
- Indian states with high disease prevalence (e.g., cancer) also have the most number of tier-1 cities, with advanced medical infrastructure and availability of investigators. Targeting these states can provide biopharma companies with faster access to patients, sites, and investigators.
- Total number of investigators has increased by 2x between 2015 and 2020, with the majority of the increase occurring in the internal medicine and oncology specialisations. However, the growth in the number of investigators is largely restricted to tier-1 and 2 cities.



- While the top 20 pharma activity for the major therapy classes in India has remained largely constant in the last decade, growth opportunities exist across key diseases (e.g., pain, epilepsy, cervical cancer) and orphan diseases (-thalassemia, Duchenne Muscular Dystrophy)
- India has an overall clinical trial participation of ~3% but contributes upwards of 15% to the global burden of most high prevalent diseases (e.g., respiratory infections, cardiovascular, diabetes, cervical cancer), representing an untapped potential for top pharma
- Top biopharma should align their strategy towards tier-1 cities (e.g., Mumbai, Delhi, Bengaluru, Chennai) where the higher bed capacity, number of doctors, and presence of tertiary care multi-city hospitals can support enablement efforts of running faster and more efficient clinical trials.

5.5 SPACE SCIENCE & TECHNOLOGY AWARENESS TRAINING (START)

Why in News

Recently, ISRO has launched a new introductory-level online training program called space science and technology awareness training (START).

Important Point

ISRO's START Program Details

The 'Space Science and Technology Awareness Training (START)' is an initiative of ISRO aimed at post-graduate and final-year undergraduate students of physical sciences and technology.

- **Scope:** The Space Science and Technology Awareness Training (START) programme will cover various domains of space science, including-
 - o Astronomy & Astrophysics,
 - o Heliophysics & Sun-Earth interaction,
 - o Instrumentation, and
 - o Aeronomy.
- **Implementation:** various programs under Space Science and Technology Awareness Training (START) initiative will be delivered by the scientists from Indian academia and ISRO centres.
- **Registration:** Academic institutions can submit applications for the START programme through the Jigyasa portal by May 20, 2023.

Objectives

- The START programme is part of ISRO's efforts to enable Indian students to become professionals in space science and technology, as the organization's space science exploration program continues to expand into new domains.
- The START programme is intended to provide students with an introductory-level training in space science and technology, giving them an overview of different facets of the field, research opportunities, and career options.



- The training will also emphasize the cross-disciplinary nature of space science, giving students insights into how their individual aptitudes can be applied to the field.
- The ISRO's START programme is expected to help build a human capacity that will lead space science and research in the future.

Significance

- The START program by ISRO will include lectures on the Indian space science exploration program and research opportunities in space science and technologies.
- The training is designed to provide an overview of various aspects of space science and technology, allowing students to better understand their aptitude for the field, appreciate its cross-disciplinary nature, and choose their career path accordingly.
- Students will also be exposed to the ongoing research in different Indian institutes through this program.
- The START programme is intended to give them an overview of the different facets of the field, research opportunities and career options.

Remote sensing courses

- The ISRO's National Remote Sensing Centre (NRSC) has also announced two short courses- Remote Sensing Data Acquisition and Remote Sensing Data Processing.
- The courses are conducted through the Centre for Space Science and Technology Education in Asia and the Pacific (CSSTEAP) and are scheduled from August 21 to September 1 and October 9 to 20, respectively, at NRSC's Earth Station at Shadnagar near Hyderabad.
- The CSSTEAP is an educational institution affiliated with the United Nations.

5.6 ANDROID MALWARE

Why in News

New Android malware discovered that steals your passwords, 2FA codes

Important Points

- A new Android malware known as 'FluHorse' has been discovered, which targets users in Eastern Asia with malicious apps that look like legitimate versions with over 1,00,000 installs.
- According to Check Point Research, these malicious apps are designed to extract sensitive information, including user credentials and Two-Factor Authentication (2FA) codes.
- FluHorse malware targets multiple sectors in Eastern Asia and is typically distributed via email.
- In some cases, high-profile entities such as government officials were targeted at the initial stages of the phishing email attack.
- One of the most concerning aspects of FluHorse is its ability to go undetected for long periods of time, making it a persistent and dangerous threat that is difficult to detect.



- According to the report, FluHorse attacks start with targeted and malicious emails sent to high-profile individuals, urging them to take immediate action to resolve an alleged payment issue.
- Usually, the target is directed to a phishing website through a hyperlink included in the email. Once there, they are prompted to download the phoney APK (Android package file) of the fake application.
- The FluHorse carrier apps mimic 'ETC,' a Taiwanese toll collection app, and 'VPBank Neo,' a Vietnamese banking app.
- On Google Play, both legitimate versions of these apps have over a million downloads.
- Moreover, the report said that upon installation, all three fake apps request SMS access in order to intercept incoming 2FA codes in case they are required to hijack the accounts.
- The fake apps mimic the original user interfaces but lack functionality beyond two to three windows that load forms that capture the victim's information.

Following the capture of the victims' account credentials and credit card information, the apps display a "system is busy" message for 10 minutes to make the process appear realistic while operators act in the background to intercept 2FA codes and leverage the stolen data.

What is Android malware?

- Android malware is a malicious software that is intended to harm or corrupt computer systems. Malware developers employ several methods to infiltrate devices and networks. The goal, like with any malware, is to damage the device and steal personal data.

How it enters a device?

- Downloading harmful applications – Apps and downloadable content are the most prevalent way hackers transmit malware. Apps obtained from an official app store are generally secure. Apps obtained through unauthorized means, such as from cracked versions or from illegal sources, can contain viruses.
- Using a smartphone or tablet with operating system flaws – Mobile devices are often exploited by hackers due to flaws in the OS. If you don't keep your device's software up to date, it will be vulnerable to these flaws, which are usually quickly identified and fixed.
- Using insecure Wi-Fi or URLs – Public WiFi networks are often unsecured, which means that hackers can easily intercept and read your data as it's transmitted over the network. Furthermore, it can be used to spread malware and viruses to connected devices. Additionally, there is a risk of compromising sensitive data from your device if you visit unsecured websites. Using your phone's browser can potentially expose you to various risks which may result in web browser assaults. These kinds of attacks are more widespread on Android smartphones.
- Phishing through text message or voicemail – You may receive a text message or a call from what looks to be a reputable source requesting personal information about you or your device. Hackers frequently utilize this information to steal any data they find, like



social security numbers, credit card information, and so on. Furthermore, unsecured website URLs can also be shared to the user through text messages that can compromise your phone's software.

5.7 ETHANOL BLENDING

Why in News

Sugar mills set to hit 12 per cent ethanol blending target

Important Points

- India is making progress towards achieving its target of 12% ethanol blending with petrol for the current ethanol supply year (ESY).
- Oil marketing companies (OMCs) have already received 233 crore litres of ethanol out of the contracted 514 crore litres for ESY 2022-23, enabling them to increase blending to 11.65% compared to 10% during the same period last year.
- According to an industry official, sugar crushing has almost come to an end across India, except in Tamil Nadu.
- Distilleries will now switch to producing ethanol from molasses, which is already stored for the off-season. Ethanol production from molasses is an achievement amid a fall in sugar production.
- The OMCs have contracted to purchase 374 crore litres of ethanol from sugar-based distilleries and 140 crore litres from grain-based plants.
- One tonne of sugarcane yields around 70-75 litres of ethanol if processed directly from juice, while one tonne of B-Heavy Molasses produces about 320 litres of biofuel.
- Sugar mills have contracted to supply 138 crore litres of ethanol made from sugarcane juice and 230 crore litres from B-heavy molasses.
- The government has recently changed the ethanol year from November to October for the 2023-24 season, from December to November till now.
- The current transition year will run for 11 months, from December to October, and the 12% blending target has to be achieved by October 31.
- India aims to achieve a 20% ethanol blending target by 2025.
- The government has announced various initiatives and measures to encourage the production and use of ethanol in the country, including the expansion of the ethanol supply chain, increasing the number of ethanol plants, and introducing flex-fuel vehicles.
- Government has been implementing the Ethanol Blended Petrol Programme wherein OMCs sell petrol blended with ethanol.
- Recently, PM launched a pilot project for E20 fuel, 2 years ahead of target.
- Ethanol fuels are less polluting, cost effective, lower import bills and help in achieving energy security. It also brings in farmers in the energy supply chain and engages them in the energy economy.

What is Ethanol Blending?

- Ethyl alcohol or Ethanol (C_2H_5OH) is a biofuel that is naturally made by fermenting sugar.



- While it is mostly derived by extracting sugar from sugarcane, other organic matter like foodgrains can also be used for its production.
- As part of its carbon reduction commitments, India has launched the Ethanol Blended Petrol (EBP) programme to mix this biofuel with petrol to reduce the consumption of fossil fuel.
- Earlier, the government announced the achievement of E10 target, that is, the petrol used in the country has 10% ethanol in it.

Why E20?

- According to “Roadmap for Ethanol Blending in India: 2020-2025” a report by a special expert committee set up by the Centre, India’s net import of petroleum was 185Mt at a cost of \$551 billion in 2020-21.
- Most of the petroleum products are used in transportation. Hence, a successful E20 programme can save the country \$4 billion per annum, that is, around Rs 30,000 crore.
- Besides, ethanol is a less polluting fuel, and offers equivalent efficiency at lower cost than petrol.
- Availability of large arable land, rising production of foodgrains and sugarcane leading to surpluses, availability of technology to produce ethanol from plant based sources, and feasibility of making vehicles compliant to ethanol blended petrol make E20 not only a national imperative, but also an important strategic requirement.
- It adds that different agencies of the government have made rapid moves to put in place a favourable regulatory and retail ecosystem for safe, and effective use of ethanol blended petrol and that Oil Marketing Companies have prepared their plans for phased rollout, and vehicle manufacturers have assured of making a similar plan once the intention of the government with timelines is publicly declared.

E20 Study & R&D Outside India

- A project to study the suitability of 20% ethanol-gasoline blend (E20) with in-use vehicles was undertaken by Automotive Research Association of India (ARAI), Indian Institute of Petroleum (IIP) and Indian Oil Corporation (R&D) during 2014-15, with a funding from Department of Heavy Industry (DHI).
- Material compatibility tests revealed that the metals and metal coatings had no issue with E20.
- Elastomers had inferior performance with E20 compared to neat gasoline.
- Plastic PA66 had a drop in tensile strength after use with E20.
- In the vehicle level studies, fuel economy decreased up to 6% (depending on the vehicle type) on an average basis.
- The test vehicles passed startability and drivability tests at hot and cold conditions with E0 and E20 test fuels.
- In all the cases, there was no severe malfunction or stall observed at any stage of vehicle operation.
- No abnormal wear of engine components or deposits or deterioration of engine oils were observed after the on-road mileage accumulation trials.



- Joint studies reported by the Massachusetts Institute of Technology (MIT) and Honda R&D indicate that the improvement in relative efficiency up to 20% can be achieved with E20 compared to normal gasoline, when the engine is properly tuned.
- Trials undertaken by Ford Motor Company concluded that the engine optimised for E20 fuel showed comparable volumetric fuel economy (mileage) and range (kilometres travelled in single fill) of normal gasoline with a CO₂ reduction of 5%.

Environmental Impact

- Pointing out that vehicular emissions such as Carbon Monoxide (CO), Hydrocarbons (HC) and Oxides of Nitrogen (NO_x) are currently under regulation in India, the report argued that use of ethanol blended gasoline decreases these emissions.
- Here's a summary of emission benefits with E10 and E20 fuels compared to neat gasoline:

E20 Petrol: What is Ethanol blending petrol & India's E20

- Higher reductions in Carbon Monoxide emissions were observed with E20 fuel – 50% lower in two-wheelers and 30% lower in four-wheelers.
- Hydrocarbon emissions are reduced by 20% with ethanol blends compared to normal gasoline.
- Nitrous Oxide emissions did not show a significant trend as it depended on the vehicle/engine type and engine operating conditions.
- The unregulated carbonyl emissions, such as acetaldehyde emission were, however, higher with E10 and E20 compared to normal gasoline, due to the presence of hydroxyl groups in ethanol.
- However, these emissions were relatively minor (in few micrograms) compared to regulated emissions (which were in grams).
- Evaporative emission test results with E20 fuel were similar to E0.
- Overall, ethanol blending can help decrease emissions from both two-wheelers and four-wheelers.

Other Impact

Further, there are also various other impacts use of such fuel will have — primarily on the consumer, vehicle manufacturers and component manufacturers.

- **Fuel Efficiency:** While using E20 fuel, there will be a drop in fuel efficiency by nearly 6-7% for 4-wheelers designed for E0 and calibrated for E10; 3%-4% for 2-wheelers designed for E0 and calibrated for E10; 1-2% for 4-wheelers designed for E10 and calibrated for E20. However, with the modifications in engines (hardware and tuning), the loss in efficiency due to blended fuel can be reduced.
- **Startability:** In the E20 project, the results indicated that the test vehicles passed startability and drivability tests at hot and cold conditions with E0 and E20 test fuel. In all the cases, there was no severe malfunction or stall observed at any stage of vehicle operation.



And, vehicle manufacturers need the following changes in production lines to produce compatible vehicles:

- Engines and components will need to be tested and calibrated with E20 as fuel
- Vendors need to be developed for the procurement of additional components compatible with E20 All the components required can be made available in the country.
- No significant change in the assembly line is expected
- For Component manufacturers:
- There will be no major structural change in the components in migrating from E10 to E20
- There will be changes in material of piston rings, piston heads, O-rings, seals, fuel pumps etc., all of which can be produced in the country.

5.8 JAMES WEBB TELESCOPE

Why in News

The James Webb telescope revealed surprise asteroids in the Fomalhaut star system

Important Points

- The three asteroid belts around Fomalhaut are the first asteroid belts ever seen outside the solar system in infrared light. The warm, dusty structures are more complex than the Kuiper asteroid belt
- NASA's James Webb Space Telescope (JWST) has found three belts around a nearby young star called Fomalhaut, revealing mysteries about the structures.
- These are the first asteroid belts ever seen outside the solar system in infrared light.
- The JWST, also called Webb, captured images of the warm, dusty structures around Fomalhaut, and found that they are more complex than the asteroid and Kuiper dust belts of the solar system.
- The three nested belts extend out to 23 billion kilometres from Fomalhaut, NASA says on its website.
- This is equivalent to 150 times the distance between the Earth and the Sun.
- The two inner belts had never been seen before, and were revealed for the first time by Webb.
- Planetary debris disks around other stars are analogous to the asteroid and Kuiper belts in the solar system, reveal the configuration of small bodies, and provide hints for the presence of planets, the authors noted in the study.

Fomalhaut is a bright star, is surrounded by three disks

- One can see Fomalhaut with their naked eye because it is the brightest star in the southern constellation Piscis Austrinus. Fomalhaut is surrounded by the dusty belts which are debris from collisions of larger bodies.
- The debris belts can also be referred to as "debris disks".
- NASA describe Fomalhaut as the "archetype" of debris disks found elsewhere in the Milky Way galaxy, because it has components similar to those seen in the solar system.



- By looking at the patterns in the rings, scientists may be able to make a little sketch of what a planetary system should look like.

How the belts around Fomalhaut might have formed

- Earlier, the Hubble Space Telescope, Herschel Space Observatory, and the Atacama Large Millimetre Array (ALMA) had captured sharp images of the outermost belt of dusty structures around Fomalhaut.
- Through Webb's observations, scientists, for the first time, have resolved the inner belts.
- Webb's Mid-Infrared Instrument (MIRI) revealed these three nested belts.
- Gravitational forces of unseen planets are likely to have carved out these belts.
- The intermediate belt is probably shepherded by an unseen planet.
- A large dust cloud discovered within the outer ring is possible evidence of another dust-creating collision.
- In our solar system, the outer edge of the Kuiper belt is sculpted by Jupiter, while the inner edge is sculpted by Neptune.
- NASA's Infrared Astronomical Satellite discovered Fomalhaut's dust ring in 1983.
- The authors concluded that Fomalhaut appears to be the site of a complex and possibly dynamic active planetary system.

What Is the James Webb Space Telescope?

- The James Webb Space Telescope is the largest, most powerful space telescope ever built. It will allow scientists to look at what our universe was like about 200 million years after the Big Bang.
- The telescope will be able to capture images of some of the first galaxies ever formed.
- It will also be able to observe objects in our solar system from Mars outward, look inside dust clouds to see where new stars and planets are forming and examine the atmospheres of planets orbiting other stars.

Facts about the James Webb Space Telescope

- It is so big that it has to fold origami-style to fit inside the rocket to launch.
- The telescope will unfold, sunshield first, once in space.
- The James Webb Space Telescope sees the universe in light that is invisible to human eyes. This light is called infrared radiation.
- The James Webb Space Telescope will use its infrared cameras to see through dust in our universe. Stars and planets form inside those dust clouds, so peeking inside could lead to exciting new discoveries.
- The Webb telescope's cameras are sensitive to heat from the Sun.
- The temperature difference between the sun-facing and shaded sides of the telescope is more than 600 degrees Fahrenheit.



5.9 WATSONX

Why in News

IBM unveils new watsonx, AI and data platform

Important Points

- International Business Machines Corp launched watsonx, a new artificial intelligence and data platform to help companies integrate AI in their business.
- The new AI platform launch comes over a decade after IBM's software called Watson got attention for winning the game show Jeopardy.
- IBM at the time could "learn" and process human language.
- But Watson's high cost at the time made it a challenge for companies to use.
- Fast forward a decade, chatbot ChatGPT's overnight success is making AI adoption at companies a focus, and IBM is looking to grab new business.
- This time, the lower cost of implementing the large language AI models means the chances of success are high.
- AI could reduce certain back office jobs at IBM in the coming years.
- IBM was also embracing a more open ecosystem and partnering with open-source AI software development hub Hugging Face and others.
- IBM said companies can use the watsonx platform to train and deploy AI models, automatically generate code using natural language and use various large language models built for different purposes such as chemical creation or climate change modeling.

5.10 BABY FROM THREE PEOPLE

Why in News

First UK baby with DNA from three people born through IVF

Important Points

- The first baby was created in the United Kingdom from the DNA of three people using a pioneering IVF procedure.
- The baby was developed using the process called mitochondrial donation treatment (MDT) in which the nucleus is taken from one of the eggs of the mother, which contains her DNA and is implanted into a donor egg.
- The donor egg's nuclei are removed but its healthy mitochondrial DNA is retained.
- The process involves the creation of IVF embryos which are free from harmful mutations that are carried by their mothers and are likely to be passed onto their children.
- Unlike normal DNA, which contains the genetic information that helps in creating normal humans, mitochondrial DNA contains power for the cell.
- Researchers have drawn a comparison between the mitochondrial DNA and a battery.
- Various scientists insist that the term "three-parent baby" is not accurate because more than 98.8 per cent of the child's DNA still comes from two people.



- A green light was given by the UK parliament to the procedure in 2015 and requests for its use were considered by the regulatory body called the Human Fertilisation and Embryology Authority (HFEA).
- The first “three-parent child” of Britain was found in a Freedom of Information request made to the HFEA.
- As per reports, the clinic said that few babies have been born using MDT in the UK.
- The details of the babies who have been created using the MDT programme are not released by doctors amid concerns that the confidentiality of the patient can be compromised through specific information.
- The HFEA has stated that "less than five" babies were born as of 20 April 2023 using the technology. However, HFEA refused to provide precise numbers to protect the identities of the families.
- News that a small number of babies with donated mitochondria have now been born in the UK is the next step, in what will probably remain a slow and cautious process of assessing and refining mitochondrial donation.
- Britain is not the first nation where children have been born through MDT. In 2016, the same procedure was used for a child who was created in Mexico.

What is IVF?

- In vitro fertilization (IVF) is a complex series of procedures used to help with fertility or prevent genetic problems and assist with the conception of a child.
- During IVF, mature eggs are collected (retrieved) from ovaries and fertilized by sperm in a lab.
- Then the fertilized egg (embryo) or eggs (embryos) are transferred to a uterus. One full cycle of IVF takes about three weeks.
- Sometimes these steps are split into different parts and the process can take longer.
- IVF is the most effective form of assisted reproductive technology.
- The procedure can be done using a couple's own eggs and sperm.
- Or IVF may involve eggs, sperm or embryos from a known or anonymous donor.
- In some cases, a gestational carrier — someone who has an embryo implanted in the uterus — might be used.

5.11 ROBOTICS FRAMEWORK

Why in News

Telangana govt launches first of its kind State Robotics Framework

Important Points

- The Telangana government introduced a new policy known as the State Robotics Framework.
- It is designed to establish a self-sustaining robotics ecosystem and to position the state as a leader in robotics in India.



- The policy aims to provide support for research and development, encourage collaboration between academia and industry, and promote the adoption of robotics technology across various sectors.
- As part of the State Robotics Framework, Telangana plans to establish a Robo Park with testing facilities, co-working spaces, and co-production or manufacturing options.
- These facilities will be set up either on state-owned sites or in collaboration with industry, academia, and incubators at competitive rates.
- Furthermore, the state intends to establish a world-class robotics accelerator to provide startups with the necessary support, including incubation, infrastructure, authorization, market insights, investor connections, and mentorship.
- This accelerator will be a crucial resource for entrepreneurs and startups in the robotics sector, helping them grow and succeed.

About the Robotics Framework

- The State Robotics Framework is a detailed plan that outlines Telangana's vision for advancing the robotics ecosystem and promoting industry growth in India.
- The framework was created by the Emerging Technologies Wing of the ITE&C Department of Telangana, in collaboration with the All India Robotics Association and input from academic, industry experts and stakeholders.
- The framework aims to use robotics technology to drive growth and development in four critical areas: agriculture, healthcare, industrial automation, and consumer robotics.
- The emphasis is on leveraging robotics to improve outcomes in these domains.

Advantages of Technological Policy

- Improved Safety
- Upgraded Precision or Accuracy
- Effective Progress
- Growth of manifold industries including manufacturing, logistics, healthcare and agriculture
- Hence, with a steadfast framework of robotics, the state will open new channels for growth in industries and elevate the economic output and will emerge as a leader in India.
- It is a dedicated effort put to support startups, investors and robotics fanatics.

Robotics Innovation Centre

- With this improved version, society will get a real positive impact as the talent of Telangana will unfold in India and overseas.
- Under this scheme, the Government aims to set up a Telangana Robotics Innovation Centre (TRIC).
- The framework will be implemented through this centre launch to undertake key pillars of infrastructure access, fostering research and innovation, business empowerment, development of a capable workforce and responsible deployment.



- Additionally, the Telangana Robotics Innovation Center (TRIC) will be responsible for the implementation of this framework and will be the central place to instigate the main pillars of the framework, as mentioned in the notification.

5.12 LIGO-INDIA PROJECT

Why in News

PM Modi Lays Foundation Stone of LIGO-India Project

Important Points

- Prime Minister Narendra Modi laid the foundation stone of the Laser Interferometer Gravitational-Wave Observatory – India (LIGO-India), placing the nation among a handful of countries that have a Gravitational-Wave observatory.
- The Prime Minister also announced multiple projects related to scientific and technological advancement in the country, worth more than Rs 5,800 crore on the occasion of 25th National Technology Day.
- The projects for which the foundation stone was laid include Laser Interferometer Gravitational-Wave Observatory-India (LIGO-India), Hingoli; Homi Bhabha Cancer Hospital and Research Centre, Jatni, Odisha; and Platinum Jubilee Block of Tata Memorial Hospital, Mumbai.
- The LIGO-India will include India in one of the few countries to have such observatories in the world.
- It will give Indian students and scientists new and advanced opportunities.

LIGO-India: What Is It?

- LIGO (Laser Interferometer Gravitational-Wave Observatory) is a physics experiment that detects cosmic ripples called gravitational waves, which carry information about their origins and provide clues to the nature of gravity.
- It derives its foundation from the theories of Albert Einstein.
- According to Einstein's theory, when two massive objects collide, they create a ripple or a disturbance in the fabric of space and time.
- This disturbance propagates in all directions from the source, like waves of undulating space-time.
- These waves are known as gravitational waves.
- Gravitational waves travel at the speed of light, and they carry information about their origins, which could help us learn more about the nature of gravity.
- Physicists believe that the most potent gravitational waves are generated by cataclysmic events, such as the collision of black holes, exploding stars, or colliding neutron stars.
- By detecting and studying these waves, scientists can gain insight into some of the most fundamental questions about the universe.
- In February 2016, the government granted in-principle approval for the construction of LIGO-India, an advanced gravitational-wave observatory that will form part of a global network.



- LIGO-India is a collaborative venture between Indian research institutions, the LIGO Laboratory in the US, and international partners.
- The observatory will feature a 4 km interferometer arm length and will be highly sensitive to gravitational waves generated by the merging of massive astrophysical objects like black holes and neutron stars.
- The Department of Atomic Energy and the Department of Science and Technology will oversee the construction of LIGO-India in partnership with the National Science Foundation of the US, as well as national and international research and academic institutions.
- The US will provide key components for the facility valued at \$80 million, equivalent to Rs 560 crore.

Why Is LIGO-India Important?

- The LIGO-India Observatory will significantly improve the capability of the global scientific community in the field of gravitational-wave astronomy and astrophysics.
- It will also advance Indian science and technology in a wide range of cutting-edge fields, including lasers, optics, vacuum, quantum metrology, and control systems.
- Mega-science ventures like LIGO-India provide ideal learning platforms to create seamless ecosystems that connect academia, laboratories, and industry on a national and global scale.

5.13 CEIR

Why in News

Mobile tracking system CEIR set for pan-India launch.

Important Points

- CEIR system, which allows people to block and track their lost or stolen mobile phones, is set for pan-India launch, and the Union government will roll it out across the country.

What is CEIR?

- CEIR aims to ease the reporting of stolen and lost mobile phones, and block such devices from being used, across the country. Also, citizens can check the status of their request to block a lost/stolen phone, and they can also unblock the device, once it has been found.

How will the system work?

- In recent days, CDoT, an autonomous telecom research and development (R&D) centre of the DoT, Government of India, has been running a pilot of the CEIR system in telecom circles such as Delhi, Maharashtra, Karnataka, and the North-East. To the system, CDoT added features to check the use of cloned mobile phones, doing so for all telecom operators.
- Then, to check the entry of any unauthorised device on their network, operators will have the list of approved IMEI numbers. This is because the Centre has made it



mandatory to disclose IMEI – a 15-digit unique numeric identifier – of mobile phones before these are sold.

- Finally, with the help of CEIR system, operators will use this IMEI information to track the lost or stolen device.

5.14 SATURN

Why in News

With 62 Newly Discovered Moons, Saturn Knocks Jupiter off Its Pedestal

Important Points

- In the race for the title of the planet with the most moons, Saturn may have overtaken Jupiter for the final time.
- Planet Saturn has made a remarkable comeback to reclaim the title of the “planet with the highest number of moons”, surpassing Jupiter, which temporarily took the lead in February with its 12 newly discovered moons.
- A new study have unveiled an astonishing 62 new moons orbiting the ringed planet, bringing Saturn's official count of natural satellites to a grand total of 145.
- In contrast, International Astronomical Union (IAU) has confirmed Jupiter's moon count at 95.
- Newly discovered moons of Saturn have currently been designated with numbers/letters
- In due course, these moons will be bestowed with names inspired by Gallic, Norse, and Canadian Inuit gods, following the established convention for Saturn's moons.
- Saturn not only has nearly doubled its number of moons, it now has more moons than all the rest of the planets in the solar system combined.
- According to reports from the Associated Press (AP), Jupiter and Saturn are host to a multitude of small moons. Researchers believe that these moons are remnants of larger moons that collided with each other or with comets and asteroids.
- Similar processes are thought to have occurred on Uranus and Neptune as well, but due to their significant distance from Earth, the task of spotting and studying their moons becomes even more challenging.
- Nasa's upcoming Dragonfly mission, anticipated to be launched in 2027, holds the promise of enabling close-up observations of at least one of Saturn's smaller outer moons.

Technique to discover moons

- The study, cited in the report, mentioned an innovative technique known as “shift and stack” to uncover dimmer and smaller satellites.
- This method involves shifting consecutive images at a rate that matches the moon's motion across the sky, resulting in a brighter appearance when the data is combined.

Saturn's rings

- A recent study on Saturn's rings said that the scientists have made a remarkable discovery indicating that the rings were acquired relatively recently in the grand timeline of the solar system's history.



- By analysing data gathered from Nasa's Cassini spacecraft, experts have concluded that the colossal rings did not form concurrently with the planet itself.
- Instead, they estimate that the formation of these majestic rings took place no more than 400 million years ago.
- It is natural to think that the rings have been formed together with Saturn [which is] about 4.5bn years old.

5.15 AXIOM MISSION-2

Why in News

SpaceX's Axiom mission-2 set for launch with 1st Saudi woman

Important Points

- A private mission to the International Space Station (ISS) organized by Axiom Space is all set to launch the 'Ax-2' from Florida with the first-ever Saudi woman in its crew to voyage into space.
- The launch of Ax-2 is targetet from Launch Complex 39A at NASA's Kennedy Space Center in Florida.
- The two mission specialists, Ali AlQarni and Rayyanah Barnawi from the Kingdom of Saudi Arabia (KSA) are members of the inaugural Saudi national astronaut program, reported Axiom Space.
- 33-year-old Barnawi is a young laboratory specialist who has vast experience in the research of cancer stem cells. She is currently working as a research and laboratory specialist.
- Holder of a bachelor's degree in reproductive science, genetic engineering, and tissue development from the University of Otago in New Zealand, she obtained her master's degree in biomedical sciences from King Faisal University.
- She has nine years of brilliant experience in the field of cancer stem cell research, according to Saudi Gazette.
- In February, Saudi Arabia announced that it will be sending the first Saudi female astronaut Rayyanah Barnawi and male astronaut Ali Al-Qarni to the ISS during the second quarter of 2023.
- The spaceflight is scheduled to launch from the USA to the International Space Station.
- In addition, the Saudi Human Spaceflight Program includes the training of two more astronauts -- Mariam Fardous and Ali Al-Ghamdi -- on all mission requirements, as per the report in the Saudi Gazette.
- The space mission aims to empower the capabilities of Saudi scientists in human spaceflight geared towards serving humanity and benefiting from the promising opportunities offered by the space industry, as well as contributing to scientific research in many aspects such as health, sustainability, and space technology.
- Through this program, the Kingdom seeks to activate scientific innovations at the level of space sciences, and enhance its ability to independently conduct its own research that will reflect positively on the future of the space industry and the country as well, reported Saudi Gazette.



5.16 HIMALAYAN CHANDRA TELESCOPE

Why in News

India's Himalayan Telescope observes one of the most energetic objects in universe

Important Points

- The Indian Astronomical Observatory located in Hanle of Ladakh has joined hands with 10 other global telescopes to observe the brightening of BL Lacertae (BL Lac), a blazar located about 950 million light years away from Earth.
- A blazar is a type of galaxy that is powered by a humongous black hole and is among one of the brightest and most powerful objects in the universe.
- They are known for emitting highly energetic particles and radiation, including gamma rays, X-rays, and radio waves.
- A team from the Raman Research Institute has now studied the brightening of BL Lac, which was first discovered almost a century ago and has been slowly inching close to the maxima.
- These are compact structures showing anomalous luminosity from time to time.
- The team used the global pool of telescopes to pick up the electromagnetic emissions that are visible across the radio, microwave, infrared, optical, ultra-violet, X-ray, and gamma wavelengths.
- Astronomers had in July 2020 suspected that BL Lac was beginning to flare up and the 11 telescopes including the Himalayan Chandra Telescope located in Ladakh's Hanle were targeted at the blazar for 84 days.
- As time progressed, it was observed that the flare was becoming brighter gradually, indicating that BL Lac was turning more active.
- For the first time in 2020, BL Lac's brightness reached its maximum. This was captured well by the Modified Dall-Kirkham telescope located in Krak³w, Poland.
- The observations revealed that the brightness of BL Lac increased from magnitude 14 to 11.8 and the international team of researchers calculated the source's magnetic field, which was found to range from 7.5 Gauss to 76.3 Gauss during the flare.
- The Ministry of Science Technology in a statement said that the calculations, never possible before, were solely performed because of the availability of Terabytes of datasets obtained from the battery of the telescope.

5.17 SUPERCOMPUTERS

Why in News

India set to triple speed of its fastest supercomputers

Important Points

- According to Ministry of Earth Sciences (MoES), India is set to dramatically scale up its super-computing prowess and install an 18-petaflop system over the course of this year.
- Flops (floating point operations per second) are an indicator of computers processing speed and a petaflop refers to a 1,000 trillion flops.



- Processing power to such a degree greatly eases complex mathematical calculations required, for among other things, forecasting how the weather will be over the next few days all the way up to two-three months ahead.
- Currently India's most powerful, civilian supercomputers — Pratyush and Mihir — with a combined capacity of 6.8 petaflops are housed at the Indian Institute of Tropical Meteorology (IITM), Pune, and the National Centre for Medium Range Weather Forecasting (NCMRWF), Noida, respectively.
- They were made operational in 2018 at an investment of Rs 438 crore.
- Both these organisations are affiliated to the MoES.
- The new supercomputers too will be housed at the IITM and NCMRWF.

Imported from France

- The new supercomputers, yet to be named, are imported from French corporation, ATOS — an information technology service and consulting company.
- The Modi Government signed a deal in December 2018 with France to procure high-performance computers worth Rs 4,500 crore by 2025.
- The new earth-sciences Ministry computers are likely to cost Rs 900 crore.
- Every 4-5 years systems have to be upgraded.
- Indian current hpc allows to map weather and climate changes to a resolution of 12*12 km.
- With the new system we can improve resolution to 6*6 (km).
- This means that, like cameras, four times as many pixels can be used to represent a given area providing greater clarity and more accurate local forecast.
- The goal is eventually to be able to represent an area by 1 km-square grids and that can be used to warn of cloudburst and such rapidly evolving weather systems.
- The fastest high-performance computing system in the world is currently the Frontier-Cray system at Oakridge National Laboratory, United States.
- This has a peak speed of 1 exa-flop (or about 1,000 petaflops). The top 10 other systems, based on speed, range from about 400 petaflops to 60 petaflops.



6. SOCIAL ISSUES

6.1 DIMA HASAO PEACE PACT

Why in News

Assam-based insurgent groups have signed a peace agreement with the State Government and the Centre recently.

Important Points

- The Assam-based insurgent group was represented by Dimasa National Liberation Army (DNLA)/Dimasa People's Supreme Council (DPSC) — which operates in the Dima Hasao district.
- The agreement will put a complete end to insurgency and with this, there are no more armed groups in 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.
- As a result of this agreement, more than 168 armed cadres of DNLA surrendered with their weapons and joined the mainstream.
- Dimasa Welfare Council will be set up by the Government of Assam to protect, preserve and promote a social, cultural, and linguistic identity to meet political, economic and educational aspirations and 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 Paragraph 14 of 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 Council.
- It also provides for necessary measures to be taken by the Government of India and the Government of Assam to rehabilitate the surrendered armed cadres of DNLA.
- To this effect, a Special Development package of 500 crore each, will also be provided by the Government of India and Government of Assam over a period of five years, for all-round development of NCHAC as well as Dimasa people residing in other parts of the State
- The DNLA was established in April 2019 seeking a sovereign territory for the Dimasa tribals and launched an armed insurgency to achieve its goal.

Who are Dimasa tribes?

- The Dimasa people are an ethnolinguistic community presently inhabiting in Assam and Nagaland states in Northeastern India.
- They speak Dimasa, a Tibeto-Burman language. This community is fairly homogeneous and exclusive, with members required to draw from both parents' separate clans.
- The 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.

- The Dimasas are one of the oldest inhabitants of the Northeastern part of India and is one of the many Kachari tribes.
- Following political problems in the 18th century, the Dimasa ruler moved further south in the plains of Cachar and there took place a division among them—with the hills Dimasa maintaining their traditional living and political exclusiveness, the plains Dimasas have made no attempt to assert themselves.

6.2 NDPS

Why in News

Government likely to ask addicts to submit for rehabilitation to avoid jail time

Important Points

- As the Union government debates decriminalising consumption of narcotic drugs and psychotropic substances, it is likely to bring in a policy where addicts and users will have to submit themselves before treatment centres and declare themselves as such in order to escape criminal prosecution.
- In the past two years, the number of vulnerable districts (for drug use) have gone up from 272 to 372, with Delhi, Jammu and Kashmir, Rajasthan, Sikkim, Goa, Chandigarh, Puducherry, and Tripura having 100% districts marked as vulnerable. These are followed by Uttarakhand and Punjab, where 92.30% and 86.95% districts have been marked vulnerable, respectively.
- According to the substance usage survey conducted by the Social Justice Ministry through AIIMS in 2018, alcohol had emerged as the most used substance among adults at 17.1% prevalence.
- Apart from this, the survey showed that cannabis use had the highest prevalence at 3.30%, followed by opioids (2.10%), sedatives (1.21%), inhalants (0.58%) and cocaine (0.11%).
- Currently, under the Narcotic Drugs and Psychotropic Substances Act, 1985, the consumption of any narcotic drugs or psychotropic substance may attract a jail term of up to one year and/or fines up to Rs20,000.
- As of now, while enforcement agencies are targeting supply chains, the Social Justice Ministry is concurrently running country-wide awareness and rehabilitation campaigns to treat users and addicts like victims and not criminals.
- Citing examples of countries that have followed the total decriminalisation path, a senior government official argued that it was an “ineffective policy”.
- For minors who are caught consuming illegal substances, the onus will be on the parents to declare their wards as users or addicts and check them into an appropriate facility.
- Anticipating an influx of users once this option becomes a reality, the Social Justice Ministry is now preparing to scale up the network of 508 rehabilitation and de-addiction facilities it supports under the campaign for drug demand reduction — *Nasha Mukta Bharat Abhiyaan*.



- The centres currently operational include about 340 integrated rehabilitation centres for addicts (in-patient care), about 50 community-based peer-led intervention centres, 71 outreach and drop-in centres (out-patient care), and about 46 addiction treatment facilities (advanced medical care in government hospitals).

Narcotic Drugs and Psychotropic Substances

- Narcotic Drugs and Psychotropic Substances have several medical and scientific uses. However, they can be and are also abused and trafficked.
- India's approach towards Narcotic Drugs and Psychotropic Substances is enshrined in Article 47 of the Constitution of India which mandates that the 'State shall endeavour to bring about prohibition of the consumption except for medicinal purposes of intoxicating drinks and of drugs which are injurious to health'.
- The same principle of preventing use of drugs except for medicinal use was also adopted in the three international conventions on drug related matters, viz., Single Convention on Narcotic Drugs, 1961, Convention on Psychotropic Substances, 1971 and the UN Convention Against Illicit Traffic in Narcotic Drugs & Psychotropic Substances, 1988.
- India has signed and ratified these three conventions.
- India's commitment to prevention of drug abuse and trafficking predates the coming into force of the three conventions.
- The Narcotic Drugs and Psychotropic Substances (NDPS) Act, 1985 was framed taking into account India's obligations under the three UN drug Conventions.

6.3 ORGAN DONATION

Why in News

Manual to set up transplant programmes, train coordinators to improve organ donation discussed

Important Points

- From standardising the course for transplant coordinators to developing a manual for setting up an organ transplant programme at a hospital, the National Organ and Tissue Transplant Organisation is working towards structural reforms to improve organ donation and transplant in the country.
- The organisation has been working towards standardising processes for registering to receive organs and the allocation of organs across the country, with a call for a "one nation, one policy".
- Towards this goal, the 65-year age limit for registering as a recipient of organs from deceased donors was removed earlier this year along with domicile requirements, allowing patients from one state to register with hospitals from other states.
- The government recently granted special casual leave of up to 42 days to central government employees who donate organs.
- The highest number of organ transplants in the country was recorded in 2022, when 15,000 organs—hearts, kidneys and livers, among others—were transplanted.



- Although a large chunk of these transplants utilised organs from living relatives, better coordination among the regional and states-level bodies has resulted in the increased utilisation of deceased organs as well.
- As per data, 2,265 organs from 930 deceased people were utilised in 2016. In 2022, as many as 2,765 organs from 904 deceased people were utilised.
- In the meeting, a step-by-step guide for the implementation of a transplant programme in a hospital and a standard course for training transplant coordinators were discussed. Both documents are likely to be released shortly.

Objectives of the Programme:

- To organize a system of organ and tissue procurement & distribution for transplantation.
- To promote deceased organ and Tissue donation.
- Furthermore, to train required manpower.
- Also, to protect vulnerable poor from organ trafficking.
- Lastly, to monitor organ and tissue transplant services and bring about policy and programme corrections/ changes whenever needed.

The key activities under the programme include:

- Setting up of State Organ & Tissue Transplant Organisations (SOTTOs) in each State/UT
- Setting up of National/ Regional/State Bio-material centres.
- Financial support for establishing new Organ Transplant/retrieval facilities and strengthening of existing Organ Transplant/retrieval facilities.
- Training to transplant experts including surgeons, physicians, transplant coordinators, etc.
- Financial support for the hiring of Transplant Coordinators to medical colleges and trauma centres.
- Post-transplant immune-suppressant drugs to Below Poverty Line (BPL) patients.

About NOTTO

- National Organ and Tissue Transplant Organisation (NOTTO) is set up under Directorate General of Health Services, Ministry of Health and Family Welfare, located in New Delhi.
- Organ donation in India is regulated by the Transplantation of Human Organs and Tissues Act, 1994.

About National Organ Transplant Programme (NOTP):

- National Organ Transplant Programme (NOTP) aims to promote organ donation and transplantation across all States/Union Territories (UTs).
- Implementing Agency: Directorate General of Health Services(DGHS), Ministry of Health and Family Welfare is implementing the National Organ Transplant Programme.

Framework related to organ transplant in India

- Transplantation of Human Organs Act, 1994 provides a system to regulate removal, storage and transplantation of human organs.



- Transplantation of Human Organs (Amendment) Act, 2011.
- Transplantation of Human Organs and Tissues Rules, 2014.

6.4 SEXUAL HARASSMENT

Why in News

NHRC issues notice to Sports Ministry, NSFs over lack of Internal Complaints Committee to address sexual harassment

Important Points

- An investigation revealed that more than half 16 of India's 30 national sports federations do not have an Internal Complaints Committee (ICC), a legal requirement under the Prevention of Sexual Harassment (PoSH) Act, 2013.
- The government's committee headed by boxer M C Mary Kom that looked into the allegations of the wrestlers who have been protesting at Jantar Mantar in New Delhi against Brij Bhushan Sharan Singh, the BJP MP who runs wrestling in India, has flagged the absence of the ICC at the Wrestling Federation of India (WFI) as a "major finding".
- Internal Complaints Committees (ICCs) are statutory bodies that are established under the Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013 (POSH Act) in India.
- According to the POSH Act, every employer who has 10 or more employees is required to constitute an ICC at each workplace.

The ICC should consist of at least four members

- At least 50% should be women.
- One should be a senior woman employee as the presiding officer.
- One should be an external member from a non-governmental organization or a legal background.
- The ICC members should be appointed for a term of 3 years and should undergo regular training on the POSH Act and related issues.

Objectives

- The main objective of ICCs is to provide a mechanism for addressing complaints of sexual harassment of women in the workplace and ensuring a safe and conducive work environment for them.
- To provide a safe and conducive work environment for women, in line with the constitutional principles of gender equality and dignity.
- Conduct a fair and impartial inquiry into the complaints, provide interim relief and protection to the complainants, recommend appropriate action against the perpetrators, and ensure compliance with the provisions of the Act.

What Is The Law Against Sexual Harassment Of Women At The Workplace?



- The Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, commonly known as the PoSH Act, was passed in 2013.
- It defined sexual harassment, lay down the procedures for complaint and inquiry, and the action to be taken in cases of sexual harassment.

How Did The PoSH Act Come About?

- The 2013 law broadened and gave legislative backing to what are known as the Vishaka Guidelines, which were laid down by the Supreme Court in a judgment passed in 1997.
- The case in question was filed by women's rights groups, including one called Vishaka, over the alleged gangrape of a social worker from Rajasthan named Bhanwari Devi. Bhanwari had fought against the marriage of a one-year-old baby girl in 1992, and had been allegedly gangraped as retribution.
- The Vishaka Guidelines defined sexual harassment and imposed three key obligations on institutions — prohibition, prevention, redress. The Supreme Court directed that they should establish a Complaints Committee, which would look into matters of sexual harassment of women at the workplace. The court made the guidelines legally binding.

What Does The Act Say About The Complaints Committee?

- The PoSH Act subsequently mandated that every employer must constitute an Internal Complaints Committee (ICC) at each office or branch that had 10 or more employees. It defined various aspects of sexual harassment, and lay down procedures for action in case of a complaint.
- The aggrieved victim under the Act can be a woman “of any age whether employed [at the workplace] or not”, who “alleges to have been subjected to any act of sexual harassment”. In effect, the Act protects the rights of all women who are working or visiting any workplace, in any capacity.

What Constitutes Sexual Harassment Under The PoSH Act?

Under the 2013 law, sexual harassment includes “any one or more” of the following “unwelcome acts or behaviour” committed directly or by implication:

- Physical contact and advances
- A demand or request for sexual favours
- Sexually coloured remarks
- Showing pornography
- Any other unwelcome physical, verbal or non-verbal conduct of sexual nature.

A ‘Handbook on Sexual Harassment of Women at Workplace’ published by the Ministry of Women & Child Development contains more detailed instances of behaviour that constitutes sexual harassment at the workplace. These circumstances include, broadly:



- Sexually suggestive remarks or innuendo; serious or repeated offensive remarks; inappropriate questions or remarks about a person's sex life;
- Display of sexist or offensive pictures, posters, MMS, SMS, WhatsApp, or emails; Intimidation, threats, blackmail around sexual favours;
- Threats, intimidation or retaliation against an employee who speaks up about these;
- Unwelcome social invitations with sexual overtones, commonly seen as flirting; and
- Unwelcome sexual advances.
- The Handbook says “unwelcome behaviour” is experienced when the victim feels bad or powerless, and when it causes anger/ sadness or negative self-esteem. Unwelcome behaviour is “illegal, demeaning, invading, one-sided and power-based”.

In addition, the PoSH Act mentions five circumstances that amount to sexual harassment:

- Implied or explicit promise of preferential treatment in her employment;
- Implied or explicit threat of detrimental treatment;
- Implied or explicit threat about the complainant's present or future employment status;
- Interference with the complainant's work or creating an offensive or hostile work environment;
- Humiliating treatment of the complainant that is likely to affect her health or safety.

What Is The Procedure For Complaint Under The Act?

- It is not compulsory for the aggrieved victim to file a complaint for the ICC to take action. The Act says that she “may” do so — and if she cannot, any member of the ICC “shall” render “all reasonable assistance” to her to complain in writing.
- If the woman cannot complain because of “physical or mental incapacity or death or otherwise”, her legal heir may do so.
- Under the Act, the complaint must be made “within three months from the date of the incident”. However, the ICC can “extend the time limit” if “it is satisfied that the circumstances were such which prevented the woman from filing a complaint within the said period”.
- The ICC “may”, before inquiry, and “at the request of the aggrieved woman, take steps to settle the matter between her and the respondent through conciliation” — provided that “no monetary settlement shall be made as a basis of conciliation”.
- The ICC may either forward the victim's complaint to the police, or it can start an inquiry that has to be completed within 90 days. The ICC has powers similar to those of a civil court in respect of summoning and examining any person on oath, and requiring the discovery and production of documents.
- When the inquiry is completed, the ICC must provide a report of its findings to the employer within 10 days. The report must also be made available to both parties.
- The identity of the woman, respondent, witness, any information on the inquiry, recommendation and action taken, should not be made public.

What Happens After The ICC Has Filed Its Report?



- If the allegations of sexual harassment are proved, the ICC will recommend to the employer to take action “in accordance with the provisions of the service rules” of the company. These may vary from company to company.
- The ICC may also recommend that the company deduct the salary of the person found guilty, “as it may consider appropriate”. The compensation is determined based on five aspects: suffering and emotional distress caused to the woman; loss in career opportunity; her medical expenses; income and financial status of the respondent; and the feasibility of such payment.
- If either the aggrieved woman or the respondent is not satisfied, they may appeal in court within 90 days.

6.5 COVID-19

Why in News

WHO says Covid-19 is no longer a global health emergency

Important Points

- The World Health Organization (WHO) has declared that Covid-19 no longer represents a “global health emergency”.
- The statement represents a major step towards ending the pandemic and comes three years after it first declared its highest level of alert over the virus.
- The statement represents a major step towards ending the pandemic and comes three years after it first declared its highest level of alert over the virus.
- Officials said the virus’ death rate had dropped from a peak of more than 100,000 people per week in January 2021 to just over 3,500 on 24 April 2023.
- WHO said at least seven million people died in the pandemic.

‘Great hope’

- Emergency Committee met for the 15th time and recommended to declare an end to the public health emergency of international concern.
- The removal of the highest level of alert did not mean the danger was over and said the emergency status could be reinstated if the situation changed.
- The worst thing any country can do now is to use this news as a reason to let down its guard, to dismantle the systems it has built, or to send the message to its people that Covid-19 is nothing to worry about.
- The World Health Organization first declared Covid-19 to be a public health emergency of international concern (PHEIC) in January 2020.
- This signalled the need for coordinated global action to protect people from the new virus.
- Vaccines were one of the major turning points in the pandemic.
- According to the WHO, 13 billion doses have been given, allowing many people to be protected from serious illness and death.
- But in many countries vaccines have not reached most of those in need.
- More than 765 million confirmed Covid infections have been recorded worldwide.



- The US and UK, like many other countries, have already talked about “living with the virus” and wound down many of the tests and social mixing rules.
- WHO has issued the public health emergency declaration seven times since 2005. The designation triggers a series of rules that guide response to threatening disease outbreaks, including the fast-tracking of tests and medicines.
- The declaration for COVID-19 was the first time the WHO announced an international health emergency since an Ebola outbreak in the Democratic Republic of Congo in 2019.
- WHO also released the 2023-2025 COVID-19 Strategic Preparedness and Response Plan (SPRP) which is designed to guide countries in transitioning to long-term management of COVID-19.
- This plan outlines important actions for countries to consider for 5 areas under 10 pillars.

6.6 CHILD MARRIAGE

Why in News

Global Polycrisis Creating Uphill Battle End Child Marriage

Important Points

- As per the new analysis by UNICEF, multiple crises including conflict, climate shocks, and the ongoing fallout from COVID-19 are threatening to reverse hard-earned gains made reducing child marriage in the last decade.

Child Marriages globally:

- Child Marriage is a marriage or an informal union entered into by an individual before reaching a certain age as specified by law.
- Globally, an estimated 640 million girls and women alive today were married in childhood.
- Despite decline in share of women being married in childhood from 21% to 19%, global reductions at a 20 times faster rate is needed to meet Sustainable Development Goal of ending child marriage by 2030.
- Sub-Saharan Africa currently shoulders the second largest global share of child brides i.e. 20%.
- Latin America and the Caribbean is also falling behind and are on course to have the second-highest regional level of child marriage by 2030.

Child Marriages in India:

- The minimum legal age for marriage in India for a girl is 18 years and for boys is 21 years.
- In India, the rate of child marriage has decreased from 27 per cent in 2015-16 to 23.3 per cent in 2021.
- While certain states like Rajasthan have made progress, others such as Uttar Pradesh, Madhya Pradesh, West Bengal, and Andhra Pradesh need to put in greater effort to reduce their rates.



- Poverty and social and educational backwardness significantly contribute to the prevalence of child marriages.
- The report also underlines that impoverishment and other challenges caused by the pandemic and climate change are compelling parents to marry off their daughters at a young age. Although legislation is crucial in preventing such marriages, its enforcement needs to be stricter.
- Additionally, addressing poverty and improving girls' education are vital measures.
- Child marriages affect the physical and mental well-being of girls, and deny them the opportunity to fulfill their potential.
- Moreover, they effectively exclude a significant portion of the population from national development, depriving the nation of their productive contributions.
- Just as an educated and employed woman contributes more to the nation than her male counterparts, a girl who is married off and denied education and employment opportunities represents a loss to the nation.
- Although India has recorded significant progress in recent decades, it still accounts for one-third of the global total.

Consequences of child marriage:

- Deprivation of basic rights such as Right to Education, Right to Rest and Leisure, Right to Protection from Mental.
- Physical Abuse including Rape and Sexual Exploitation.
- Risk of child and maternal health complications due to increased risk of early pregnancy.
- Disempowerment of Women since they remain dependent and underpowered due to lack of education.
- Mental health issues since they get isolated from friends and family members.

6.7 MATERNAL AND NEWBORN DEATHS

Why in News

Progress in tackling maternal as well as newborn deaths stagnant since 2015

Important Points

- Despite over 4.5 million women and babies dying every year during pregnancy, childbirth or the first weeks after birth, global progress on mitigating this has halted since 2015, revealed a new report by the United Nations (UN).
- Stagnating investments and little political intent, augmented by the COVID-19 pandemic, rising poverty and worsening humanitarian crises, have compounded an already precarious situation.
- The report on improving maternal and newborn health and survival and reducing stillbirth placed India at the top, accounting for 17 per cent of global maternal deaths, stillbirths and neonatal births (788,000 total deaths).



- Pregnant women and newborns continue to die at unacceptably high rates worldwide, and the COVID-19 pandemic has created further setbacks to providing them with the healthcare they need.
- Key findings of the report revealed how gains made between 2000 and 2010 were faster than they have been in the years since 2010.
- Maternal mortality ratio observed an annual reduction rate of 2.8 per cent between 2000 and 2009, which decreased to 1.3 per cent between 2010 and 2020. An improvement of reducing this indicator by 11.9 per cent is required in the next decade to meet global targets of an MMR equivalent to 70 deaths per 1,000 live births.
- Between 2000 and 2009, the stillbirth rate was reduced by 2.3 per cent and by 1.8 per cent between 2010 and 2021. A 5.2 per cent reduction is required between 2022 and 2030 to meet global targets of less than 12 stillbirths per 1,000 live births.
- Neonatal mortality rate (NMR) records a similar trend; a 3.2 per cent reduction between 2000 and 2009, 2.2 per cent reduction in 2010 and 2021.
- NMR needs to be reduced by another 7.2 per cent between 2022 and 2030 to meet the global target of ending newborn mortality.
- While progress has not been up to mark, meeting these targets by the end of this decade can still save close to eight million lives — over one million women, 2.6 million stillbirths and 4.2 million newborns.
- Doing so “will only be possible with high coverage of life-saving interventions combined with quality and equity across the continuum of care, from preconception to the postnatal period,” the report noted.
- Following India, countries with the highest number of absolute maternal and neonatal deaths and stillbirths in 2020 are Nigeria (540,000 deaths), Pakistan (474,000), Democratic Republic of Congo (241,000), Ethiopia (196,000), Bangladesh (121,000), China (108,000), Indonesia (103,000), Afghanistan (95,000) and Tanzania (94,000).
- These maternal and infant health indicators can be improved significantly by ramping up essential health services.
- Three standard measures can be used to assess this availability; at least four antenatal care contacts (ANC4), having a skilled attendant at birth (SAB) and receiving postnatal care (PNC) within the first two days after birth.
- While coverage rates for ANC4 have improved to 68 per cent in 2022 from 61 per cent in 2010, the figure is projected to move up by only one percentage point by 2025.
- The same goes for SAB coverage rates, up from 75 per cent to 86 per cent in the same duration, and an expected improvement to 88 per cent by 2025.
- For PNC, the coverage has recorded the highest improvement — up from 54 per cent to 66 per cent between 2010 and 2022. It is further projected to touch 69 per cent by 2025. The projections make it clear that ANC4 and PNC coverage will fail to meet global targets at the current pace.
- “Upward trends are promising, but rates of improvement to increase coverage must accelerate if 2025 targets are to be achieved. Further, even when pregnant women, new mothers and newborns have access to services, ensuring they benefit from respectful and quality care remains a critical gap,” the report noted.



- Bridging the emergency care lacuna for newborns and pregnant women is another hurdle without which achieving the targeted reduction in MMR, NMR and stillbirths will not be possible.
- Only 51 per cent of countries are expected to have care units for small and sick newborns planned in 80 per cent or more districts by 2025.
- A closer region-wise analysis reveals only 35 per cent of countries in sub-Saharan Africa are expected to achieve this goal. In contrast, 71 per cent of countries in Central and South Asia have planned for coverage in 80 per cent or more districts.

EmOC:

- Access to quality emergency obstetric care (EmOC) is critical for reducing maternal mortality.
- But only about 36 per cent of facilities providing EmOC in sub-Saharan Africa are considered functioning versus 62 per cent in northern Africa and western Asia and more than 80 per cent of EmOC facilities in other regions.
- Improvement on this front can significantly help reduce maternal deaths, a leading cause of which is postpartum haemorrhage — defined as the loss of more than 500 ml of blood within 24 hours after birth.
- A set of interventions to manage postpartum haemorrhage can reduce heavy bleeding by 60 per cent, a new study has revealed.
- A gender transformative approach can address maternal and newborn mortality.
- It is vital to stamp out the underlying factors which give rise to poor maternal health outcomes like socio-economic inequalities, discrimination, poverty and injustice.

6.8 SDGS

Why in News

Bhopal becomes first Indian city to track progress towards meeting SDGs

Important Points

- Bhopal in Madhya Pradesh has become the first city in India to adopt the localisation of the United Nations-mandated sustainable development goals (SDG).
- MP's capital city will now have voluntary local reviews (VLR) demonstrate local government's capacity and commitments.
- MP Government launched an Agenda for Action: Sustainable Urban Transformation in Bhopal, the UN said in a press release.
- The SDGs localisation is translating the agenda, Transforming our world: the 2030 Agenda for Sustainable Development (known as Agenda 2030), into local actions and impacts that contribute to the global achievement of the goals.
- Bhopal's VLR is the result of a collaboration between the Bhopal Municipal Corporation, UN-Habitat and a collective of over 23 local stakeholders to measurably demonstrate the city's aspirations for a sustainable and inclusive urban transformation, the press note said.



- It incorporated a mix of quantitative and qualitative approaches to the review of SDGs, with qualitative mapping of 56 developmental projects.
- In 2015, all 193 member states of the UN adopted the Agenda 2030, comprising 17 SDGs and 169 targets as a plan of action for people, planet and prosperity.
- The member states report their progress towards achieving the goals through a voluntary national review (VNR) to UN's high-level political forum (HLPF).
- Local and regional governments are increasingly engaging in their own subnational reviews, so-called VLRs, which have proven useful for cities and regions, according to the UN.
- Unlike the VNRs, local reviews do not directly have an official basis in the 2030 Agenda or other intergovernmental agreements, even though the 2030 Agenda underlines in several places the importance of governments working closely with regional and local authorities on its implementation.
- Cities and regions have a pivotal role in achieving Agenda 2030 as at least 60 per cent of the 169 targets could not possibly be achieved.
- VLRs have emerged as a powerful tool that forefronts local action. New York City became the first city to present its VLR to the HLPF in 2018. By 2021, some 33 countries had made 114 VLRs or similar review documents publicly available.

UN-Habitat: United Nations Human Settlements Programme

- The United Nations Human Settlements Programme (UN-Habitat) is mandated by the UN General Assembly to promote socially and environmentally sustainable towns and cities.
- UN-Habitat is the focal point for all urbanization and human settlement matters within the UN system.
- UN-Habitat works with partners to build inclusive, safe, resilient and sustainable cities and communities.
- UN-Habitat promotes urbanization as a positive transformative force for people and communities, reducing inequality, discrimination and poverty.

Mission

- UN-Habitat works in over 90 countries to promote transformative change in cities and human settlements through knowledge, policy advice, technical assistance and collaborative action.
- UN-Habitat's strategic plan 2020-2023 adopts a more strategic and integrated approach to solving the challenges and opportunities of twenty-first century cities and other human settlements.
- UN-Habitat's mission embodies the four main roles of the organization, which can be summarized as: think, do, share, and partner.
 - **THINK:** UN-Habitat's normative work, including groundbreaking research and capacity-building, sets standards, proposes norms and principles, shares good practice, monitors global progress and supports formulation of policies related to sustainable cities and human settlements.



o **DO:** UN-Habitat’s operational work takes various forms of technical assistance, drawing on its unique expertise in sustainable urbanization and crisis response. UN-Habitat implements projects to provide value-added and tailored support to countries.

6.9 7TH UN GLOBAL ROAD SAFETY WEEK

Why in News

Global Plan for the Decade of Action for Road Safety 2021-2030

Important Points

- The 7th UN Global Road Safety Week held on 15-21 May 2023. It called for policy makers to #RethinkMobility in order to make walking, cycling, and public transport safe and convenient so that people can make the shift to active, sustainable mobility.
- This modal shift is one of the recommendations in the Global Plan for the Decade of Action 2021-2030.
- Road traffic injuries are a leading cause of death and disability worldwide, with around 1.3 million people killed and as many as 50 million people injured each year.
- For people aged 5-29 years, there is no greater threat to their lives. Globally, 1 of every 4 deaths occur among pedestrians and cyclists.
- The Global Plan for the Decade of Action for Road Safety 2021-2030 reflects an ambitious target to reduce road traffic deaths and injuries by 50% by 2030.
- It highlights that they can be prevented by addressing the whole of the transport system, taking action to ensure safe roads, vehicles and behaviours as well as to improve emergency care.
- WHO, in collaboration with partners, organizes periodic UN Global Road Safety Weeks.
- This 7th edition focuses on sustainable transport, in particular the need to shift to walking, cycling and using public transport.
- Road safety is both a prerequisite for and an outcome of this shift.
- Road traffic injures are a leading cause of death and disability worldwide, with around 1.3 million people killed and as many as 50 million people injured each year.
- India is number one in world in road accidents.
- 99% of pedestrians are susceptible to injury in India.
- WHO invites all road safety and sustainable mobility partners to mark the 7th UN Global Road Safety Week by organizing events and activities and sharing messages and materials on social media with the hashtags:
#RethinkMobility
#StreetsforLifez
#RoadSafety

Key messages

- There is a desperate need for governments and their partners to rethink mobility.
- Safety must be at the core of efforts to reimagine how we move in the world.
- To ensure safety, road networks must be designed with the most at risk in mind.



- When safe, walking and cycling can contribute to making people healthy, cities sustainable, and societies equitable.
- Safe, affordable, accessible, and sustainable public transport is a solution for many of societies' ills.

India

- SAFE India advocated for 25 km/h speed limits around school zones in line with the guidelines of India's Ministry of Road Transport and Highways.
- They held a series of events on 16 May 2023 starting from an advocacy rally involving stakeholders and the police department at a major traffic post.
- This was followed by a public meeting with various decision makers and other stakeholders including civil society organizations, academia, road safety volunteers and the media.
- At this event, they handed over a petition to the Commissioner of Police and authorities from the Transport Department to obtain their commitment to implement 25 km/h speed limits around school zones.
- The Ability People engaged with local authorities and decision makers, civil society, communities, and the media to advocate for modal shift to public transport.

The Reliable IAS



7. INTERNATIONAL RELATION

7.1 UNITED NATIONS PERMANENT FORUM ON INDIGENOUS ISSUES (UNPFII)

Why in News

Adivasi rights activists have criticised India's representative at the UNPFII 22nd session for stating that the concept of 'indigenous people' was not applicable in the Indian context.

Important Points

- Indigenous peoples are the earliest known inhabitants of an area, especially one that has been colonized by a now-dominant group of settlers.
- They are distinct social and cultural groups that share collective ancestral ties to the lands and natural resources where they live, occupy or from which they have been displaced.

Theme of the session

- **Theme:** "Indigenous Peoples, human health, planetary and territorial health and climate change: a rights-based approach".

About UNPFII

- The UNPFII is an advisory body to the Economic and Social Council.
- It was established in 2000 with the mandate to deal with indigenous issues related to economic and social development, culture, the environment, education, health and human rights.
- The first meeting of the Permanent Forum was held in May 2002, with yearly sessions thereafter.
- The Forum usually meets for 10 days each year, at the UN Headquarters in New York.
- In addition to the six mandated areas (economic and social development, culture, the environment, education, health and human rights), each session is thematically focused on a specific issue.
- The Permanent Forum is one of three UN bodies that is mandated to deal specifically with indigenous peoples' issues.
- The others are the Expert Mechanism on the Rights of Indigenous Peoples and the Special Rapporteur on the rights of indigenous peoples.

7.2 ECUADOR, NIGERIA, PANAMA AND INDIA

Why in News

Ecuador, Nigeria, Panama tap India for generic medicine schemes

Important Points

- Ecuador, Panama and Nigeria are among countries that are in talks with India to make affordable generic medicines available to their citizens through a scheme similar to the Pradhan Mantri Bhartiya Janaushadhi Pariyojana (PMBJP).



Pradhan Mantri Bhartiya Janaushadhi Pariyojana:

- The PMBJP was launched by the department of pharmaceuticals in 2008 with the objective of making quality generic medicines available at affordable prices to the people.
- Under the scheme, the Jan Aushadhi Kendra stores make available quality medicines which are priced 50-90% less than branded medicines.
- In the past eight years, the estimated amount saved by citizens increased to 20,000 crore, with more than 10 lakh people visiting the Kendras every day.
- At present, there are more than 9,000 Jan Aushadhi Kendras functional across the country, and the Union government aims to increase the number to 10,000 by March 2024.

About Generic Medicine Scheme:

- Generic medicines are copies of branded drugs that are made after the patent of the original drug expires.
- They contain the same active ingredient as the branded drug and are used to treat the same condition in the same way.
- Jan Aushadhi Kendras are stores which makes quality generic medicines, consumables, and surgical items available at affordable prices for all.
- India is the largest supplier of generic drugs to the world, exporting \$19.02 billion worth of generics in FY22.

7.3 INDIA-UAE

Why in News

India-UAE Comprehensive Economic Partnership Agreement (CEPA) completes one year.

Important Points

- The historic India-UAE Comprehensive Economic Partnership Agreement (CEPA) which was signed between the two nations on 18 February 2022, officially entered into force in may 2023.
- Gems & Jewellery sector contributes a substantial portion of India's exports to the UAE and is a sector that is expected to benefit significantly from the tariff concessions obtained for Indian products under the India-UAE CEPA.
- Overall, India will benefit from preferential market access provided by the UAE on over 97 % of its tariff lines which account for 99% of Indian exports to the UAE in value terms particularly from labour-intensive sectors such as Gems and Jewellery, Textiles, leather, footwear, sports goods, plastics, furniture, agricultural and wood products, engineering products, pharmaceuticals, medical devices, and Automobiles.
- CEPA is expected to increase the total value of bilateral trade in goods to over US\$100 billion and trade in services to over US\$ 15 billion within five years.



- Although the agreement had envisioned a target of USD 100 billion worth of trade, given the size of India's market and the access that UAE would give to India, much more could be achieved.
- Noting that the agreement was an outcome of the vision of the leaders of the two nations, for India, UAE would be a gateway to the world.
- Indian Government was working on reducing the logistics cost so that the products from hinterland could also be competitive.
- USD 670 bn of exports (goods and service) during last fiscal year constituted 22-23% of the GDP.
- Indian exports to UAE increased from US\$ 28 bn to US\$ 31.3 bn.
- Some of the key sectors that have witnessed significant export growth on account of CEPA include: Mineral Fuels; Electrical Machinery (particularly telephone equipment); Gems & Jewellery; Automobiles etc.
- In the Goods Domain, UAE eliminated duties on 97.4% of its tariff line corresponding to 99% of imports from India.
- India has obtained immediate duty elimination on over 80% of its tariff lines corresponding to 90% of India's exports in value terms.
- Out of the 160 services subsectors, India has offered 100 sub-sectors to UAE and UAE has offered 111 sub-sectors to India.

7.4 WORLD PRESS FREEDOM INDEX 2023

Why in News

Recently World Press Freedom Index 2023 report published by the global media watchdog Reporters Without Borders (RSF).

Important Points

- According to the latest report from global media watchdog Reporters Without Borders (RSF), India has slipped to the 161st position out of 180 countries in the 2023 World Press Freedom Index.
- Report was released by RSF, it indicates a decline in India's ranking for press freedom.
- There are more than 100,000 newspapers (including 36,000 weeklies) and 380 TV news channels currently operating in the country.
- Since January 1, 2023 one journalist was killed in the country while 10 journalists are behind bars.
- This year's report shows the number of countries deemed "satisfactory" for their treatment of journalists rising slightly, but so does the number where the situation is "very serious".
- The ranking is based on five categories -- political, legislative, economic, sociocultural and safety of journalists.

India's Position

- India's rank in the Security indicator category is particularly concerning, as it has fallen to 172 out of 180 countries in the 2023 World Press Freedom Index. This means that



only eight countries have a worse ranking than India when it comes to ensuring the safety and security of journalists.

- In terms of this parameter, India is ranked worse than all other countries except for China, Mexico, Iran, Pakistan, Syria, Yemen, Ukraine, and Myanmar, with Myanmar having the lowest ranking.
- India's performance in the World Press Freedom Index is also poor compared to other countries in South Asia. Bangladesh ranks slightly worse than India at 163, while Pakistan ranks ahead of India at 150.
- Surprisingly, even Afghanistan, where the Taliban government is known to restrict independent journalism, has a better ranking than India, at 152. Bhutan has a much better ranking at 90, while Sri Lanka is ranked at 135.

Globally

- Nordic countries like Norway, Ireland, and Denmark ranked top three respectively while Vietnam, China, and North Korea were the bottom three countries on the index.
- Russia, where the government has largely completed its quelling of independent media, fell nine places to 164th. Despite the Russian invasion and its own issues with oligarchs, Ukraine rose 27 places to 79th.

Reporters Without Borders (RSF):

- It is an international NGO whose self-proclaimed aim is to defend and promote media freedom.
- Headquarters: Paris, France.
- It has consultative status with the United Nations.
- RSF defines press freedom as “the ability of journalists as individuals and collectives to select, produce, and disseminate news in the public interest independent of political, economic, legal and social interference and in the absence of threats to their physical and mental safety.”

7.5 KALADAN PROJECT

Why in News

India Flags off Shipment for Sittwe Port under Kaladan Project

Important Points

- Fifteen years after it was approved, the waterway component of the Kaladan Multimodal Transit Transport project (KMTTP) is set to become operational next month, with the first commercial cargo movement starting from Kolkata to Sittwe port in Myanmar.
- The deep-water port at Sittwe is part of the Rs 3,200 crore Kaladan Multi-Modal Transit Transport Project (KMTTP). Piloted by the Ministry of External Affairs and first approved in 2008, the project is aimed at boosting trade and commerce between India and Myanmar and easing access to other South Asian countries.
- Once ready, it will also provide a strategic alternate link connecting the landlocked northeastern states to the rest of India and easing the pressure on the existing narrow Siliguri corridor.



- Developed by the Inland Waterways Authority of India (IWAI) — an autonomous organisation under the Union shipping ministry — the construction of the Sittwe port was completed way back in 2018.
- But it could not be operationalised because of several obstacles, including delays in getting approvals and licenses because of the political turmoil in Myanmar and intense conflict in the Chin and Rakhine state.

Kaladan Project:

- Kaladan Multimodal Transit Transport Project (KMTTP) is a \$484-million project, built under grant assistance from India to create a multi-modal platform for cargo shipments from the eastern ports of India to Myanmar and further to North-eastern parts of the country through Myanmar.
- The primary aim of the project has been to create an alternative route to connect northeast and mainland India since the narrow Siliguri Chicken’s Neck corridor is the only feasible route for transportation.
- Kaladan Project is an example of the co-operation and commitments between India and Myanmar which will further enhance trade, commerce and economic ties with Myanmar, our north-eastern states, and South Asian countries.

Sittwe Port:

- Sittwe Port has been developed under a framework agreement between India and Myanmar for the construction and operation of a multimodal transit transport facility on Kaladan River connecting the port with Mizoram.
- The port connects to Paletwa in Myanmar through an inland waterway and from Paletwa to Zorinpui in Mizoram through a road component.
- This project will reduce distance from Kolkata to Sittwe by approximately 1328 km and will reduce the need to transport goods through the narrow Siliguri corridor.

Other Initiatives for improving connectivity in the region

- Protocol on Inland Water Transit and Trade between India and Bangladesh.
- India-Myanmar-Thailand Trilateral Highway (IMT) connecting Moreh in India with Mae Sot in Thailand via Myanmar.
- India-Japan Act East Forum (AEF) aims to promote connectivity within NER and between NER and Southeast Asia.
- Bangladesh-Bhutan-India-Nepal Motor Vehicles Agreement.

7.6 SHUTTLE DIPLOMACY

Why in News

Japan, South Korea mend ties in landmark regional shift

Important Points

- Japan and South Korea agreed to take forward ties and move past lingering historical disputes, pledging to transform a relationship that could have broad implications for the region.



- Japanese Prime Minister Fumio Kishida on Sunday became the first Japanese leader to visit Seoul in 12 years. The visit followed a trip to Japan in March by South Korean President Yoon Suk Yeol.
- What has been dubbed “shuttle diplomacy” promises to transform ties between two U.S. allies that have been bogged down over historical issues, chiefly Japan’s reluctance to apologise for atrocities committed during its occupation.
- Both have, however, been brought together by shared concerns not only over North Korea’s nuclear programme but over China’s regional muscle-flexing.
- Despite differences over Japan’s wartime actions, which remain an emotive issue in South Korea and China, President Yoon has risked domestic political fallout by making a case for moving forward and arguing that while historical issues continue to be resolved, relations still needed to look to the future.
- To that end, both sides in March agreed to come up with a fund to compensate South Koreans who suffered under Japanese forced labour programmes.
- Under the March agreement, the compensation will be paid by a joint fund, and not, as many in South Korea had demanded, funded entirely by Japanese companies, two of which had, in 2018, faced legal action in South Korea over their record during the 1910-45 occupation.
- Tens of thousands of Korean women were also forced into sexual slavery by the Japanese Army.
- Mr. Yoon’s March trip broke the ice, and took forward a rapprochement that both leaders have backed strongly. The current visit has seen both sides explore closer economic and defence ties.
- The Japanese leader also invited Mr. Yoon to the G-7 Summit to be hosted in Tokyo later this month, which would have been an unlikely prospect in the recent past.
- Japanese leaders have long repeated the mantra that everything had already been settled through the 1965 deal and refused to offer a formal apology in specific terms about Japan’s wartime crimes against Koreans.

7.7 INDIA IN AFRICA AND MIDDLE EAST

Why in News

India among top 5 countries developing oil pipelines, 49% of projects in Africa and Middle East

Important Points

- India is among the top five developers of oil pipelines, which are under construction and proposed, according to an analysis by Global Energy Monitor, a non-profit that tracks energy projects.
- The country is constructing 1,630 km long oil transmission pipelines, ranking second globally in the pipelines under construction category. With 1,194 km long proposed pipelines, India secured the 10th spot, the analysis showed.
- Along with India, the other top countries with pipelines under construction and proposed include the United States, Iraq, Iran and Tanzania.



- Some 9,100 km of oil transmission pipelines are globally under construction and 21,900 km are proposed.
- These pipelines in development are estimated to cost \$131.9 billion in capital expenditure.
- Overall, some 31,000 km of oil pipelines are under development globally. This represents a nearly 30 per cent increase from this time last year.
- Of this, 49 per cent of oil pipelines under development are in Africa and the Middle East. The cost of the infrastructure is estimated to be around \$25.3 billion.
- The two regions are home to 4,400 km of crude oil transmission pipelines at an estimated cost of \$14.4 billion.
- Also, 10,800 km of pipelines are proposed in these regions at an estimated cost of \$59.8 billion.
- The crude expansion in Africa and the Middle East is pumped as a panacea to the chaos of global energy demand, which is driven in large part by Europe's scramble for oil and gas outside of Russia.
- The infrastructure is expensive, and it will leave behind stranded assets as the world moves towards cleaner energy.
- Oil pipelines, for example, can become stranded assets when they are no longer in use and may end up as a liability before the end of their economic lifetime.
- The top five companies developing the oil transmission pipelines include state-owned enterprises as well as private companies: Iran's Ministry of Petroleum, the China National Petroleum Corporation, Iraq's Ministry of Oil, India's Numaligarh Refinery Limited and France's TotalEnergies.
- In India, Paradip Numaligarh Crude Pipeline (under construction) and New Mundra–Panipat Oil Pipeline (proposed) will be among the longest oil pipelines in the world.
- Paradip Numaligarh Crude Pipeline will begin in Paradip port. It will pass through Odisha, West Bengal, Jharkhand, Bihar and Assam and end in the Numaligarh refinery in Assam.
- The project is owned by Numaligarh Refinery Ltd, a public-sector oil company in Assam. It is expected to start functioning in 2024.
- The proposed New Mundra–Panipat Oil Pipeline will begin in Chudva in Kachchh district, Gujarat and pass through Nagaur, Jalore, Jhunjhunu, Sikar, Jodhpur and Pali districts in Rajasthan, before terminating in the Indian Oil Company Ltd's Panipat refinery in Haryana, India.

7.8 INDIAN OCEAN CONFERENCE

Why in News

6th Indian Ocean Conference (IOC 2023) took place in Bangladesh.

Important Points

- The 6th IOC took place in Dhaka, Bangladesh, and is being organised by India Foundation in association with the Ministry of Foreign Affairs, Government of



Bangladesh, and S. Rajaratnam School of International Studies in Singapore. The theme for the conference is “Peace, Prosperity and Partnership for a Resilient Future”.

- The conference aims to bring together a distinguished gathering of key stakeholders to chart the course for strengthening the Indian Ocean Region.
- There are 150 attendees from at least 25 nations present at the meeting, but Myanmar, currently facing international pressure regarding the Rohingya crisis, is not in attendance.
- Bangladesh government focused on maritime diplomacy among members of the Indian Ocean region to secure a conflict-free environment that can contribute to regional prosperity.
- Bangladesh government also emphasizes the need to promote a “culture of peace” in the IOR.
- Bangladesh requests assistance from the international community to facilitate the return of Rohingya refugees to Myanmar.

India’s Role

- External Affairs Minister Dr S. Jaishankar emphasised that the vision of the Indo Pacific has become a reality in the 21st century.
- He made this statement during the 6th Indian Ocean Conference-2023 in the Bangladeshi capital, where he also acknowledged Bangladesh’s recent announcement of the “Indo Pacific Outlook” and warned against countries that try to impede the region’s progress.
- Jaishankar noted that the Indo-Pacific represents contemporary globalisation, and a departure from the framework established in 1945, which some countries still have a vested interest in perpetuating.

India’s outlook at IOC

- Improving and enhancing connectivity should be the priority of countries in Indian Ocean Regions (IORs).
- India has shown its commitment to progress of IOR through dedicated bodies like Indian Ocean Rim Association (IORA), Indian.
- Ocean Naval Symposium (IONS), Neighbourhood First policy etc.

About Indian Ocean Conference- IOC:

- The Indian Ocean Conference (IOC) was started in 2016 and in the last six years it has emerged as the flagship consultative forum for countries in the region over regional affairs.
- The Conference endeavours to bring critical states and principal maritime partners of the region together on a common platform to deliberate upon the prospects of regional cooperation for Security And Growth for All in the Region (SAGAR).
- The first edition of the Conference was held in Singapore in 2016. It was attended by over 300 delegates from 22 countries including ministers, political leaders, diplomats, strategic thinkers, academics, and media.



- The second IOC was hosted in 2017 in Colombo, Sri Lanka and was attended by representatives from over 40 countries. The third IOC was hosted in 2018 in Hanoi, Vietnam, and was attended by delegates from 44 countries.
- The fourth edition of IOC was hosted in Maldives in 2019 and was addressed by speakers from 36 countries and attended by delegates from 40 countries.
- The fifth edition of IOC was organised in 2021 in Abu Dhabi, UAE and was addressed by 37 speakers from 21 countries.

7.9 SCO

Why in News

SCO members adopt India's proposal for digital public infra

Important Points

- SCO nations have adopted India's proposal for developing digital public infrastructure (DPI).
- India continues to make significant strides aimed at expanding access to digital technologies and services like Aadhaar, Unified Payments Interface, DigiLocker, and CoWin.
- Indian minister chaired the meeting of ICT ministers of Shanghai Cooperation Organisation (SCO) member countries where they unanimously adopted India's proposal.
- DPI is important from the perspective of making sure that technology is democratized.
- There was also a need felt for interoperability between different systems being developed by the member states and the body recognized the need for setting up an organization for setting common standards for interoperability of digital systems among member states.
- Approximately 74 billion UPI transactions worth Rs125.94 lakh crore were conducted in 2022, National Payments Cooperation of India data show.
- In 2021, the UPI platform handled more than 38 billion transactions, amounting to Rs71.54 lakh crore.
- Using CoWin, India's Covid-19 vaccination app, 2.2 billion doses have been administered so far.
- India Stack, which details these digital assets, is a "set of open APIs and digital public goods that aim to unlock the economic primitives of identity, data, and payments at population scale.
- Although the name of this project bears the word India, the vision of India Stack is not limited to one country; it can be applied to any nation, be it a developed one or an emerging one.
- The government has previously asserted that several nations have shown an interest in India Stack.
- India also shared with SCO member states about investing \$3 billion to take mobile connectivity to villages in remote areas and \$5 billion to bring broadband connectivity to all 250 thousand village council.



- One of the key outcomes of the India Stack is UPI, which has transformed the payments system in India, pushing the financial inclusion metric by 5% compounded annual growth rate.
- The export of UPI to other countries has grown significantly, with the international arm of NPCI partnering with countries such as the UK, the UAE, Singapore, Malaysia, Hong Kong, Bhutan, Nepal.
- The recent signature by SCO member states to adopt India’s proposal for developing digital public infrastructure as the way forward for deploying digital technologies in members is a significant recognition of India’s efforts towards having digitally inclusive growth at the global scale.

About SCO

- The SCO grouping includes Kazakhstan, China, Kyrgyzstan, Pakistan, Russia, Tajikistan, Uzbekistan and India. It also has four Observer States - Afghanistan, Belarus, Iran, and Mongolia. Moreover, the intra-governmental body also has six Dialogue Partners namely Armenia, Azerbaijan, Cambodia, Nepal, Sri Lanka, and Turkey.
- SCO is a permanent intergovernmental international organization.
- It’s a Eurasian political, economic and military organization aiming to maintain peace, security and stability in the region.
- It was created in 2001.
- The SCO Charter was signed in 2002, and entered into force in 2003.
- Since its inception in 2001, the SCO has mainly focused on regional security issues, its fight against regional terrorism, ethnic separatism and religious extremism.
- To date, the SCO’s priorities also include regional development.
- The SCO has been an observer in the UN General Assembly since 2005.
- In April 2010, the UN and SCO Secretariats signed a Joint Declaration on Cooperation.

7.10 PALESTINIAN

Why in News

UN to commemorate 1948 Palestinian ‘catastrophe’ for the first time

Important Points

- For the first time, the United Nations will officially commemorate the flight of hundreds of thousands of Palestinians from what is now Israel on the 75th anniversary of their exodus — an action stemming from the U.N.’s partition of British-ruled Palestine into separate Jewish and Arab states.
- Palestinian President Mahmoud Abbas is headlining U.N. commemoration of what Palestinians call the “Nakba” or “catastrophe.”
- Palestinian U.N. ambassador, called the U.N. observance “historic” and significant because the General Assembly played a key role in the partition of Palestine.
- The Palestinians still don’t have an independent state, and they don’t have the right to return to their homes as called for in a General Assembly resolution adopted in December 1948.



- Israel's condemned the commemoration, calling it an "abominable event" and a "blatant attempt to distort history. Israel's said those who attend will be condoning antisemitism and giving a green light to Palestinians "to continue exploiting international organs to promote their libelous narrative."
- The General Assembly, which had 57 member nations in 1947, approved the resolution dividing Palestine by a vote of 33-13 with 10 abstentions.
- The Jewish side accepted the U.N. partition plan and after the British mandate expired in 1948, Israel declared its independence.
- The Arabs rejected the plan and neighboring Arab countries launched a war against the Jewish state.
- The Nakba commemorates the estimated 700,000 Palestinians who fled or were forced from their homes in 1948.
- The fate of these refugees and their descendants — estimated at over 5 million across the Middle East — remains a major disputed issue in the Arab-Israeli conflict.
- Israel rejects demands for a mass return of refugees to long-lost homes, saying it would threaten the country's Jewish character.
- As the 75th anniversary approached, the now 193-member General Assembly approved a resolution last year by a vote of 90-30 with 47 abstentions requesting the U.N. Committee on the Exercise of the Inalienable Rights of the Palestinian People organize a high-level event to commemorate the Nakba.
- The United States was among the countries that joined Israel in voting against the resolution, and the U.S. Mission said no American diplomat will attend Monday's commemoration.
- U.N. recognition as a state enabled the Palestinians to join treaties, take cases against Israel's occupation to the International Criminal Court and the International Court of Justice, which is the U.N.'s highest tribunal, and in 2019 to chair the Group of 77, the U.N. coalition of 134 mainly developing nations and China.
- The Nakba commemoration comes as Israeli-Palestinian fighting has intensified.

About Palestine

- Palestine was among former Ottoman territories placed under UK administration by the League of Nations in 1922.
- All of these territories eventually became fully independent States, except Palestine, where in addition to "the rendering of administrative assistance and advice" the British Mandate incorporated the "Balfour Declaration" of 1917, expressing support for "the establishment in Palestine of a national home for the Jewish people".
- During the Mandate, from 1922 to 1947, large-scale Jewish immigration, mainly from Eastern Europe took place, the numbers swelling in the 1930s with the Nazi persecution.
- Arab demands for independence and resistance to immigration led to a rebellion in 1937, followed by continuing terrorism and violence from both sides.
- UK considered various formulas to bring independence to a land ravaged by violence.
- In 1947, the UK turned the Palestine problem over to the UN.



7.11 G7 HIROSHIMA SUMMIT

Why in News

Leaders of seven of the most powerful democracies will gather this weekend for the Group of Seven summit in Hiroshima

Important Points

- Leaders are expected to discuss not only economics, but politics, and Russia's February 2022 full-scale invasion of Ukraine.
- China, which has become increasingly assertive in its claims in the disputed South China Sea and over self-ruled Taiwan, is also likely to be an issue along with North Korea's weapons testing.

Here's a look at the G7 and what to expect:

What is the G7 Summit?

- The G7 is an informal group of leading industrialised democracies with no permanent secretariat or legal status.
- It consists of Canada, France, Germany, Italy, Japan, the United Kingdom and the United States.
- The group was founded – as the G6 – following the 1973 oil crisis as a forum for the richest nations to discuss global economic issues. Its countries have a combined annual gross domestic product (GDP) of \$40 trillion – making up just under half the world economy.
- The founding members held their first summit in 1975 in France to discuss how to tackle the deep recession that followed the embargo imposed by the oil production cartel, OPEC.
- Canada became the seventh member a year later.
- Russia joined to form the G8 in 1998, but was expelled after Moscow's 2014 annexation of Crimea.
- The presidency of the summits revolves among the seven members, and this year it is Japan's turn to host. In 2024, it will be Italy.
- Two representatives of the European Union (EU) also join, and it has become customary in recent years for leaders from some non-G7 countries and international organisations to take part in some sessions.
- The leaders discuss a wide range of issues, including economic policy, security, climate change, energy and gender.

Who is attending?

- This year, the leaders of Australia, Brazil, Comoros (chair of the African Union), Cook Islands (chair of the Pacific Islands Forum), India (G20 president), Indonesia (chair of Association of Southeast Asian Nations), South Korea and Vietnam are invited, reflecting Japanese Prime Minister Fumio Kishida's stress on the importance of reaching out to developing countries, as well as US allies and partners.



- The invitations to leaders outside of the G7 are meant to extend cooperation to a broader range of countries.
- But the economic expansion of nations including Brazil, China and India (all members of the BRICS grouping which also includes Russia and South Africa) has raised questions about the G7's relevance and its role in leading a world economy that is increasingly reliant on growth beyond the wealthiest nations.
- Leaders of the United Nations, the International Energy Agency, the International Monetary Fund, the Organization for Economic Co-operation and Development, the World Bank, the World Health Organization and the World Trade Organization are also on the guest list.

What will be discussed?

- The summit comes just days after Ukrainian President Volodymyr Zelenskyy completed a whirlwind trip around Europe to meet a number of the G7 leaders.
- Zelenskyy's tour was aimed at building political support ahead of a widely anticipated counteroffensive to reclaim lands occupied by Moscow's forces, and securing new weapons commitments.
- G7 leaders are expected to strongly condemn Russia's war on Ukraine while pledging their continuing support for Ukraine. Zelenskyy will join the session via the internet.
- Support for Ukraine and sanctions against Russia will be the main topics of discussion.
- There will also be a focus on Beijing's escalating threats against Taiwan, the self-governing democratic island Beijing claims as its own, and ways to reduce Western democracies' economic and supply chain dependency on China.
- The seven leaders have also signalled that China's use of punitive trade measures will be high on the agenda of the three-day annual summit.
- China's use of coercive economic moves has been an issue of growing concern in the Asia Pacific and Europe in recent years, with Japan, South Korea, Australia and Lithuania all facing trade restrictions following disputes with Beijing on issues ranging from the origins of the COVID-19 pandemic to Taiwan.
- For developing nations, including many former colonies of Western powers with varied views on and ties to Russia and China, the G7 is set to offer more support in health, food security and infrastructure to help underpin closer ties.
- Developed countries promised in 2009 to transfer \$100bn annually between 2020 and 2025 to vulnerable states hit by increasingly severe climate-linked impacts and disasters – but that target was never met.
- Rich G7 nations owe poor ones an estimated \$13 trillion in unpaid development aid as well as support in the fight against climate change, according to the British NGO Oxfam.
- Not originally on the agenda, the rapid growth of generative artificial intelligence (AI) chatbot ChatGPT means G7 leaders can no longer ignore the issues it raises.

Choice of venue

- Hiroshima known throughout the world as the first city to be hit by a nuclear weapon.



- The 1945 bombing helped end World War II, but devastated Hiroshima and Nagasaki, killing thousands of civilians.
- Hiroshima choice of venue reflects his determination to put nuclear disarmament and non-proliferation at the top of the summit's agenda.
- A path to nuclear disarmament has appeared more difficult with Russia's recent nuclear weapons threats in Ukraine, as well as North Korea's repeated ballistic missile tests and Iran's expansion of its nuclear programme.

7.12 FIPIC SUMMIT

Why in News

3rd Forum for India-Pacific Islands Cooperation (FIPIC) Summit 2023, PM Modi Interacted with Leaders from Pacific Island Nations.

Important Points

- Papua New Guinea Prime Minister bending down to touch Prime Minister Narendra Modi's feet has drawn a lot of interest.
- This happened right after the Indian PM landed in the capital city of Port Moresby for his first visit to the country, the first by any Indian prime minister, for the Forum for India-Pacific Islands Cooperation (FIPIC) summit, 2023.

What is FIPIC?

- The Forum for India-Pacific Islands Cooperation (FIPIC) was launched during Indian PM visit to Fiji in November 2014.
- FIPIC includes 14 island countries – Cook Islands, Fiji, Kiribati, Marshall Islands, Micronesia, Nauru, Niue, Palau, Papua New Guinea, Samoa, Solomon Islands, Tonga, Tuvalu, and Vanuatu – that are located in the Pacific Ocean, to the northeast of Australia.

What was the idea behind FIPIC?

- According to the group's website, despite their relatively small size and considerable distance from India, many of these islands have large exclusive economic zones (EEZs).
- EEZs is the distance up to which a coastal nation has jurisdiction over the ocean, including both living and non-living resources. It generally goes to 200 nautical miles or 230 miles (around 370 km) beyond a nation's territorial sea.
- India's larger focus is on the Indian Ocean where it has sought to play a major role and protect its strategic and commercial interests.
- The FIPIC initiative then marks a serious effort to expand India's engagement in the Pacific region as well.
- The references to "developments in the Indo-Pacific region" and a "vision for a free, open and inclusive Indo-Pacific" are believed to be related to China's increasing assertion in the region.



- PM also said at the FIPIC summit, “A friend in need is a friend indeed”, and told leaders of the 14 countries that those that they had considered trustworthy were “not standing by our sides in times of need” – again believed to be a reference to China.
- Based on 2021-22 data, the total annual trade between India and Pacific Island countries is valued at \$570 million, in commodities such as plastics, pharmaceuticals, sugar, mineral fuel and ores.
- Among them, Papua New Guinea is the biggest trade partner in terms of value.

And what is the FIPIC summit?

- This was the third FIPIC summit to be held.
- FIPIC-I, in 2014, took place at Suva, Fiji’s capital city.
- India announced various development assistance initiatives and other cooperation projects in areas of climate change, trade, economy, telemedicine and teleeducation, IT, grants for community development projects, etc.
- At FIPIC-II in 2015 in Jaipur, India again announced similar initiatives. India also approached the event from a large diplomatic perspective, calling for a “dedicated seat for Small Island Developing States in an expanded and reformed UN Security Council in both categories”.
- In 2019, the India-Pacific Small Island Developing States (PSIDS) Leaders’ Meeting (comprising delegations of 12 out of the 14 Pacific Islands countries) was held on September 24, 2019 in New York on the sidelines of the 74th UN General Assembly.
- The Indian government then announced an allocation of \$12 million grant (\$1 million to each PSIDS) towards implementation of high-impact developmental projects in the area of their choice.
- In addition, a concessional Line of Credit of \$150 million, which can be availed by the PSIDS for undertaking solar, renewable energy and climate related projects based on each country’s requirement, was announced.

What happened at the FIPIC summit 2023?

- The third FIPIC summit was to be held in early 2020 but was postponed because of the Covid-19 pandemic. During his concluding remarks, the prime minister announced initiatives such as:
 - Establishment of a super-specialty cardiology hospital in Fiji. The Indian government will bear the full cost of this mega greenfield project.
 - Sea ambulances will be provided to all the 14 Pacific island countries.
 - In 2022, a Jaipur Foot Camp was conducted in Fiji where prosthetic limbs were provided free of cost to more than 600 people. Similar Foot Camp will be set up in Papua New guinea this year and starting from 2024, two such camps will be organised every year in the Pacific island countries.
 - The PM also pledged to provide desalination units for the people of every Pacific Island country.



8. GOVERNMENT SCHEME

8.1 REVAMPED CGTMSE SCHEME

Why in News

The Union Minister for MSME has recently launched the revamped Credit Guarantee Fund Trust for Micro and Small Enterprises (CGTMSE) Scheme.

Important Points

- CGTMSE has been provided with an additional corpus support of Rs 9,000 crore in the Union Budget for FY 2023-24 to revamp its Scheme to provide guarantee for additional Rs 2 lakh crore to Micro & Small Enterprises.
- Accordingly, major revamp measures were launched & disseminated to lending institutions.
- The modifications included reduction in guarantee fees for loans upto Rs 1 crore by 50% bringing the minimum guarantee fee to the level of 0.37% pa only.
- Another major change announced was raising of ceiling for guarantee from Rs 2 crore to Rs 5 crore and enhancing the threshold limit for claim settlement without initiation of legal action to Rs 10 lakh.
- It was also announced that CGTMSE will collaborate with National Institute for Micro, Small and Medium Enterprises (ni-msme), Hyderabad for setting up a Centre of Financial Inclusion for MSME.

About CGTMSE Scheme

- The Ministry of MSME launched Credit Guarantee Fund Scheme for Micro and Small Enterprises on 30th August 2000 to ensure better flow of credit to micro and small enterprises by minimizing the risk perception of financial institutions and banks.
- To operationalise the scheme, Government of India and SIDBI set up the Credit Guarantee Fund Trust for Micro and Small Enterprises (CGTMSE).
- The corpus of CGTMSE is being contributed by the Government and SIDBI in the ratio of 4:1 respectively.

8.2 VIVAD SE VISHWAS I-RELIEF TO MSMES SCHEME

Why in News

The Department of Expenditure, Ministry of Finance, has launched the scheme, “Vivad se Vishwas I – Relief to MSMEs” for providing relief to Micro, Small and Medium Enterprises (MSMEs) for COVID-19 period.

Important Points

- The scheme was announced in the Union Budget 2023-24 by Union Finance Minister Smt. Nirmala Sitharaman. In Para 66 of the Union Budget speech, Smt. Sitharaman had announced :-
“In cases of failure by MSMEs to execute contracts during the COVID period, 95 per cent of the forfeited amount relating to bid or performance security will be returned to

them by Government and Government undertakings. This will provide relief to MSMEs”.

- COVID-19 pandemic, one of the biggest crises in the human history, had a devastating impact on economy, especially MSMEs. The relief provided under this scheme is in continuation to the efforts of government in promoting and sustaining the MSME sector.
- Under the scheme, Ministries have been asked to refund performance security, bid security and liquidated damages forfeited/ deducted during the COVID-19 pandemic. Certain relief has also been provided to MSMEs debarred for default in execution of contracts during the COVID-19 period.
- The Ministry of Finance, through this scheme, decided to give following additional benefits to eligible MSMEs, affected during the COVID-19 period:
 - o 95% of the performance security forfeited shall be refunded.
 - o 95% of the Bid security shall be refunded.
 - o 95% of the Liquidated Damages (LD) deducted shall be refunded.
 - o 95% of the Risk Purchase amount realized shall be refunded.
 - o In case any firm has been debarred only due to default in execution of such contracts, such debarment shall also be revoked, by issuing an appropriate order by the procuring entity.
- However, in case a firm has been ignored for placement of any contract due to debarment in the interim period (i.e. date of debarment and the date of revocation under this order), no claim shall be entertained.
 - o No interest shall be paid on such refunded amount.

Eligibility for Vivad se Vishwas Scheme I

- Under the “Vivad se Vishwas I – Relief for MSMEs” scheme, relief will be provided to Micro, Small, and Medium Enterprises (MSMEs) in all contracts for the procurement of goods and services by any department, ministry, attached/subordinate office, an autonomous body, Central Public Sector Enterprise (CPSE) or public sector financial institution, etc., provided that the MSME meets the following criteria:
 1. The supplier or contractor must have been registered as an MSME with the Ministry of MSME as of 31.03.2022.
 2. The original completion or delivery period of the contract falls between 19.02.2020 and 31.03.2022.
- This relief aims to provide support to MSMEs impacted by the COVID-19 pandemic and help them overcome the financial difficulties caused by it.

8.3 KRISHI MAPPER APP

Why in News

Recently, the Union Agriculture Minister inaugurated the Krishi Mapper App.

Important Points

- The ministry has set national targets for the production of food grains, pulses, and oilseeds at 3320, 292.5, and 440 lakh tonnes, respectively, for the year 2023-24.



- India had a record production of food grains, pulses, oilseeds, and sugarcane in 2022-23, estimated at 3235, 278, 400, and 4688 lakh tonnes, respectively.
- Mustard Mission for the last three years, has enhanced rapeseed and mustard production by 40% from 91.2 to 128.2 lakh tonnes.

About the App

- It is an integrated app for Geospatial Data in Agriculture.
- It will minimize the duplication of efforts and provide ready-to-analysis data products to innovators in India.
- It will facilitate Ease of access to credit, Near Real-time stress watch for the sector at various levels of granularity with the ability to drill down to individual land parcels under stress and Near Real-time assessment and processing of claims.
- It may help in the land-based intervention viz. Geotagging of the farms under different schemes and integrating with crop data, mapping the crops along with attributes and collecting photographs periodically based on Crop Phenological Stage Impact Assessment and Cluster/geography wise performance Benchmarking and Monitoring Natural Farming Conversions.

8.4 SOCIAL SECURITY SCHEMES

Why in News

Pradhan Mantri Suraksha Bima Yojana (PMJJBY), Pradhan Mantri Jeevan Jyoti Bima Yojana (PMSBY) and Atal Pension Yojana (APY) complete 8 years of providing social security cover

Important Points

- The three schemes are dedicated to the welfare of the citizens, recognising the need for securing human life from unforeseen eventualisation and financial uncertainties.
- In order to ensure that the people from the unorganised section of the country are financially secure, the Government launched two insurance schemes —PMJJBY and PMSBY; and also introduced APY to cover the exigencies in the old age.

1. Pradhan Mantri Jeevan Jyoti Bima Yojana (PMJJBY)

- **Scheme:** PMJJBY is a one-year life insurance scheme renewable from year to year offering coverage for death due to any reason.
- **Eligibility:** Persons in the age group of 18-50 years having an individual bank or a post office account are entitled to enroll under the scheme. People who join the scheme before completing 50 years of age can continue to have the risk of life covered up to age of 55 years upon payment of regular premium.
- **Benefits:** Life cover of Rs. 2 Lakh in case of death due to any reason against a premium of Rs. 436/- per annum.
- **Enrolment:** Enrolments under the scheme can be done by visiting the branch/ BC point or website of the bank of the account holder or at the post office in case of post office



savings bank account. The premium under the scheme is auto debited every year from the subscriber's bank account based on a one-time mandate from the account holder.

- **Achievements:** As on 26.04.2023, the cumulative enrolments under the scheme have been more than 16.19 crore and an amount of Rs. 13,290.40 crore has been paid for 6,64,520 claims.

2. Pradhan Mantri Suraksha Bima Yojana (PMSBY)

- **Scheme:** PMSBY is a one-year accidental insurance scheme renewable from year to year offering coverage for death or disability due to accident.
- **Eligibility:** Persons in the age group of 18-70 years having an individual bank or a post office account are entitled to enroll under the scheme.
- **Benefits:** Accidental death cum disability cover of Rs.2 lakh (Rs.1 lakh in case of partial disability) for death or disability due to an accident against a premium of Rs.20/- per annum.
- **Enrolment:** Enrolment under the scheme can be done by visiting the branch/ BC point or website of the bank of the account holder or at the post office in case of post office savings bank account. The premium under the scheme is auto debited every year from the subscriber's bank account based on a one-time mandate from the account holder.
- **Achievements:** As on 26.04.2023, the cumulative enrolments under the scheme have been more than 34.18 crore and an amount of Rs. 2,302.26 crore has been paid for 1,15,951 claims.

3. Atal Pension Yojana (APY)

- The Atal Pension Yojana (APY) was launched to create a universal social security system for all Indians, especially the poor, the under-privileged and the workers in the unorganised sector.
- It is an initiative of the Government to provide financial security and cover future exigencies for the people in the unorganised sector. APY is administered by Pension Fund Regulatory and Development Authority (PFRDA) under the overall administrative and institutional architecture of the National Pension System (NPS).
- **Eligibility:** APY is open to all bank account holders in the age group of 18 to 40 years who are not income tax payers and the contributions differ, based on pension amount chosen.
- **Benefits:** Subscribers would receive the guaranteed minimum monthly pension of Rs. 1000 or Rs. 2000 or Rs. 3000 or Rs. 4000 or Rs. 5000 after the age of 60 years, based on the contributions made by the subscriber after joining the scheme.
- **Disbursement of the Scheme Benefits:** The monthly pension is available to the subscriber, and after him to his spouse and after their death, the pension corpus, as accumulated at age 60 of the subscriber, would be returned to the nominee of the subscriber.
- In case of premature death of subscriber (death before 60 years of age), spouse of the subscriber can continue contribution to APY account of the subscriber, for the



remaining vesting period, till the original subscriber would have attained the age of 60 years.

- **Contribution by Central Government:** The minimum pension would be guaranteed by the Government, i.e., if the accumulated corpus based on contributions earns a lower than estimated return on investment and is inadequate to provide the minimum guaranteed pension, the Central Government would fund such inadequacy. Alternatively, if the returns on investment are higher, the subscribers would get enhanced pensionary benefits.
- **Payment frequency:** Subscribers can make contributions to APY on monthly/ quarterly / half-yearly basis.
- **Withdrawal from the Scheme:** Subscribers can voluntarily exit from APY subject to certain conditions, on deduction of Government co-contribution and return/interest thereon.
- **Achievements:** As on 27.04.2023 more than 5 crore individuals have subscribed to the scheme.

8.5 THALASSEMIA BAL SEWA YOJANA

Why in News

Health Minister launches Phase-III of Thalassemia Bal Sewa Yojana.

Important Points

- Union Minister of State for Health and Family Welfare launched the third phase of Thalassemia Bal Sewa Yojana (TBSY) of the Health Ministry which is being supported by Coal India Limited.

About TBSY

- Thalassemia is an inherited blood disorder that causes a body to have less hemoglobin than normal.
- The Union Health Ministry has been implementing the TBSY since 2017 under the National Health Mission (NHM) and had recently completed its second phase in March 2023.
- The Coal India CSR-funded Hematopoietic Stem Cell Transplant (HSCT) program is a unique initiative aimed at providing a one-time cure opportunity to underprivileged Thalassemia patients who have a matched sibling donor but do not have the financial resources to cover the cost of the procedure.
- The program has successfully completed 356 bone marrow transplants for Thalassemia patients across 10 empanelled hospitals in India during the two phases.

Thalassemia

- Thalassemia is a genetic blood disorder commonly characterised by the abnormal production of haemoglobin in the body.
- The abnormality results in improper oxygen transport and destruction of red blood cells.



- It has wide-ranging effects on the human body like iron overload, bone deformities and in severe cases can cause heart diseases.
- The disease has no cure and people living with thalassemia require regular blood transfusions as an effective measure to prolong life.

India's Position

- India is the thalassemia capital of the world with 40 million carriers and over 1, 00,000 patients.
- There is no prevention and control programme at the national level.
- With preventive health checks not being the norm in India, people suffering from thalassemia are unknowingly passing on this genetic disorder to their children.
- Over 1, 00,000 patients across the country die before they turn 20 due to lack of access to treatment.

E-Raktkosh portal

- e-Raktkosh portal was launched in 2016 by the Ministry of Health and Family Welfare.
- It is a Centralized Blood Bank Management System that provides a comprehensive IT solution to standardize and streamline the standard operating procedures, guidelines and workflow of blood banks across the country.

8.6 BHARAT EMART

Why in News

India Post to onboard ONDC; inks MoU with CAIT, Tripta Technologies

Important Points

- India Post signed an MoU with the Confederation of All India Traders (CAIT) and Tripta Technologies for facilitating the operationalisation of a portal called 'Bharat EMart'.
- The pact facilitates the operationalisation of the 'Bharat EMart' portal, which will provide the facility of pick-up of consignments from the premises of traders and ensure delivery at the doorsteps of the consignees across the country.
- An estimated eight crore traders associated with CAIT will be benefitted from the agreement.
- India Post in the recent past has entered into similar agreements with the Government e-Marketplace (GeM) and Regional Centers of Tribal Cooperative Marketing Development Federation of India Limited (TRIFED) to provide pick-up and delivery of parcels at the doorsteps of the consignees.
- India Post will also soon onboard itself on the Open Network for Digital Commerce (ONDC) platform, being developed by the Ministry of Commerce as a logistics service provider.
- The Postal Department has transformed itself with the passage of time and the demands of the public and that technological induction and the addition of new services have made India Post a modern service provider.



- Today, it provides banking, insurance, and last-mile delivery of benefits of several welfare schemes run by the government to every village through its network of 1.59 lakh post offices.

Bharat EMart:

- Bharat EMart is an e-commerce marketplace created by the **Confederation of All India Traders (CAIT)**, India Post, and Tripta Technologies.
- The portal provides logistics support to small traders in India, which will increase their businesses and employment opportunities.
- The portal provides the facility of pick-up of consignments from the premises of traders and ensures delivery at the doorsteps of the consignees across the country.
- The portal is expected to benefit eight crore traders associated with CAIT.
- India Post has become the logistics partner for crores of traders through the operationalisation of the Bharat EMart portal.

8.7 SWACHH BHARAT MISSION GRAMIN

Why in News

50% villages of India attain ODF+ status in Phase 2.

Important Points

- In yet another remarkable achievement under the Swachh Bharat Mission Gramin (SBM-G) initiative, 50% of the total villages in India have acquired the ODF Plus status under phase II of the mission.
- ODF Plus village is that village that successfully sustained its Open Defecation Free (ODF) status, in addition to implementing either solid/liquid waste management systems.
- Till date, more than 2.96 lakh villages have declared themselves ODF Plus, which can be seen as a very positive development towards realising the SBM-G phase II goals by 2024-25.
- The Swachh Bharat Mission has been in operation for nine years, and reaching the milestone of 50% ODF Plus villages is a noteworthy achievement for India.
- This accomplishment signifies that India has progressed beyond solely constructing and using toilets to attain total cleanliness, that is, from ODF to ODF Plus.
- The states with the highest percentage of ODF Plus villages are Telangana with 100%, Karnataka with 99.5%, Tamil Nadu with 97.8%, and Uttar Pradesh with 95.2%, while the top performing small states are Goa with 95.3% and Sikkim with 69.2%.
- Among the Union Territories, Andaman & Nicobar Islands, Dadra Nagar Haveli & Daman Diu, and Lakshadweep have achieved 100% ODF Plus Model villages.
- These states and union territories have made significant strides in achieving the ODF Plus status, and their contributions have played a crucial role in reaching this milestone.

Swachh Bharat mission and SBM-G

- In order to speed up the achievement of universal sanitation coverage and draw attention to sanitation issues, the Prime Minister of India introduced the Swachh Bharat Mission on October 2nd, 2014.



- The mission aimed to have all villages, Gram Panchayats, Districts, States, and Union Territories in India become “open-defecation free” (ODF) by constructing over 100 million toilets in rural India by October 2nd, 2019, which marked the 150th birth anniversary of Mahatma Gandhi.
- To maintain the open defecation-free status, ensure that no one is left behind, and guarantee access to solid and liquid waste management facilities, the Mission had transitioned to Phase II of SBMG, called ODF-Plus.
- Under Phase II of the Swachh Bharat Mission (Gramin), ODF Plus activities aim to reinforce ODF behaviours and concentrate on providing measures for the safe disposal of solid and liquid waste in villages.

Different categories of ODF Plus status

- Out of the total of 296,928 ODF Plus villages, 208,613 villages are considered ODF Plus Aspiring, as they have implemented measures for managing either solid waste or liquid waste.
- Meanwhile, 32,030 villages are categorized as ODF Plus Rising, as they have made arrangements for both solid waste and liquid waste management.
- The remaining 56,285 villages have achieved the highest category, known as ODF Plus Model, which means they have sustained their open defecation-free status, have arrangements for both solid and liquid waste management, and are visually clean, with no signs of litter or stagnant wastewater.
- Moreover, these villages also display ODF Plus Information, Education & Communication (IEC) messages.
- As of now, 165,048 villages have established solid waste management systems, 239,063 villages have implemented liquid waste management measures, 457,060 villages have minimal stagnant water, and 467,384 villages have minimal litter.

8.8 POSHAN BHI, PADHAI BHI

Why in News

Union WCD Minister launches “Poshan Bhi, Padhai Bhi”, an Early Childhood Care and Education program under Mission Saksham Anganwadi and Poshan 2.0

Important Points

ECCE is an important component of Mission Saksham Anganwadi and Poshan 2.0 (Mission Poshan 2.0) and envisaged under the National Education Policy 2020.

What is the Poshan Bhi Padhai Bhi Programme?

- It is a pathbreaking ECCE program to ensure that India has the world’s largest, universal, high-quality pre-school network, as suggested by the NEP 2020.
- The aim is not only to make anganwadi centres nutrition hubs but also education-imparting centres - providing at least two hours of high-quality preschool instruction on a daily basis.



- Under this, the government will target children’s development in every domain mentioned in the National Curriculum Framework, viz., physical and motor development, cognitive development, socio-emotional-ethical development, etc.
- It will also ensure the use of developmentally appropriate pedagogies and emphasising the links with primary education as well as early childhood health and nutrition services.
- It will help build a Jan Andolan, to involve communities in strengthening the foundations of the country’s future generations.

Mission Saksham Anganwadi and Poshan 2.0:

- It is an Integrated Nutrition Support Programme approved for implementation during the 15th Finance Commission period 2021-22 to 2025-26.
- It seeks to address the challenges of malnutrition in children, adolescent girls, pregnant women and lactating mothers through –
 - o A strategic shift in nutrition content and delivery and
 - o Creation of a convergent eco-system to develop and promote practices that nurture health, wellness and immunity.
- The existing components (of the on-going nutrition programme) have been re-organised (to improve implementation) under Poshan 2.0 into the primary verticals given below:
- Nutrition Support through Supplementary Nutrition Programme (SNP) for children (06 months to 6 years), pregnant women and lactating mothers (PWLM); and for Adolescent Girls (14 to 18 years) in Aspirational Districts and North Eastern Region (NER);
- ECCE [3-6 years] and early stimulation for (0-3 years);
- Anganwadi Infrastructure including modern, upgraded Saksham Anganwadi; and
- Poshan Abhiyaan: Launched in 2018, its focus is to lay emphasis on nutritional status of adolescent girls, pregnant women, lactating mothers and children from 0-6 years age.

Anganwadi in India:

- Considering global evidence that 85% of brain development is achieved by the age of 6 years, the Anganwadi eco-system becomes a critical access point for building the children’s base.
- Close to 9 lakh operational Anganwadi centres across the country are providing supplementary nutrition and early care and education to around 8 crore beneficiary children (under the age of 6 years).
- This makes it the largest public provisioning of such services in the world.
- MoWCD has allocated Rs 600 crore for the training of anganwadi workers to implement the ECCE.
- The National Institute of Public Cooperation and Child Development (NIPCCD) has been roped in for the training of Anganwadi workers.

8.9 MISSION AMRIT SAROVAR

Why in News

Recently, more than 50,000 water bodies have been rejuvenated ahead of schedule under the Mission Amrit Sarovar.



Important Points

- The mission, launched as a part of the celebration of Azadi ka Amrit Mahotsav by Prime Minister Narendra Modi.
- It aimed at rejuvenating at least 75 water bodies in every district of the country with the target to build 50,000 'Amrit Sarovar' by August 15, 2023.
- The ministry said the target has been achieved ahead of schedule, adding, "So far, 50,071 'Amrit Sarovar' have been completed".
- To achieve the resolution of rainwater conservation and harvesting through Mission Amrit Sarovar, the Rural Development Ministry worked as the nodal ministry.
- From renovating the water bodies which had reached the verge of extinction to the construction of new water bodies, a detailed action plan was prepared.
- The target of 50,000 'Amrit Sarovar' could be achieved ahead of time because of the efforts made through 'whole of government' approach and 'people participation' during all aspects of the mission.
- With the coordinated efforts of district administration, Panchayat Raj officials, public representatives, panchayats, voluntary organisations, various institutions and public participation in states and union territories about 1,05,243 sites were identified as 'Amrit Sarovar'.
- Out of these, work has already begun at 72,297 sites and 50,071 'Amrit Sarovars' have been completed.
- The mission also aims to construct or renovate the 'Amrit Sarovar' in such a way that they become the centre of local community activities.
- A user group is being formed for each sarovar so that there is community ownership in the maintenance of the water body.
- So far 59,282 user groups have joined the mission for maintaining the 'Sarovar' and generating their livelihood from it.
- Till now, 1,784 freedom fighters, 684 families of martyrs, 448 families of freedom fighters, 18,173 senior members of panchayats and 56 Padma awardees have participated in the mission.

8.10 SAKSHAM

Why in News

Union Health Ministry launched SAKSHAM Learning Management Information System

Important Points

- The Learning Management Information System (LMIS) of the Ministry of Health and Family Welfare (MoHFW) called SAKSHAM (Stimulating Advanced Knowledge for Sustainable Health Management) was launched by the Union Health Secretary.
- Developed by the National Institute of Health and Family Welfare (NIHFW), New Delhi, the digital platform is envisioned to be utilised for all blended learning programmes in the future.



- Going forward, it will act as a central database of trained healthcare professionals in the country and will also serve as an enabler for case-based learning in the sector.

About the SAKSHAM

- SAKSHAM is an integrated and specialized online learning platform aimed at providing medical education and training to all healthcare professionals in India.
- This digital system will guarantee comprehensive development of healthcare professionals, including those working in rural and remote areas at primary health centres, as well as those employed in tertiary care and corporate hospitals located in metropolitan cities.
- Designed to positively impact healthcare professionals by helping them to acquire globally relevant knowledge, the Stimulating Advanced Knowledge for Sustainable Health Management (SAKSHAM), a Learning Management Information System (LMIS) of MoHFW, will work on a mission to provide standard training to the healthcare staff across the horizons of public and private care subsectors, covering professionals from primary care centres located in rural and remote areas all the way up to tertiary care and corporate hospitals in metropolitan cities.
- **Currently SAKSHAM:** LMIS is hosting more than 200 public health and 100 clinical courses through online mode. Health professionals can register themselves for these courses on the portal through url: <https://lmis.nihfw.ac.in/> and get the certification after undergoing requisite training and qualifying the required assessment criteria.
- It is pertinent to note that the courses offered in the portal have been developed in collaboration with global healthcare agencies, including WHO, UNICEF, UNDP, and reputed national and international institutes, and are also peer reviewed and approved by domain experts from the concerned departments.

8.11 ONE STATION ONE PRODUCT

Why in News

Railways invite applications to promote local produces under ‘One Station One Product’ scheme

Important Points

- The Southern Railway has invited an Expression of Interest (EoI) from interested artisans, weavers and other eligible persons for promoting local produces under ‘One Station One Product’ (OSOP) scheme of the Centre.
- The Railway launched OSOP with objectives to promote ‘Vocal for Local’ vision of the Union government, providing a market for local and indigenous products, thereby creating additional income opportunities for the marginalised sections of society.
- Till May this year, 20 OSOP stalls were opened in Kerala jurisdiction of Southern Railway.
- These OSOP stalls are designed through the National Design Institute for uniformity.
- The OSOP scheme also provided business opportunities for 202 beneficiaries since its inception in Kerala.
- Keeping in mind the objective of this scheme, a transparent mechanism is being followed for allotment of outlets.



- Selection is made based on draw of lots by a committee formed at station level for this purpose.
- Eligible beneficiary can set up a stall at the Railway station to sell indigenous products for 15 days, on payment of a nominal token fee remitted along with the application.
- The beneficiary desirous of running OSOP outlets should be a holder of artisan/weaver ID card issued by Development Commissioner Handicrafts, Development Commissioner Handloom, or by the requisite State/Central Government Authority or Individual artisans/weavers/craftsmen enrolled/registered with TRIFED/ NHDC/KVIC etc. or Self-Help Groups registered with PMEGP or any eligible member of marginalized/ weaker sections of society, said a release issued by the Railways.

One Station One Product (OSOP) scheme

- The OSOP scheme was launched with a vision to promote ‘Vocal for Local’.
- This would help the local manufacturers to sell their product and will create additional income opportunities for the marginalised sections of society.
- Under the scheme, the allotment is done to all eligible applicants on a rotational basis.
- The pilot of the scheme was started on March 25, 2022.
- The OSOP scheme is providing welfare of local artisans, potters, weavers, tribals etc.

Scope

- The eligible applicant will be allotted a temporary stall or kiosk for a period of 15 days on deposition of Rs. 1,000 with Railways.
- The zonal railways will identify the stations, eligible products and the vendors.

The products under the OSOP scheme includes

- Food items (Seasonal or Processed or semi processed foods)
- Handicrafts
- Artefacts
- Textiles
- Handlooms
- Traditional Garments
- Local agricultural produce
- Local toys
- Leather products
- Local Gems and Jewellery

8.12 PARAKH

Why in News

Education Ministry calls first meet aimed at unifying 60 school boards

Important Points



- The Ministry of Education organised a workshop in New Delhi with the aim of unifying the 60 school examination boards operating in different States and union territories under one umbrella.
- PARAKH has been set up as the organisation under NCERT. It will work on bringing the school boards across the States and the Union Territories on a common platform.
- PARAKH will act as a common platform for interaction of all concerned stakeholders in order to develop a holistic approach that ensures a fair assessment system which promotes equity in performance and equivalence in assessment of students.
- The workshop will study school assessments, examination practices and equivalence of boards across the country.
- The main component of this plan is PARAKH or the National Assessment Centre which has been set up as an organisation under the National Council of Educational Research and Training.
- The mandate of PARAKH is to work on bringing the school boards across the States and the Union Territories to a common platform.
- As a first step, a workshop on PARAKH will act as a common platform for interaction of all concerned stakeholders in order to develop a holistic approach that ensures a fair assessment system which promotes equity in performance and equivalence in assessment of students.
- Government aim is to establish a unified framework that enables seamless transitions for students moving between different boards or regions.
- This includes aligning curriculum standards, grading systems, and evaluation methodologies to enhance the credibility, recognition of certificates, and grades obtained across boards.
- The discussion revolved around the need to reassess the prevailing rote examination culture in our education system.
- There is a growing realization that holistic assessments, encompassing various dimensions of a student's abilities and potential, are equally important.
- It emphasized the need for well-designed and standardized question papers, ensuring fairness and consistency across schools and boards.
- Additionally, there is a call to strike a balance between formative and summative assessments, reducing the burden of high-stakes examinations while effectively measuring a student's progress.
- An analysis of examination results of secondary and higher secondary boards was also presented.

8.13 UDAN 5.1

Why in News

Ministry of Civil Aviation launches UDAN 5.1, specifically designed for helicopter routes.

Important Points

- Following four successful rounds of the Regional Connectivity Scheme (RCS) - Ude Desh Ka Aam Nagrik (UDAN) and with the version 5.0 of the fifth round underway,



the Ministry of Civil Aviation has launched UDAN 5.1 to further enhance the connectivity to remote areas of the country and achieve last mile connectivity through helicopters.

- For the first time under RCS-UDAN, this round is designed specifically for helicopter routes.

The main features include:

- An increase in the scope of operations for operators wherein the scheme will now allow routes where one of the origin or destination locations is in a priority area. Earlier both points had to be in priority areas.
- Airfare caps have been reduced by as much as 25% to make flying in helicopters more affordable for passengers.
- Viability Gap Funding (VGF) caps for the operators have been increased substantially for both single and twin-engine helicopters to enhance financial viability for operating the awarded routes.
- The latest round of UDAN scheme is a testament to two emerging phenomenon in Indian civil aviation - one, a deeper democratisation of air travel with a focus on last-mile connectivity.
- Second, a growing appetite for helicopters in aiding tourism.
- Greater helicopter penetration through such efforts will help boost tourism, hospitality, and thus, our local economies. UDAN 5.1 heralds a new dawn not just for civil aviation, but also for India's remote & unserved regions.
- The current version of the scheme has been designed after consultations with all stakeholders including helicopter operators.
- While the intended target is to provide last-mile connectivity, it is also projected to give the helicopter segment of the Indian civil aviation industry a much needed boost.
- It may be mentioned that till date 46 helicopter routes have been operationalized under previous rounds of the scheme benefitting a number of hilly and North East states and this round is targeting coverage of a much larger number of routes.
- Under the UDAN scheme passengers have received the benefit of air connectivity, airlines have received concessions for operating regional routes, and unserved regions have received the direct and indirect benefits of air connectivity for their economic development.
- The present version of the scheme will be another step towards the Hon'ble Prime Minister's vision of allowing the common man to travel by air at affordable fares to remote destinations of the country.



9. MISCELLANEOUS

9.1 FUTURE OF JOBS REPORT 2023

Why in News

The 2023 version of the World Economic Forum’s Future of Jobs Report was released recently.

Important Points

- The report primarily states that around a quarter of jobs are set to change by 2027.
- The survey is based on input from some 800 companies employing more than 11 million workers and uses a dataset of 673 million jobs.
- In the report it was revealed that the skills with the highest share of companies reporting growing demand include analytical and creative thinking, followed by technological literacy, curiosity and lifelong learning, resilience and flexibility, systems thinking and AI and big data.
- Surveyed companies have shown cognitive skills to be growing in importance most quickly, reflecting the increasing importance of complex problem-solving in the workplace.
- According to the WEF report, skills less in demand include global citizenship, sensory processing abilities and manual dexterity, endurance and precision.
- The report revealed that the largest absolute gains in jobs will come from education (3 million jobs) and agriculture (4 million jobs), driven in part by demographics and in part by applications of new technologies in these fields.
- Further the report noted that management skills, engagement skills, technology skills, ethics and physical abilities are generally considered to be less important than cognition, self-efficacy, and working with others. Technology and digitalisation is both the driver of job creation and of destruction, a summary of the report said.
- “Advancing technology adoption and increasing digitization will cause significant labour market churn,” it said.
- The fastest declining roles will be secretarial and clerical roles such as bank tellers and cashiers which can be automated while demand for AI machine learning specialists and cybersecurity experts is expected to grow significantly, it said.

Core job skills in demand in 2023

In this list while cognitive skills took the top two spot, self-efficacy, working with others, and technology skills took up the rest of the seven spots. Here’s a detailed look:

- Analytical thinking- Constitutes on average 9% of the core skills reported by companies.
- Creative thinking- Accounts for an average of 7% of the core skills reported by companies.
- Resilience, flexibility and agility- With an estimated average of 6%, this Self-efficacy skill took up the third spot.



- Motivation and self-awareness-Like resilience, flexibility and agility this too logged an estimated 6% in average skill set graph.
- Curiosity and lifelong learning-Another self-efficacy skill, curiosity and lifelong learning accounted for 6% in average skill set graph.
- **Technological literacy-** A little over 40% companies surveyed noted that technological literacy is 5% of the skill set sought in employees.
- **Dependability and attention to detail-** In a similar statistic, companies also attested that dependability and attention to detail is an estimated 5% average skill set demanded
- **Empathy and active listening-** Less than 5% estimated average core skill set reported by companies was empathy and active listening.
- **Leadership and social influence-** This core working with others skill set recorded an estimated average composition of little over 4% among workers in organizations surveyed
- **Quality control-** The only management skill on this list, constituting 5% of worker skill sets despite ranking tenth, quality control is an example of a skill particularly important to a limited cohort of businesses.

Job skills demand on the rise

- Analytical Thinking
- Creative Thinking
- Technological literacy
- Curiosity and lifelong learning
- Resilience, Flexibility, Agility
- Systems Thinking
- AI and Big Data
- Motivation and Awareness
- Talent Management
- Service Orientation and Customer Service

9.2 THERMOBARIC BOMB

Why in News

Recently, Human rights groups accused Myanmar's military of using thermobaric bomb.

Important Points

- Myanmar's military used an "enhanced blast" munition known as a fuel-air explosive in an airstrike that killed more than 160 people, including many children, at a ceremony held last month by opponents of army rule, a human rights monitoring group charged.
- Human Rights Watch accused the military of dropping the weapon, also known as a thermobaric or vacuum bomb, on a crowd that had gathered for the opening of a local office of the country's resistance movement outside Pazigy village in Myanmar's central Sagaing region.



- The area is about 110 kilometers (70 miles) north of Mandalay, the country's second-largest city.
- The attack caused "indiscriminate and disproportionate civilian casualties in violation of international humanitarian law, and was an apparent war crime.

About: Thermobaric bomb

- Thermobaric weapons consist of a fuel container and two separate explosive charges, with the first detonating to disperse the fuel particles and the second igniting the dispersed fuel and oxygen in the air, creating a blast wave of extreme pressure and heat that creates a partial vacuum in an enclosed space.
- That makes the weapon particularly deadly for people in an enclosed space, such as the office that was being opened.
- Thermobaric bomb is also known as aerosol bombs, fuel air explosives, or vacuum bombs.
- These are called vacuum bombs as they suck in oxygen from surrounding areas to generate high-voltage explosions.
- It is a fuel container with two distinct explosive charges inside of it.
- Thermobaric bomb can be dropped as a bomb from an aeroplane or launched as a rocket.
- When it hits its target, first explosive charge opens the container and widely scatters fuel mixture as a cloud.
- A second charge then detonates the cloud, resulting in a huge fireball, a massive blast wave and a vacuum which sucks up all surrounding oxygen.
- There are no international laws specifically banning their use.
- A thermobaric weapon causes significantly greater devastation than a conventional bomb of comparable size.

Background

- Myanmar is wracked by violence that began after the army ousted the elected government of Aung San Suu Kyi in February 2021 and brutally suppressed nonviolent protests.
- That triggered armed resistance and combat in many parts of the country, with the military increasingly using airstrikes to counter the opposition and secure territory.
- Human Rights Watch said it based its conclusion that a thermobaric weapon had been used on a review of 59 photos of the victims' bodies and a video of the site following the attacks.
- The attack killed 168 civilians, including 40 children under 18 years old. A 6-month-old girl was the youngest victim and a 76-year-old man was the oldest.
- Myanmar's army acknowledged the attack but defended its actions, accusing anti-government forces in the area of carrying out a violent campaign of terror.

Use of thermobaric weapons

- The use of thermobaric weapons is rarely publicly acknowledged because of the indiscriminate destruction they can cause.



- The United States has used varieties of fuel-air explosives in conflicts in Vietnam, Afghanistan and Iraq.
- In Afghanistan, the U.S. Air Force dropped what it described as its “largest non-nuclear conventional weapon,” the 9,840-kilogram (21,693-pound) Massive Ordnance Air Blast Bomb.
- Russia, which acknowledges producing fuel-air munitions, has been accused of using them in several conflicts, including in Ukraine.
- The weapons have also been reported to have been used by Azerbaijan in fighting against neighboring Armenia, and by government forces in Syria’s civil war.

9.3 GALLANTRY AWARDS

Why in News

The President of India recently conferred 37 Gallantry awards, including eight Kirti Chakras and 29 Shaurya Chakras, during Defence Investiture Ceremony (Phase-1) held in New Delhi.

Important Points

About Gallantry Awards

- They have been instituted by the Government of India to honour the acts of bravery and sacrifice of the officers/personnel of the Armed Forces, other lawfully constituted Forces and civilians.
- These gallantry awards are announced twice a year - first on the occasion of the Republic Day and then on the occasion of the Independence Day.

Background:

- Three gallantry awards, namely Param Vir Chakra, Maha Vir Chakra and Vir Chakra, were instituted by the Government of India on 26th January, 1950.
- Thereafter, the other three gallantry awards, i.e. the Ashoka Chakra Class-I, the Ashoka Chakra Class-II and the Ashoka Chakra Class-III were instituted in 1952. These awards were renamed Ashoka Chakra, Kirti Chakra and Shaurya Chakra, respectively, in 1967.
- Order of precedence: The order of precedence of these awards is the Param Vir Chakra, the Ashoka Chakra, the Mahavir Chakra, the Kirti Chakra, the Vir Chakra and the Shaurya Chakra.
- All the gallantry awards may be awarded posthumously.
- Persons recommended for the award shall not be involved in any adverse report or should not have been conveyed any displeasure or censure or given any punishment in a court martial proceedings or through administrative action.

The Ashoka Chakra, The Kirti Chakra & Shaurya Chakra:

- Eligibility: The following categories of persons shall be eligible for the Ashoka Chakra, the Kirti Chakra and the Shaurya Chakra:



- Officers and men and women of all ranks of the Army, the Navy and the Air Force, of any of the Reserve Forces, of the Territorial Army, Militia and of any other lawfully constituted forces.
- Members of the Nursing Services of the Armed Forces.
- Civilian citizens of either sex in all walks of life and members of Police Forces, including Central Para-Military Forces and Railway Protection Force.

Conditions of Eligibility:

- The Ashoka Chakra is awarded for the most conspicuous bravery or some act of daring or pre-eminent act of valour or self-sacrifice otherwise than in the face of the enemy.
- The Kirti Chakra is awarded for conspicuous gallantry otherwise than in the face of the enemy.
- The Shaurya Chakra is awarded for gallantry otherwise than in the face of the enemy.
- Order of precedence: Param Vir Chakra, Ashoka Chakra, Mahavir Chakra, Kirti Chakra, Vir Chakra and Shaurya Chakra.

Veer Gatha Project

- The Government of India launched “Veer Gatha Project” as a part of Azadi Ka Amrit Mahotsav under which government has been introducing several events to mark to 75th year of India’s independence.
- Veer Gatha project was launched to inspire school children, by making them aware with stories of war heroes and brave hearts.
- The project aimed to disseminate the details of acts of bravery and life stories of the officers/personnel of the Armed Forces, other lawfully constituted forces and civilians, among the students.
- The students were motivated to frame different projects in the form of Poem / Paragraph / Essay / Painting / Multimedia Presentation (Enactment Video) on gallantry award winners and 25 best projects were to be rewarded nationally by Ministry of Defence and Ministry of Education.
- As a part of the project and to increase awareness among school students about the Gallantry Award winners of our country, the Ministry of Defence, through its field organisations, Army, Navy and Airforce, organized numerous virtual/face-to-face awareness programmes/sessions of one hour duration for schools across the country.
- During these interactive sessions, queries of students were answered and short videos/PPTs/ documentaries/ brochures and various other resource material were shared with students.

Veer Gatha 2.0 Project

- After the overwhelming response and success of Veer Gatha Edition-1, the Ministry of Defence in coordination with Ministry of Education has now decided to launch Project Veer Gatha 2.0 which is proposed to be culminated with the prize distribution ceremony in January 2023.



- As per last edition, the project will be open for all the schools in all States and Union Territories.
- Following the similar steps as earlier, the Ministry of Defence, through field formations of Army/Navy/ Airforce, will organize virtual/face-to-face awareness programs/sessions of one hour duration for schools across the country and during these interactive sessions, presentations will be made by the personnel of the armed forces on operation, battles resulting in conferment of awards.
- As part of the initiative, it is proposed that serving gallantry award winners would visit schools located in their respective stations.
- The service personnel will answer queries of students. Where possible short videos/PPTs/ documentaries/ brochures and other resource material will be shared with students.

9.4 HARIT SAGAR

Why in News

Ministry of Ports, Shipping & Waterways Launches 'Harit Sagar' Green Port Guidelines 2023

Important Points

About the village

- Reductions in carbon emissions and achieving sustainable and inclusive development are central to the government's agenda.
- In line with that, Ministry of Ports, Shipping & Waterways launched 'Harit Sagar,' the Green Port Guidelines in New Delhi.
- Harit Sagar Guidelines 2023 provide a comprehensive framework for the major ports, empowering them to create a comprehensive action plan aimed at achieving quantifiable reductions in carbon emissions over defined timelines.

Reducing carbon emissions

- The guidelines are aimed at minimizing waste through Reduce, Reuse, Repurpose and Recycle to attain zero waste discharge from port operations.
- In addition, it also promotes monitoring based on environmental performance indicators.
- Another major factor of the guidelines is that they lay emphasis on the use of clean and green energy in port operations, developing port capabilities for storage, handling, and bunkering greener fuels like green hydrogen and green ammonia, among others.
- Ports are major hubs of economic activity.
- However, this high level of activity can result in significant environmental impacts, including air and water pollution, among others.
- Such green initiatives help mitigate these impacts by reducing pollution, conserving resources, and promoting sustainable practices.
- Harit Sagar Green Port Guidelines is a significant step towards achieving our sustainability goals.



- These guidelines have been formulated with the aim of promoting environmentally friendly practices across all the ports.
- From now onwards, the ports will be able to evaluate themselves on the environmental indicators to know their capability in the environmental aspects.
- As sustainability becomes a growing concern for businesses and consumers globally, Indian ports are demonstrating their commitment to environmental responsibility.
- India has been taking significant steps to adopt green initiatives in its ports to promote sustainability and reduce environmental impact.
- India's four major ports Deendayal Port, Visakhapatnam Port, New Mangalore Port, and VOC Port are already generating more renewable energy than their demand.

Sagar Shreshtha Samman awards

- In addition, Government also conferred 'Sagar Shrestha Samman' awards to major ports for their all-time best performance on select operational and financial parameters during FY 2022–2023.
- Deendayal Port, Kandla, was awarded the best Absolute Performance award for the year 2022-23 for handling the highest cargo of 137.56 MMT.
- Paradip Port was awarded the best incremental performance for attaining the highest cargo growth rate of 16.56% last year.
- The award for remarkable Pre-Berthing Detention time was awarded to Kamarajar Port, while Mormugao Port was awarded for best Ship Berth Day output in the incremental category.

9.5 POKHRAN-II

Why in News

Indian witnessed the 25th anniversary of Pokhran-II

Important Points

- On May 11, 1998, India conducted three nuclear bomb test explosions at the Indian Army's Pokhran Test Range. Two days later, on May 13, two more bombs were tested.
- Codenamed Operation Shakti (literally, "strength"), these tests would display India's capability to build fission and thermonuclear weapons with yields up to 200 kilotons, helping India enter the highly guarded club of countries with capability to deploy nuclear weapons.
- However, Pokhran-II, as the series of tests is more popularly known, was also the culmination of a long journey that began back in the 1940s-50s – a journey replete with difficulties, with failure lurking at every corner.

Homi J Bhaba lays the foundations

- India's nuclear programme can be traced to the work of physicist Homi J Bhaba.
- In 1945, after Bhaba's successful lobbying of India's biggest industrial family, the Tata Institute of Fundamental Research was opened in Bombay.
- TIFR was India's first research institution dedicated to the study of nuclear physics.



- Post independence, Bhabha repeatedly met and convinced Prime Minister Jawaharlal Nehru about the importance of nuclear energy and the need for India to allocate resources for its development.
- Thus, in 1954, the Department of Atomic Energy (DAE) was founded, with Bhabha as director.
- While Nehru publicly opposed nuclear weapons, privately, he had given Bhabha a free hand to lay foundations for both civilian and military uses of nuclear technology.
- Under him, the DEA operated with autonomy and away from significant public scrutiny.

The threat of China and Pakistan

- A pivotal moment in India's nuclear journey came after it suffered a crushing defeat in the 1962 Sino-Indian War and China's subsequent nuclear bomb test at Lop Nor in 1964.
- Concerned about India's sovereignty and the looming might of an unfriendly China, the mood in the political establishment towards nuclear weapons was slowly shifting.
- While new Prime Minister Lal Bahadur Shastri first tried to attain nuclear guarantees from established nuclear weapons states, when such guarantees did not emerge, a different route had to be taken.
- Things were further accelerated, when in 1965, India went to war with Pakistan once again, with China openly supporting Pakistan this time.
- Effectively, India was surrounded by two unfriendly nations, and needed to take steps towards building self-sufficiency.
- However, the path towards obtaining nuclear weapons would not be easy.

The “discriminatory” NPT

- By the 1960s, discourse around nuclear disarmament and non-proliferation had shifted to the mainstream as the Cold War arms pushed the US and the USSR to great extremes.
- After China successfully tested its own bomb, there was increasing international consensus among the big powers regarding the need for a non-proliferation treaty.
- In 1968, the Non-Proliferation Treaty (NPT) came into existence.
- The treaty defines nuclear-weapon states as those that have built and tested a nuclear explosive device before January 1, 1967 – the US, Russia (formerly USSR), the UK, France and China – and effectively disallows any other state from acquiring nuclear weapons.
- While the treaty has been signed by almost every country in the world, India is one of the few non-signatories.
- Government of India refused to accede to terms of the treaty because it failed to address India's misgivings; specifically, the continued nuclear abstinence of the non-nuclear states was not linked to explicit reciprocal obligations by the nuclear weapons states.



Pokhran-I and its aftermath

- By the 1970s, India was capable of conducting a nuclear bomb test.
- Bhaba's successor at the DAE, Vikram Sarabhai, had worked to significantly broaden India's nuclear technology and now the question was more of political will, especially in context of a global order extremely wary of nuclear proliferation.
- Indira Gandhi took over the country's reins from Shastri after his sudden death in 1966.
- Once considered a puppet in the hands of senior Congress leadership, she would soon show her mettle, leading India through another testing war against Pakistan in 1971 and winning an overwhelming mandate in the following elections.
- On May 18, 1974, with support from Indira, India carried out its first nuclear test at the Pokhran test site. Pokhran-I, codenamed Operation Smiling Buddha, would be billed as a "peaceful nuclear explosion", with "few military implications".
- There was near-universal condemnation and countries like the US and Canada imposed significant international sanctions on India.
- These sanctions would be a major setback for India's nuclear journey, and majorly decelerate its progress.

The period between the two tests

- Beyond international sanctions, India's nuclear journey was also hobbled by domestic political instability.
- The Emergency of 1975 and Prime Minister Morarji Desai's opposition to nuclear weapons brought the programme to a grinding halt.
- However, clamour for developing nuclear weapons picked up once again in the 1980s, as reports on Pakistan's rapidly progressing nuclear capabilities emerged.
- In 1983, the Defence Research and Development Organisation's (DRDO) funding was increased and Dr. APJ Abdul Kalam was put in charge of India's missile programme.
- That year, India also developed capabilities to reprocess plutonium to weapons grade.
- Furthermore, throughout decade, India exponentially increased its plutonium stockpiles.
- Early 1990s brought with them increased pressure to quickly develop nuclear weapons. With the fall of the USSR in 1991, India lost one of its biggest military allies, since the time Indira Gandhi had signed a 20-year security pact with it in 1971.
- Furthermore, the US continued to provide military aid to Pakistan despite its own misgivings with its nuclear weapons programme. Finally, discussions regarding a Comprehensive Test Ban Treaty (CTBT) were also underway in the UN (it would be finalised in 1996, India did not sign it).
- For India, it felt like its window of opportunity was fast closing.
- Thus, in 1995, then Prime Minister PV Narasimha Rao permitted the preparations for carrying out a nuclear test in December 1995.
- However, logistical and political reasons pushed back the tests further.



Pokhran-II: projecting India's strength

- After a few years of domestic turmoil when the political will to conduct nuclear testing was wanting, in 1998, the National Democratic Alliance (NDA) led by the BJP came to power under the leadership of Atal Bihari Vajpayee.
- One of key promises in its manifesto was to “induct nuclear weapons” into India’s arsenal.
- In March 1998, Pakistan launched the Ghauri missile – built with assistance from China.
- Two months later, India responded with Operation Shakti.
- While the 1974 tests were ostensibly done for peaceful purposes, the 1998 tests were the culmination of India’s nuclear weaponisation process.
- Consequently, the Indian Government declared itself as a state possessing nuclear weapons following Pokhran-II
- While the tests in 1998 also invited sanctions from some countries (like the US), the condemnation was far from universal like in 1974.
- In context of India’s fast-growing economy and market potential, India was able to stand its ground and thus cement its status as a dominant nation state.

9.6 YUVA PRATIBHA

Why in News

MyGov collaborates with IHM Pusa to launch ‘YUVA PRATIBHA - Culinary Talent Hunt’

Important Points

- The competition aims to promote India’s rich culinary heritage and showcase its value and significance to the world. It also aims to bring out lost recipes and promote the culinary talents of young chefs and home cooks.
- In 2023, the United Nations declared it as the ‘International Year of the Millets’ following India’s proposal to position itself as a global hub for millet. Millets have been an integral part of the Indian diet for centuries.
- The competition aims to increase the production and consumption of millets and promote awareness about their versatility and health benefits.
- The competition provides a unique opportunity for participants to showcase their creativity and innovation in cooking with healthy and sustainable ingredients, particularly millet.
- It aims to create awareness about the importance of millet in our diet and promote their consumption.
- The fusion of millets in this competition is expected to inspire young chefs and home cooks to explore and experiment with millets in their cooking.

Aim & Objective:

- The aim is to encourage and showcase the culinary skills of young Indians.
- The competition also aims to raise awareness about the nutritional value and importance of millet in ensuring food security and improving nutrition.
- The event aims to promote millets at a national level and increase their consumption.



- Participants will be encouraged to incorporate millets into their cooking, promoting their versatility and health benefits.

How to Participate:

- Visit the Innovateindia website to participate in the contest.
- Only citizens of India aged between 18 to 40 years are eligible to participate.
- Entries must be submitted on the MyGov portal. Entries submitted through any other mode will not be evaluated.
- The dish/recipe should be home-cooked, and at least 50% of the ingredients should be millet.
- Participants must submit 3 photographs: (i) a photo of the ingredients used; (ii) a photo of the dish prepared, and (iii) a photo of the participant with the dish.
- The description of the dish should be clear and precise, including all the steps involved.
- The content is available in both Hindi and English.
- Participants are allowed to submit only one entry.
- The top 3 winners will be announced in a physical event in New Delhi.

Reward & Recognition:

- The first prize winner will receive Rs1,00,000/-, a trophy, and a certificate.
- The second prize winner will receive Rs75,000/-, a trophy, and a certificate.
- The third prize winner will receive Rs50,000/-, a trophy, and a certificate.
- The twelve contestants who make it to the final round will be rewarded with a cash prize of Rs5,000/- each.

9.7 BAOBAB TREES

Why in News

Forest dept can't permit translocation of Baobab trees

Important Points

- The Madhya Pradesh government has decided that the forest department cannot give permission to translocate Dhar's famed Baobab trees, some of which are centuries old, and that this can be done only by the State Biodiversity Board.
- The decision was taken after a report highlighted the heritage and historical value of the trees, native to Africa, but likely brought to this corner of Madhya Pradesh by African soldiers hired by the local Islamic kingdoms between the 10th and 17th century.
- The report also mentioned the protests by tribals against the translocation of Baobab trees by a Hyderabad businessman Ramdev Rao.
- The ban has been imposed by placing the trees under the Biodiversity Act, which means that permission to use them commercially will have to be taken from the state biodiversity board.
- Now, the trees can't be used commercially without permission of biodiversity board.
- Management of such biological resources is bound to be done under the rules/instructions issued under Biodiversity Act 2002.



About the Baobab trees

- Native to mainland Africa and the island country of Madagascar, the deciduous baobab *Adansonia digitata* can live up to 2,000 years and is a globally threatened species.
- Mandu, in Dhar district of Madhya Pradesh, is perhaps the only place in India where baobab trees are found in abundance, with an estimated 1,000 trees in the periphery of Mandu town.
- Now, the state government has plans to apply for a Geographical Indication tag for the khorasani imli or the fruit of the baobab, for the purpose of getting better recognition, economic benefit for the farmers and protection of the rare tree.
- Aside from Mandu where it is most abundant, baobab trees have been recorded in Prayagraj (formerly Allahabad) in Uttar Pradesh, Wai in Maharashtra, and some places in Gujarat and Andhra Pradesh.

GI Tag

- A Geographical Indication tag acts as a trademark for a product in a specific geographical region possessing unique or valuable properties.
- The Geographical Indication tag can be given to agricultural, horticultural or forestry products such as fruits, vegetables, seeds, flowers and other products of trees.
- The tag can be applied for by the producers of the concerned goods or an entity representing them.
- The application undergoes examination and scrutiny after which, if accepted, it goes through the process of registration.
- So far, Madhya Pradesh has at least 10 Geographical Indication tags for different products such as Kadaknath black chicken and chanderi sarees, which get legal protection against unauthorised use.
- The tag provides the product a unique identity which helps the local community to market it better and benefit more.

Tribal livelihoods

- Baobabs provide livelihoods to the people of Mandu.
- Shopkeepers sell fruit pods as a souvenir to tourists.
- It fetches a good price according to its size, from Rs 50 to Rs 200 for one fruit, who sells souvenirs opposite Jami Mosque at Mandu fort.
- Moreover, the pulp and seeds are sold separately for Rs 10 per packet for their medicinal qualities.
- The shopkeepers, largely members of the Bhil tribe, either collect them from the nearby jungle or buy them from people who grow baobabs.
- Tribal people have been instrumental in saving these trees till now.
- Baobab tree is synonymous with Mandu in India.
- The fruit is a rich source of Vitamin C and contains abundant antioxidants.
- It is used to treat stomach disorders. Even the bark is used to cure several diseases.



Bhil Tribe

- The Bhil are one of the largest tribal groups, living in Chhattisgarh, Gujarat, Karnataka, Madhya Pradesh, Maharashtra, Andhra Pradesh and Rajasthan.
- The name is derived from the word 'billu', which means bow.
- The Bhil are known to be excellent archers coupled with deep knowledge about their local geography.
- Traditionally, experts in guerrilla warfare, most of them today are farmers and agricultural labourers. They are also skilled sculptors.
- Bhil women wear traditional saris while men are dressed in long frock and pyjamas. The woman put on heavy ornaments made of silver, brass along with rosaries of beads and silver coins and earring.

9.8 DATA GOVERNANCE QUALITY INDEX (DGQI)

Why in News

Recently, The Ministry of Ports, Shipping and Waterways (MoPSW) has been ranked second among 66 ministries in the Data Governance Quality Index (DGQI) assessment for the quarter (Q3) of FY23.

Important Points

- The ministry secured a score of 4.7 out of 5, highlighting its commitment to excellence in data governance.
- Conducted by the Development Monitoring and Evaluation Office (DMEO), NITI Aayog, the DGQI survey aims to measure the maturity level of administrative data systems and their use in decision-making of various ministries and departments on the implementation of central sector schemes and centrally-sponsored schemes.
- It also identifies reforms to reach the frontier of seamless data exchange and its synergistic use within the ministry, while defining clear pathways to achieve these goals.
- The DGQI assessment encompasses six pivotal themes, including Data Generation, Data Quality, Use of Technology, Data Analysis, Use and Dissemination, Data Security and HR Capacity, and Case Studies.
- MoPSW's success in the DGQI assessment was assisted by concerted efforts of the National Technology Centre for Ports, Waterways, and Coasts (NTCPWC) at IIT Madras, which was tasked with improving MoPSW's Management Information System (MIS) in compliance with DGQI standards.
- Notably, the NTCPWC is developed under Sagarmala by MoPSW as a technology arm of the MoPSW.
- The DGQI has assessed the MIS portals for five schemes of MoPSW - Sagarmala, Research and Development, Shipping, ALHW (Andaman, Lakshadweep Harbour Works), IWAI (Inland Waterways Authority of India) & IWT (Inland Water Transport) - to enhance data flow, increase data quality and by incorporating emerging technologies such as AI/ ML.
- The impact of data-driven decision-making has been significant for MoPSW, as it has enabled the ministry to identify reforms and achieve its desired goals and objectives to



improve the implementation framework of government policies, schemes, and programmes.

- The effort of DMEO, Niti Aayog, to bring out such a report card of the Ministries / Departments is highly appreciable. It will immensely help improve the implementation framework of government policies, schemes, and programs to achieve the desired goals.
- Data-driven approach enables policymakers to identify trends, opportunities, and areas for improvement accurately.
- With reliable data, the ministries can make informed decisions that lead to better outcomes for citizens.
- Moreover, data-driven decision-making is cost-effective and enhances transparency, making it easier to track the progress of schemes and policies.
- By leveraging data and technology, MoPSW has set a high standard for other ministries and departments to emulate.

9.9 INTERNATIONAL ORGANIZATION FOR MIGRATION

Why in News

Amy Pope elected as the first woman to head the UN's migration agency

Important Points

- Member countries of the UN migration agency elected Amy Pope of the United States as its next director general.
- Pope elbowed aside her boss, Antonio Vitorino of Portugal, to get the job of International Organization for Migration (IOM) director general and will become the first woman to head the Geneva-based agency that was founded in 1951.
- Pope currently serves as Vitorino's deputy and ran against him for the job.
- She will start her five-year term on October 1 2023.
- The face-off was unusual in that Pope was looking to unseat her boss in a contest between allies: The United States.
- Portugal are fellow NATO members.
- The US government, which strongly supported Pope's candidacy, welcomed the news.

About IOM

- It was established in 1951, it is leading intergovernmental organization in the field of migration.
- IOM is part of the United Nations system, as a related organization.
- It has 175 member states (India is a member).
- It works to help ensure the orderly and humane management of migration to promote international cooperation on migration issue.



10. YOJANA JUNE 2023: TECHADE

10.1 INNOVATION IN SPACE TECHNOLOGY

- Since its founding, the Indian Space Research Organisation (ISRO) has been at the forefront of space exploration and technology.
- India has been a significant player in the international space arena over the years by advancing space technology with the help of the organisation and its critical resources.
- The ISRO had experienced the advancement of space technology and innovation at several technical boundaries.

Space transportation system:

- With the invention of solid-propulsion-based Sounding Rockets, which can lift 30 kg of cargo to 120 km of height, the 1970s saw the birth of the space transportation system.
- The creation of the first generation of launch vehicles, such as the Satellite Launch Vehicles (SLV) and Augmented SLV (ASLV) with the use of liquid propulsion, came thereafter.
- The Polar Satellite Launch Vehicle (PSLV), which can deliver a 1700 kg payload into polar orbit, was created as a consequence of the merging of solid and liquid propulsion and the development of several critical technologies.
- The significant technological advance in the construction of third generation rockets, or GSLV launch vehicles, which are capable of putting a 2000 kg payload in Geo-Synchronous Transfer Orbit (GTO), was the domestic creation of a Cryogenic propulsive engine.
- High-throughput communication satellite launches required the creation of Launch Vehicle MK3 (LVM3), a more sophisticated launch vehicle.
- LVM3 is equipped with the third-largest solid boosters in the world, as well as high-capacity liquid and cryogenic engines, and it is capable of launching a 4000 kg payload into GTO.
- Small Satellite Launch Vehicle (SSLV) is a new launch vehicle from ISRO.

Space Infrastructure:

- Early on, ISRO concentrated on creating satellite launchers like the SLV-3 and ASLV, which were used to place tiny satellites into low Earth orbit.
- The GSLV, a more potent rocket that can carry bigger payloads into geosynchronous transfer orbit, was the subject of early studies by ISRO in the late 1990s.
- Since the GSLV's initial successful launch in 2001, a number of significant satellites have been launched using it.
- With the launch of Chandrayaan-1, India's first lunar mission, in 2008, the ISRO began concentrating on deep space exploration in the 2000s.



- The Mars Orbiter Mission, which was launched in 2013, came next. With this launch, India became the first nation to successfully send a spacecraft to Mars on its initial attempt.
- The Indian Regional Navigation Satellite System (IRNSS), a satellite-based navigation system comparable to GPS, was introduced by ISRO in 2016.
- This system, now known as NavIC, gives users throughout India and the neighbouring areas precise positional data.
- ISRO has been constructing the infrastructure needed for human spaceflight in recent years.
- This includes testing a crew escape mechanism and creating a crew module to transport astronauts. Gaganyaan, ISRO's first crewed mission, is scheduled to launch in 2024.

Space Applications:

- Applications for Earth Observation (EO) by ISRO are institutionalized across many user Ministries/Departments, with a focus on national security, agriculture, agro forestry, disaster management, fisheries, land use and land cover (LULC), resource mapping, planning, monitoring, and evaluation, as well as decision support for important flagship government programmes.
- There has been a lot of advancement in imaging and ground infrastructure in order to fulfil the aforementioned needs for remote sensing/PO applications.
- Multi-object tracking radar, an integrated multi-mission ground segment for earth observation satellites, Polarimetric Doppler Weather Radar, and a state-of-the-art advanced ground station for Earth Observation satellites at Bharti Station, Antarctica are examples of ground technologies for tracking multiple space objects that have made it easier to use satellite services continuously.

Ongoing projects:

- Reusable launch vehicles, stage recovery and reuse, vertical take-off and landing (VTVL), LOX-methane engines, air breathing/hybrid propulsion, space robotics, humanoid robots, advanced inertial systems, low cost spacecrafts, quantum communication, advanced scientific payloads, space based surveillance, and atomic clock are all areas where space technology innovation is still making progress.
- ISRO is working on a Reusable Launch Vehicle (RLV) programme in an effort to develop technology for affordable access to space and space tourism.
- ISRO is also developing reusable air breathing propulsion for a future, cost-effective space transportation system.
- The Hypersonic Air Breathing Vehicle with Airframe Integrated System (HAVA) is an integrated scramjet engine that is now the focus of the ISRO's research and development efforts.



10.2 STARTUPS-REVOLUTIONISING INDIA'S GROWTH STORY

- Startups have become a significant force in India's economic growth in recent years. The government's emphasis on encouraging innovation and entrepreneurship has resulted in a fast expansion of India's startup ecosystem.
- India has the third-largest startup ecosystem in the world, with over 50,000 firms, according to a NASSCOM survey.
- Over the past several years, fundraising activities have exploded exponentially in the nation's entrepreneurial ecosystem. In only 2022, Indian companies raised almost \$25 billion.
- Indian unicorns are also thriving in the quick-paced, dynamic environment, coming up with creative solutions and creating a lot of jobs in the process.
- India has around 108 unicorns in its population today, making it the second-largest unicorn country in the world.

Increased funding:

- The rising use of digitalisation and the simple accessibility of finance at the early phases of growth for startups were the main drivers of the surge in funding for startups.
- In order to streamline and expedite the process of obtaining money at both early and mature phases, Startup India has created a number of programmes.
- The Startup India Seed Fund Scheme (SIFSS), which has a budget of Rs 945 crore and supports early-stage funding from angel investors and venture capital firms, offers financial assistance to early-stage startups for proof of concept, prototype development, product trials, market entry, and commercialization.
- The Fund of Funds programme, which was established in 2016, is another government initiative devoted to providing financial support to businesses.
- Apart from the several managerial and regulatory challenges, one of the biggest problems faced by startups is easy access to early-stage debt to finance their capital requirements. Traditional lending institutions, such as commercial banks, rely on the same old mandate.
- The Government has established the Credit Guarantee Scheme for startups for providing credit guarantees to loans extended to DPIIT-recognised startups by Scheduled Commercial Banks, Non-Banking Financial Companies (NBFCs), and Venture Debt Funds (VDFs) under SEBI registered Alternative Investment Funds.

10.3 POTENTIAL OF INDIA'S EDTECH SECTOR

- The term "EdTech" or "Education Technology" refers to the application of hardware, software, or both to improve teaching and learning.
- Nowadays, smartphones with EdTech apps installed are synonymous with education. The ability of EdTech to reach poor kids in remote locations has played a significant part in the sector's growth and will likely continue to do so in the years to come.
- Each kid has various demands, as well as a varied learning style and speed. Whatever their age or level of understanding, EdTech makes it possible for everyone to get an education of a high standard.



India's ICT Revolution:

- A strong Information and Communication Technology (ICT) ecosystem must be accessible and available for EdTech to succeed.
- Over the past 25 years, the Indian ICT sector has experienced remarkable growth. The industry's overall revenue and workforce in FY 2022 exceeded US\$200 billion and 5 million, respectively. It is expected to spend US\$144 billion on ICT by the end of 2023.
- About 52% of this investment is anticipated to go in the services sector. The industry's shift from business maintenance to enterprise solution supply includes a significant role for edTech.
- EdTech's rise and quick uptake may also be linked to India's quick digitalization, the expansion of ICT infrastructure, and the accessibility of technology and information throughout the previous two decades.
- India has 92.5 million internet users in 2010; by 2022, that number will have multiplied by 10, reaching 932.2 million. By 2040, this is anticipated to reach 1.53 billion.
- This may also be related to the fact that one GB of mobile data costs just Rs 14, a 90% decrease from 2013, making India one of the countries with the lowest data pricing internationally.
- There has been a 27X increase in the number of smartphone users in India, from 34 million in 2010 to 931 million in 2022. This is expected to rise to 1.53 billion by 2040.
- The development of these factors and the tangible benefits that EdTech provides in the teaching-learning process have presented a significant opportunity for the EdTech sector and its diverse players to expand their presence and adaptability.

Significance of Edtech to students and Teachers:

- With the use of technology, education is now accessible to people from all socioeconomic backgrounds.
- As a result of the digital revolution in India, EdTech has expanded accessibility to the country's most rural regions.
- For students, edtech offers three main advantages:
- Playing while you learn: The use of gamified approaches in EdTech, particularly for kids in grades K–6, helps pupils grasp ideas and makes learning enjoyable.
- Anytime and anyplace classes: By reaching the most rural areas of India, EdTech makes education accessible to everybody. Students may enrol in these programmes at their own convenience and pace. Working individuals can use their spare time to pick up new skills.
- Access to qualified instructors: EdTech makes it possible for everyone in India's towns and villages to have access to qualified teachers.
- By offering interesting pedagogical techniques to support their instruction, educational technology not only benefits students but also teachers.
- This can include interactive whiteboards, instructional films, VR/AR simulations, and other online tools that can make students feel more involved in their education.



- Through automated grading, classroom management tools, paperless classrooms, and the removal of guessing, edtech may also aid in the administration of academics.
- Tools for classroom management aid in fostering a more cooperative, less chaotic workplace. Paperless classrooms lower printing costs and support environmentally friendly practises.
- EdTech can evaluate student abilities and needs in real-time, resulting in proactive programmes to assist difficult students and removing uncertainty.

10.4 LEVERAGING TECHNOLOGY FOR TRANSFORMING HEALTHCARE

- Software, hardware, and services are all included in the wide interdisciplinary framework known as “digital health” on an integrated platform.
- With an emphasis on better quality, greater efficiency, and simple access to healthcare services, digital health refers to the use of technology interventions for healthcare solutions and empowering healthcare seekers and providers (including individuals, the community or professional carers, doctors, the paramedical workforce, and the pharmaceutical and medical device industries).
- E-health, telehealth, telemedicine, teleconsultations, health applications, etc. are some of the terminology that are utilised.
- The broad definition of digital health encompasses the digitization of data (including patient data), data stacks, e-registries, electronic medical records (EMR), health informatics and analytics platforms, self-health monitors, and wearable health devices with sensors.
- In the same breath, discussions about more recent fields like biotechnology, genomics, and medical assistance from AI also take place.
- The internet of medical things (IoMT), which connects to health IT systems using a variety of networking technologies, has also recently merged medical equipment and applications.
- The applications of the Internet of Things (IoT) include telemedicine technology to enhance patient-doctor contact, reducing the risk of exposure to infectious illnesses, and a variety of smart sensor technologies that can gather data at the user level.

Growth of digital health interventions:

- Digital health is expected to have a global market value of USD 332.53 billion in 2022 and reach a peak of USD 1,694.21 billion by 2032.
- Although the use of mobile-aided health interventions has been around for a while, it is commonly accepted that the worldwide pandemic significantly accelerated and mainstreamed the use of digital health advances.
- Technology facilitated solutions to scale up services and also broadened them to cover a large number of beneficiaries who could access high-quality services frequently from the comfort of their homes at a time when healthcare received the highest priority and attention from both healthcare seekers and providers.
- Healthcare practitioners are now able to monitor patient health and deliver care remotely because to the widespread usage of telemedicine platforms and remote monitoring tools.



- It is mentioned that numerous apps for health and fitness around the world, coupled with rising smartphone use, are anticipated to be major drivers of the digital health market's presence and expansion.
- Additionally, it is believed that quick investments in healthcare IT infrastructure, particularly in developing and developed countries, would help scale up industry growth.
- One of the main benefits of telemedicine is that it may save time and effort, especially for patients in rural areas who do not need to travel far for consultation and treatment.
- As travel for healthcare by marginalised and poor populations is frequently accompanied by lost work hours, lost income, and lower productivity, this is also accompanied by decreased travel-related expenditures.
- According to a recent impact analysis by an NGO, each tele-consultation at an Ayushman Bharat Health & Wellness centre prevents patients from travelling up to 21.58 kilometres on average and spending more than Rs 941 on out-of-pocket medical expenses.
- Families with female carers, particularly those who are pregnant or nursing, have been reported to experience travel-related stress.
- By guaranteeing access to high-quality healthcare services for a larger fraction of the population, digital health might help the world achieve its Sustainable Development Goals by 2030.

Digital Health Solutions in India:

- Digital health solutions are proven to be essential pillars of a stronger and more resilient national healthcare system.
- The Indian healthcare system is expected to change as a result of more widespread use of digital tools, leading to improved citizen servicing, health seeker satisfaction, greater levels of quality and efficiency, and increased transparency and accountability.
- The Government of India's digital initiatives have a number of important characteristics, including inclusivity, multilingual platforms, scalability, and interoperability. Over a billion individuals have benefited from them.
- The following are some of the initiatives that have seen a vast acceptance among people, accompanied by innumerable advantages.

Ayushman Bharat Digital Mission

- **CoWIN:** Cowin stands for Covid Vaccine Intelligent Network. The platform was unveiled by the union government in January 2021 to launch a vaccine drive across the country.

Tele-MANAS

- **Nikshay 2.0:** President Draupadi Murmu launched the 'Pradhan Mantri TB Mukta Bharat Abhiyan' and the Nikshay 2.0 portal to eliminate TB by 2025.
- Nikshay 2.0 is a digital platform for community support for the persons diagnosed with tuberculosis.



- The purpose of this portal is to provide technology backup for the Ni-kshay Scheme, which aims to mobilise communities, stakeholders, elected representatives, corporates, NGOs, and individuals to come forward as donors to help the patients through additional diagnostic, nutritional, and vocational support.

Health Technology Assessment (HTA):

- To ease the process of transparency and evidence-informed decision-making in the field of health, the Government of India established an institutional framework known as the Health Technology Assessment in India (HTAIn) under the Department of Health Research (DHR).
- It offers an assessment of the country’s new and existing health technologies’ cost-effectiveness and suitability.
- HTA strives to assist in the development of patient-centered, safe, and cost-effective health policies that maximise value for money.

10.5 QUANTUM COMPUTING-TRANSFORMING TECHNOLOGY

- Traditional computer utilises “bits”—binary digits of 0s and 1s—to encode information. Quantum computing, in contrast, uses quantum bits.
- Instead of simply two states (i.e., 0 and 1), quantum computing employs quantum bits, or “qubits,” which may exist in numerous states concurrently.
- Quantum computers are capable of carrying out numerous computational operations orders of magnitude quicker than conventional computers because to the qubits’ ‘superposition’ characteristic.
- In addition, entanglement, a characteristic of quantum physics that allows two qubits to be coupled in a way that their states are inherently affected by one another, serves as another source of inspiration for quantum computing.
- Nations and industries are slowly and steadily gearing up to leverage the quantum computing wave through strategic collaborations and investments in research and innovation.

Impact of Quantum Computing:

- The future of quantum computing will fundamentally alter the skill requirements and capabilities of the emerging skill force, which is gradually gaining ground in the fields of data science, artificial intelligence, machine learning, and decision sciences. This is due to India’s growing capabilities in the area of information technology (IT) and IT-enabled services.
- Industrial data science applications that analyse data more quickly: Certain computations may be completed by quantum computers far more quickly than by conventional computing logic. This might lead to speedier data analysis for business challenges in the age of big data, especially for massive datasets produced with high velocity, as these sorts of calculations expand in scope and scale.



- Better machine learning results: Predictive capabilities and improved data-driven decision-making are two areas where machine learning algorithms are being employed more and more.
- These algorithms may concentrate on complex data types like photos and videos in the age of cognitive computing to address a variety of corporate and societal issues using computer vision.
- By enabling more effective optimisation of these algorithms, quantum computers may enhance machine learning and enhance speed, accuracy, and efficiency of computer vision.
- Quantum computing has the potential to construct architectures that examine real-time updates to the network of information in the digital world to provide suggestions, which means that these applications of generative artificial intelligence might benefit from stronger recommendations.

Implications for practice and policy:

- In the cutting-edge field of quantum computing, research and development are still in their infancy.
- This does provide India the chance to create well-funded Research Centres of Excellence at the top technology institutes.
- Long-term plans from the Department of Science and technological may be proposed, allowing for the funding of key infrastructure and workforce development initiatives in the renowned technological engineering institutes.
- In order to advance the domestic quantum technology sector, this would need to encompass both hardware and software.

10.6 AI CHATBOTS-FUTURE AND CHALLENGES

- Chatbots are computer programmes that replicate human-like communication with users via text or voice using artificial intelligence (AI). They have a wide range of uses, including sales, customer service, and personal assistants.
- Natural language processing (NLP) is a technique used by chatbots to comprehend and interpret user input and produce pertinent answers.
- Depending on the individual use case and needed level of sophistication, they can be built to work alone or in cooperation with human operators.
- They have developed into increasingly complex, context-aware, and self-learning algorithms that depend on deep learning and machine learning to build a comprehensive knowledge base of queries and answers.
- As a result, they are gradually improving their capacity to anticipate consumer needs and offer precise solutions.

Future of work:

- Chatbots are revolutionising how we work and produce content.
- Customer service, making appointments, and data input are all repetitive, boring chores that chatbots can do. By giving human employees more time to concentrate on more difficult jobs, this can help firms save time and increase efficiency.



- A tech juggernaut recently announced the addition of a potent generative AI technology to its range of applications. Numerous actions across numerous Apps may be automated by this chatbot.
- Chatbots may work around the clock, offering assistance to clients and staff members whenever needed. By providing better customer service and quicker reaction times, this may aid firms in remaining competitive.
- Internet search is one area where generative AI is having a significant impact. The introduction of generative AI, or an AI that can create fresh data or material like text, photos, or even videos, has completely changed how people search the Internet. This technology is revolutionising how we look for information online and is likely to have a significant influence on search engines in the future.

Cases of Chatbots:

- By providing a wide range of services to patients and healthcare professionals, AI chatbots have the potential to revolutionise the healthcare industry. They can serve as virtual assistants that help patients with their questions about healthcare. Their round-the-clock accessibility lessens the strain placed on the healthcare system by enabling individuals to receive basic healthcare whenever and wherever they need it.
- Chatbots can be employed to aid with healthcare tasks including symptom diagnosis and therapy recommendation. For instance, the chatbot on the Ada website may elicit information from users about their symptoms in order to provide a diagnosis and treatment strategy.
- Users may use chatbots as personal assistants to manage their calendars, make reminders, and even place food orders. For instance, consumers may place orders using the chatbot on the Domino's website.
- Chatbots can assist in automating HR procedures, including orienting new hires and responding to HR-related queries. For instance, the chatbot on the Unilever website may help staff members identify nearby daycare centres and give information about benefits and payroll.
- AI chatbots are being used by e-commerce businesses to assist their clients in finding items that meet their needs by enquiring about preferences and displaying products that are pertinent. They can also guide them through procedures like ordering and paying for things.
- Education is a key area where AI chatbots are becoming increasingly relevant. Generative AI can help in the digital transformation of our education system and make it more efficient and accessible. It can help with content creation, the translation of educational material into multiple languages, and even play the role of a tutor or instructor where there is a lack of teaching resources.

Challenges:

- The major worry with AI chatbots is that as their use grows, a sizable number of jobs may be lost if AI develops the capacity to match human output and intellect.



- Slang, regional dialects, and context are just a few examples of the intricacies of human language that chatbots must be able to perceive and comprehend. Given the continuing evolution and change of human language, this is an ongoing task.
- The prejudices and discriminatory practises of chatbot creators and data sources might be passed on to the bots. For instance, a chatbot programmed with biased data may respond to some people unfairly. Developers must take action to lessen bias and make sure their chatbots are impartial and welcoming.
- Chatbots need to be open and reliable, especially when handling private or sensitive data. Users must be certain that chatbots are not abusing their data and that it is being managed correctly.
- Security risks, such as hacking or phishing attempts, can affect chatbots.
- For a smooth user experience, chatbots must be connected with current systems, such as customer relationship management (CRM) software. Dealing with outdated systems that might not work with contemporary chatbot technology makes this difficult. In order to connect chatbots with old systems without affecting current workflows, developers must find a solution.

10.7 5G CYBER SECURITY CHALLENGES

- The fifth generation of mobile networks, or 5G. Following 1G, 2G, 3G, and 4G networks, it is a new international wireless standard.
- It makes possible a brand-new class of network intended to link practically everyone and everything together, including machines, things, and gadgets.
- While the fastest internet data speed for 4G has typically been reported at 1 Gbps, testing of the high-band spectrum of 5G has shown that internet speeds can go as high as 20 Gbps (gigabits per second).

Geopolitics of 5G:

- The big international telecom leaders have taken the lead in developing 5G technology because of its potential to have an impact on our digital future and bring about economic revolution.
- The Chinese telecom firms, who have been actively entering new markets by commercialising the technology and providing it at lower prices than their rivals, have, nevertheless, been driving the sector forward.
- Concerns have been raised over the possibility that China is actively encouraging these businesses to seize worldwide markets and, as a result, may create a massive eavesdropping network.
- There are worries that China may weaponize 5G technology by compelling Chinese telecom companies to provide the government access to customer data or even by compelling them to shut down 5G networks during geopolitical upheaval.
- As a result, for the past several years, the United States has been at the forefront of an effort to challenge Chinese telecom firms hegemony in the 5G market.



- The US government has classified Huawei and ZTE as dangers to national security, outlawed American businesses from obtaining equipment through government subsidies, and prohibited the selling of semiconductor chips without a particular licence.
- In addition to the dynamics of commerce between China and the United governments, these changes have influenced the global tech competition between democratic governments and authoritarian regimes.
- As a result, efforts have been made to unite prominent democratic governments that share similar views in order to cooperatively address the technological threat posed by authoritarian regimes like China and Russia.
- For instance, the D-10 alliance of ten democracies, proposed by former UK Prime Minister Boris Johnson, would establish a different supply chain for 5G and other future technologies.
- In addition to pledging to enhance interoperability and security, the Quadrilateral Security Dialogue, or the Quad (which brings together India, Japan, Australia, and the United States), has also committed to working on the Open RAN, which employs software to mimic signal-processing operations, and supplier diversification for 5G.

Cyber threat landscape:

- Beyond the dangers posed by the dominance and hardware of Chinese telecom firms, 5G's cyber threat landscape is diverse.
- The underlying causes of the current rise in cyberattacks and data breaches by antagonistic governments and other threat actors—geopolitical rivalries, financial motivations, and data harvesting—remain the same. They will thus threaten even 5G networks.
- Undoubtedly, 5G may be viewed as an essential infrastructure given the potential contribution it might make to economic progress and societal advancement. In light of this, 5G communication networks will be a prime target for assaults like sabotage.
- Additionally, as was already indicated, the 5G network will result in a larger spread of IOT-enabled devices.
- One prediction states that there would be over 27 billion linked IOT devices by 2025.
- As a result of these gadgets providing fresh means of spreading malware and botnets, the danger landscape is widened. These will result in more opportunities for assaults like Man-in-the-Middle attacks or Distributed Denial-of-Service attacks.
- The International Mobile Subscriber Identity (IMSI), which is used to identify and authenticate subscribers on the mobile network, is a vulnerability that 5G also carries over from earlier generation protocols. Threat actors can monitor a specific user's activities, including monitoring their whereabouts and listening in on their calls, by grabbing the IMSI and intercepting mobile communications in a specific region.



10.8 DIGITAL PUBLISHING- EXPANDING THE HORIZON

- The foundation of Indian culture, ideals, and transcendence is the publishing sector.
- The publishing sector in India supports learning and education, generates millions of jobs, and aids in the country's economic development.
- In 2022, it crossed the US \$ 33.2 billion threshold. A research claims that the market would expand at a 3.4% annual compound growth rate from 2023 to 2028, reaching a value of \$41.6 billion.
- The National Education Policy 2020's rise in overall educational spending has also contributed to the expansion of the Indian publishing sector.

Growth of Digital Publishing:

- The publishing sector has seen a considerable transition as a result of technology.
- Digital publishing has replaced traditional print media, enabling publishers to reach a larger audience. In India, digital publishing is still in its infancy.
- It makes up between 8 and 10% of the nation's publishing market, however digital publishing in India has grown significantly in recent years. A research claims that regional and digital content would propel Indian media's expansion.
- Between FY 2019 and FY 2024, the digital industry is projected to expand at a 29.1% annual pace.
- By 2024, it would reach INR 621 billion, driven by the strength of regional content. Digital publication will undoubtedly be impacted by this trend.
- Access to information is now easier than ever because to the rapid proliferation of smartphones, tablets, and e-readers.
- Digital publication, as opposed to traditional publishing, doesn't include any costs for printing, shipping, or storage. Publishers can reduce manufacturing and distribution expenses, passing those savings on to customers in the form of cheaper prices.
- E-books have been crucial to the expansion of digital publishing in India. A Nielsen study revealed that 20% of books sold in India in 2018 were electronic books. E-books provide a number of benefits over printed books, including affordability and ease.

Challenges:

- Digital publication offers both benefits and difficulties. Piracy is one of the key difficulties.
- Digital content is widely available, making it simpler for users to obtain and share copyrighted materials without permission. As a result, the publishers must take further precautions to prevent the unlawful circulation of their content.
- The ongoing updating and upkeep of digital publications is another difficulty. To keep digital material current and relevant, it should be updated often. It involves a considerable time and resource commitment.
- Publishers must make sure their material is interesting and appealing given the abundance of content available online. This entails producing unique, high-quality content that is educational.



10.9 USE OF TECHNOLOGY IN URBAN PLANNING

- The process of creating and constructing open spaces, cities, and the built environment is known as urban planning.
- Since towns and cities have existed, urban planning has a long history. Early city planning was centred on several important and fundamental components, such as fortified buildings and bastions, although it has changed significantly through time.
- Urban planning is a multifaceted process that involves both physical and social infrastructure, utility systems, communication networks, supply chains, and more. City planners, usually referred to as urban planners, design cities and develop plans for expansion and improvement in the future.
- In the present day, the explosive growth of information technology and artificial intelligence has more potential to integrate many city planning difficulties into a universal platform and pave the way for a better solution to handle complexity challenges.
- Urban planners have benefited greatly from the use of information technology, particularly via the usage of GIS (Geographic Information System)-based software.

Contemporary technologies to aid urban planning:

- Urban planners may employ a variety of urban planning applications that create complete and vibrant environments for residents and commercial enterprises using both modern technology and open data.
- There are several planning tools that aid in the process of urban design and help to create the spaces that a city's population requires.
- Urban planning has benefited progressively more from GIS over time. Many other GIS softwares have emerged as free and open-source cross-platform solutions using open source data.
- This was not achievable with the older mapping and drawing tools, but with the aid of GIS, enhanced mapping, coupled with locational data.
- All government offices use GIS for record-keeping purposes, including property mapping, utility services like water supply and sewerage networks to see the coverage of the water supply and sanitation system, and municipal solid waste management to identify the zones in order to manage the MSW Management system.
- Transport planners also utilise GIS for network analysis in order to study the road network, find conflict sites at different intersections, identify different road hierarchy, etc.
- Urban planners can establish a database to get information about specific metropolitan regions using cloud technologies.
- Cloud computing technologies can also aid in the planning of bigger infrastructure projects.
- Urban planners may use the internet to create cities that are accommodating to distant workers. As a result, urban designs have better transportation alternatives and reduced traffic congestion.



Internet of Things and Urban Planning

- In India, some key IoT devices are already in use, including smart street lights that automatically switch off to save energy.
- By utilising technology to generate self-management techniques, urban planners may design concepts that strengthen city infrastructure while putting a greater emphasis on developing neighbourhoods and communities.
- This allows cities to provide greater green space, financial independence, and financial stability. These examples show how technology may be used to create smarter city plans and encourage greater community involvement.
- Urban planners will be able to focus more on building communities thanks to technology, which will increase municipal independence.
- Citizens may participate more actively in the creation of sustainable and environmentally friendly cities in this way

The Reliable IAS



11. KURUKSHETRA JUNE 2023 ISSUE: RURAL CRAFTS

11.1 POTENTIAL OF RURAL CRAFTS

- India has a long history of crafts that are passed down from father to son.
- Many populations in Indian countryside rely on rural crafts as a source of income.

Benefits of Rural Crafts

- They offer chances for entrepreneurship and skill development, which boosts income and employment.
- They provide a major contribution to the rural economy. It also helps rural residents' income sources to diversify.
- India is popular among visitors for its rural crafts. They promote rural travel.
- It will help local agricultural and food production, promote traditional skills, and encourage eco-tourism activities, all of which will support sustainable development.
- It preserves India's rich culture and heritage.
- It can further reduce migration from rural to urban areas.
- They support the "Made in India" ideology and "Aatma Nirbhar Bharat Value".
- They also support exports. For instance, exports of handicrafts increased from Rs. 19171 crore in 2019-20 to Rs. 20151 crore in 2020-21.

Government Initiatives

- In order to promote traditional handcraft items in each district of India, the Indian government launched the One District One Product (ODOP) rural development initiative.
- It seeks to preserve traditional crafts while generating employment opportunities and raising the income of rural artists and business owners.
- The government has also picked eight craft villages around the nation for the Linking Textile with Tourism scheme, which aims to promote both craft and tourism in one area.
- Its objective is to unite India's cultural legacy through the expanding travel and tourism sector.
- Additionally, groups/organizations like Tribes India, the Crafts Council of India, Saras (run by the Ministry of Rural Development), and state emporiums have increased awareness, provided the cottage industry greater outlets, and assisted them in meeting current demands.
- The following are a few instances of occasions the government has sponsored to highlight rural crafts:
 - An annual festival called Saras Aajeevika Mela is held to promote rural livelihoods and goods.
 - The Surajkund Crafts Mela offers a stage for entertainers, artists, and craftspeople to showcase their talents.



- Aadi Mahotsav: This festival honours tribal culture's energy.
- Through the Export Promotion Council, international trade shows, and exhibits, the government is also promoting the export of handicrafts.
- Additionally, it gives craftsmen and craftspeople financial support.

Ekta Mall

- A fantastic project to promote rural craft is the Ekta Mall at the Statue of Unity in Kevadia, Gujarat.
- It provides a venue for regional artists and craftspeople to display their talents and market their wares.
- It draws tourists and visitors and supports local craftsmen's businesses.
- Other places can use this strategy as well.

Pochampally Village

- Pochampally in Telangana was chosen as the top tourist destination by the United Nations World Tourism Organisation.
- The handloom business in the hamlet is well-known, particularly for Pochampally Sarees, also known as Ikat Sarees.
- In 2018, the Pochampally Handloom Park was created. It draws visitors and highlights the industry's evolution and heritage.

11.2 RURAL CRAFTS THROUGH RITUALISTIC & INDIGENOUS TRADITIONS

- Rural arts and crafts are deeply ingrained in local customs and have significant cultural and religious value.
- They have an extensive and fascinating past that dates back thousands of years. For instance, pottery, weaving, and metalworking-related items from the Indus Valley civilisation are the oldest indication of rural crafts.
- The promotion of textiles under the Mauryan Empire included specific weaving and dyeing workshops.

Shadow Puppetry

- Traditional shadow puppetry styles such as Tholpavakoothu and Tholu Bommalata have their roots in South India.
- They employ finely crafted and painted leather puppets.
- Other regions of India, including Rajasthan, have puppet traditions known as Kathputli.

Toys

- Toys known as Kondapalli are thought to have come from the Vijaynagar dynasty.
- Kondapalli dolls were made by the Aryakshatriya caste, who was renowned for their woodcarving talents.
- Kondapalli dolls are utilised to make a show known as Bommala Kovulu during the Sankranti celebration.



Rituals and Traditions in Art and Craft

- Many cultures follow pre-work rituals before starting any kind of craftwork. One such example is the “Gadhvi” ritual used by Kutchi artisans in Gujarat, who light a lamp in their workshop while humming traditional tunes and asking for protection and blessings.
- Only during the waxing phase of the moon do Madhubani artists in Bihar create their works.
- The artists of Andhra Pradesh’s Kalamkari art fast and cleanse themselves with ceremonial bathing before commencing.
- Rural crafts are valued in places of worship as well.
- Making the Chauri is a crucial skill in Sikhism. It is used as a symbol of adoration and reverence to fan the Guru Granth Sahib.
- Intricate rangolis are prized greatly in Jainism.

11.3 BETTING BIG ON BAMBOO

- Bamboo is a renewable resource that may be used many ways to produce goods that are environmentally beneficial.
- It should be highlighted that there is a high demand for distinctive bamboo goods, and the only way to guarantee a sustainable value chain is to increase the connections between producers, craftspeople, marketers, and manufacturers.

Bamboo: Green Gold

- Brushes, dinnerware, furniture, biomass pellets, etc. are all made of bamboo.
- They are cost-effective and environmentally beneficial substitutes for aluminium, wood, and even plastic.
- It has great structural qualities and little effect on the environment. It is regarded as the future’s construction material.
- It is a sturdy and excellent alternative to wood.

India’s Bamboo Wealth

- With over 136 species scattered across almost 14 million hectares, India has the second-largest bamboo richness in the world.
- Madhya Pradesh, Arunachal Pradesh, Maharashtra, and Odisha are the states with the most bamboo-bearing land, according to projections from the Forest Survey of India for 2021.
- The National Bamboo Mission estimates that India produces 14.6 million tonnes of bamboo annually at a rate that ranges from 1 to 3 tonnes per hectare.
- India exports bamboo and bamboo-related goods to over 154 nations.
- India bought bamboo worth \$ 107 million and exported bamboo worth \$ 140.47 million in 2020–21 (April to November).
- Bamboo is a net importer into India.
- One of India’s oldest traditional cottage businesses is the production of bamboo. In addition, women labour in micro and small enterprises as both labourers and craftsmen.



National Bamboo Mission:

- Since 2018–19, the Department of Agriculture and Farmers' Welfare has been carrying out the reorganised National Bamboo Mission (NBM).
- It intends to create whole value chains for the bamboo industry, including plantation, collecting, processing, marketing, skill development, and brand promotion, to connect producers with customers.
- Through State Bamboo Missions and Bamboo Technology Support Groups, it is put into practise.
- The growth of the bamboo industry in the North East area has also received government approval for initiatives receiving outside assistance.
- NBM has helped establish 416 product development and processing units for developing the bamboo value chain.
- Around 12119 persons have been trained from 2018-19 to 2022-23.
- Moreover, Self-Help Groups (SHGs) of women that are traditionally involved in making bamboo products are given priority in skill enhancement and micro-loans disbursement.
- NBM has helped in the bamboo plantation in non-forest farmlands, community lands, arable wastelands, etc.

11.4 J&K CHANGING DYNAMICS OF HANDICRAFTS SECTOR

- Traditional crafts including shawls, weaving, carpets, papier mache, and copperware are well known in Jammu & Kashmir.
- The handicrafts industry has long been an important component of J&K's culture and economy.
- The greatest and most distinctive craftspeople may be found there, and they provide a sizeable number of job prospects.
- It should be mentioned that because the items are often made by human hands, the handicraft industry depends on human work.
- All around the world, people are praising Kashmiri handmade goods.

Background

- Shahi Hamdan, a Persian Sufi Saint who lived in the 14th century, is recognised for having significantly influenced the growth of handicrafts in J&K.
- He proceeded to Kashmir and took with him a number of talented craftspeople from Persia who taught the native artisans new methods and styles.
- Persia is the source of inspiration for modern calligraphy, woodcarving, carpet weaving, metallurgy, etc. techniques.
- J&K was a key shawl production centre during the Mughal Empire. Great art and craft patrons included the Mughals.

Handicraft Industry in Jammu and Kashmir

- Globalisation has a big influence on Jammu & Kashmir's handicraft and handloom industries.
- A worldwide audience has access to it.



- To help craftsmen, the government is undertaking a number of programmes.
- The sector is likewise using technology more and more. In order to sell their goods and reach a larger audience, many craftsmen use internet marketplaces.
- For the sector's overall growth, the government unveiled the "Wool Processing, Handloom, and Handicraft Policy 2020".
- It aspires to put into practise a multifaceted strategy for the promotion of craft, accessibility of raw resources, education, development of infrastructure, and marketing.
- Additionally, it introduces a number of ground-breaking schemes to help craftspeople.
- The Geographical Indication (G.I.) Act was introduced for the purpose of preventing cheap machine-made-fakes from genuine handicraft products. It helps in verifying the authenticity of the products.
- Some of the new additions in the registered G.I. products from J&K are Kashmir Sozni, Kani Shawl, Kashmir Walnut Wood Carvings, etc.

Srinagar

- The network of creative cities for arts and crafts includes Srinagar.
- Their membership has given it the chance to advertise their handiwork on a global scale.
- To improve and enhance the handicraft ecosystem, the Department of handicraft also launched Crafts Safari.
- Globally, there is a revived respect for handcrafted items as a result of the rising interest in environmentally friendly and sustainable products.

E-Commerce Platforms

- The emergence of e-commerce platforms is said to have had a significant effect on the handicraft sector.
- They assist weavers and craftspeople in showcasing their works to a wider audience.
- Both its consumer base and income have expanded.
- Several well-known e-commerce portals include Handicraft Mall, Etsy, and Amazon Handmade.

11.5 RURAL CRAFTS FOR LIVELIHOOD

- Indian spinning, weaving, and fine cotton and silk have all been described in the Rigveda, the Ramayana, the Mahabharata, and other ancient texts.
- Even in ancient times, these minerals were exchanged and exported to many nations.
- Exim Bank (2019) said in a study that India's creative economy includes arts and crafts.
- Craft refers to a job, profession, or activity that calls for physical dexterity or creative abilities. They are useful in addition to being aesthetically beautiful.

Importance of Craft

- It supports the entire rural economy and gives many individuals a job. About 200 million craftspeople are said to be present in India.



- Once properly promoted, they can bring in foreign exchange profits.
- It may provide a worldwide competitive edge.
- It protects India's voluminous tradition and culture.

Challenges

- In India's economy, the handicrafts sector is often unorganised.
- Market dynamics are difficult for artisans to predict. They lack the expertise to maximise their social media exposure.
- Rural regions have a low level of technological adoption.
- Other significant problems include a weak institutional foundation and a lack of funding.
- Even if workers have higher abilities, salaries do not keep pace with income increases in other industries.
- The Fourth All India Handloom Census 2019–20 shows that 66.3% of weaver households have monthly incomes of less than Rs 5000.

Interventions to Boost Handicraft Industry

- The Ministry of Textiles' Office of Development Commissioner (Handicrafts) administers programmes including the Comprehensive Handicrafts Cluster Development Scheme and the National Handicraft Development Programme.
- Under the Ambedkar Hastshilp Vikas Yojana, artisans are mobilised to give direct benefits, support for technology and infrastructure, marketing assistance, etc.
- The Ministry of Textiles bestows "Shilp Guru" awards and national honours to honour outstanding artisans for their brilliance.
- TRIFED is a national apex body under the Ministry of Tribal Affairs. Its main aim is retail marketing development of tribal handicrafts and handloom products.
- Several NGOs like Indian National Trust for Art and Culture Heritage (INTACH) work with craft clusters to develop community-based enterprise.

11.6 FOSTERING RURAL CRAFTS THROUGH ONE DISTRICT ONE PRODUCT

- In-situ development and the creation of an entrepreneurial environment are crucial for inclusive growth, productivity, and wealth in India.
- In order to expand India's part in global commerce, the Indian government emphasises new prospective export locations that are based on districts as export centres in its Foreign commerce Policy 2023.

ODOP

- The One District One Product programme was put into place by the central government on the basis of a plan for balanced regional development.
- One Village One Product (OVOP), a Japanese company development concept, has been enhanced by this idea.
- It was first made available in 1979.



- OVOP strives to promote locally produced goods and services to raise the living standards of regional craftspeople.
- Additionally, it aims to facilitate regional contributions to nation-building.
- To preserve traditional knowledge, the only goal of ODOP is to rebuild and resuscitate extinct creative goods and processes.
- It attempts to provide an atmosphere that is sustainable for art and craft items.
- 2018 saw the introduction of ODOP in Uttar Pradesh. It was introduced in all of India's states and UTs following its success in the state.
- It covers both agricultural and non-agricultural goods, such as textiles, handicrafts, handlooms, food items, cereals, and other goods.
- Not only would it facilitate the artisans'/craftsmen's access to markets outside of India, but it will also enable them to turn their talents into lucrative businesses.
- The 'District Export Hub' (DEH) of the Directorate General of Foreign Trade has amalgamated with the ODOP.

Challenges

- Poor institutional arrangement
- Lack of funds
- Inefficient linkages for marketing
- Low adoption of technology
- Lack of marketing skills

11.7 PROMOTION AND DEVELOPMENT OF HANDLOOM AND HANDICRAFT SECTOR

- India has assimilated different cultures evolved as a stronger and more resilient country.
- The different art forms have evolved as a result of several factors like:
 - Availability of raw materials
 - Legacy skill transfer
 - Environment
 - Local agricultural traditions
 - Religious beliefs

Important Facts

- The entrance of the East India Company in India caused substantial harm to the textile and handicraft industries.
- During the British era, there was a fall in art and craft output.
- Only areas with local needs and support might support it. For instance, royal families sponsored the use of brassware and costly silver decorations like filigree.
- Families were passionate about preserving certain arts. For instance, the Patola saree weaving tradition was maintained by the Salvi family in Patan, Gujarat.
- There are a number of efforts, such as Silk Mark and Handloom Mark, that serve as quality certification indicators. Through the use of Geographical Indication labelling, they also safeguard the crafts' identity and place of origin.